As filed with the
Securities and Exchange Commission on September 17, 2018.

Registration No. 333-227103

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO.1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

SUTRO BIOPHARMA, INC.
(Exact name of registrant as specified in its charter)

Delaware	2836	47-0926186
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

310 Utah Avenue, Suite 150
South San Francisco, CA 94080
(650) 392-8412
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

William J. Newell
Chief Executive Officer
Sutro Biopharma, Inc.
310 Utah Avenue, Suite 150
South San Francisco, CA 94080
(650) 392-8412
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☐
Emerging growth company	☒		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided to Section 7(a)(2)(B) of the Securities Act. ☐

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(3)
Common Stock, par value $0.001 per share	5,750,000	$16.00	$92,000,000	$11,454

(1) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(a) under the Securities Act of 1933, as amended. Includes 750,000 additional shares that the underwriters have the option to purchase.

(2) Estimated solely for the purpose of calculating the amount of the registration fee.

(3) The Registrant previously paid $9,338 of this amount in connection with the initial filing of this Registration Statement.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

PROSPECTUS (Subject to Completion) **September 17, 2018**

5,000,000 Shares

Common Stock

This is an initial public offering of shares of common stock by Sutro Biopharma, Inc. We are offering 5,000,000 shares of our common stock. The initial public offering price is expected to be between $14.00 and $16.00 per share.

Prior to this offering, there has been no market for our common stock. We have applied to list our common stock on the Nasdaq Global Market under the symbol "STRO."

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

	Per share	*Total*
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to Sutro, before expenses	$	$

(1) See "Underwriting" for a description of the compensation payable to the underwriters.

We have granted the underwriters an option for a period of 30 days to purchase up to 750,000 additional shares of common stock.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 14.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing shares of common stock in this offering with an aggregate value of up to approximately $30.0 million at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these parties as they will on any other shares sold to the public in this offering.

Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA, or Merck, a holder of approximately 12.5% of our outstanding common stock, has agreed to purchase from us, concurrently with this offering in a private placement, up to $10.0 million of shares of our common stock at a price per share equal to the initial public offering price, subject to a 17.5% ownership cap after giving effect to the concurrent private placement and this offering. The sale of shares in the concurrent private placement will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of the concurrent private placement. The shares of common stock purchased in the concurrent private placement will not be subject to any underwriting discounts or commissions.

The underwriters expect to deliver shares of common stock to purchasers on , 2018.

Joint Book-running Managers

Cowen **Piper Jaffray**

Co-managers

JMP Securities **Wedbush PacGrow**

, 2018

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We have not, and the underwriters have not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses we have prepared. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock.

Through and including , 2018 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Persons who come into possession of this prospectus and any applicable free writing prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus and any such free writing prospectus applicable to that jurisdiction.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes thereto and the information set forth under the sections entitled "Risk Factors," "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," in each case included in this prospectus. Some of the statements in this prospectus constitute forward-looking statements that involve risks and uncertainties. See the section entitled "Special Note Regarding Forward-Looking Statements." Unless the context otherwise requires, we use the terms "Sutro," "company," "we," "us" and "our" in this prospectus to refer to Sutro Biopharma, Inc.

Overview

We are a clinical stage drug discovery, development and manufacturing company focused on leveraging our proprietary integrated cell-free protein synthesis platform, XpressCF, to create a broad variety of optimally designed, next-generation protein therapeutics for cancer and autoimmune disorders. We aim to design therapeutics using the most potent modalities, including cytokine-based immuno-oncology, or I/O, therapeutics, antibody-drug conjugates, or ADCs, and bispecific antibodies that are directed primarily against clinically validated targets where the current standard of care is suboptimal. We believe our platform allows us to accelerate the discovery and development of potential first-in-class and best-in-class molecules by enabling the rapid and systematic evaluation of protein structure-activity relationships to create optimized homogeneous product candidates. Our mission is to transform the lives of patients by using our XpressCF Platform to create medicines with improved therapeutic profiles for areas of unmet need.

Our two most advanced product candidates are wholly owned: STRO-001, an ADC directed against CD74, for patients with multiple myeloma and non-Hodgkin lymphoma, or NHL, and STRO-002, an ADC directed against folate receptor-alpha, or FolR a, for patients with ovarian and endometrial cancers. STRO-001 is currently enrolling patients in a Phase 1 trial, with initial safety data expected in mid-2019. We plan to submit an investigational new drug, or IND, application for STRO-002 to the U.S. Food and Drug Administration, or FDA, in the fourth quarter of 2018.

Our Product Candidates

Our first internally developed product candidate is STRO-001, which we believe has the potential to be a first-in-class and best-in-class ADC directed against CD74, an antigen that is highly expressed in many B cell malignancies. In multiple preclinical models, STRO-001 has demonstrated potent anti-tumor activity. In addition, the properties of STRO-001 suggest a low likelihood of off-target toxicity and potential for an improved therapeutic index. STRO-001 is currently enrolling patients in a Phase 1 trial for multiple myeloma and NHL and we expect initial safety data in mid-2019.

We are also internally developing STRO-002, an ADC directed against FolRa, initially targeted for the treatment of ovarian and endometrial cancers. Our experiments show that FolRa expression can be detected in 90% or more of ovarian and endometrial cancers. In preclinical models, STRO-002 has demonstrated the potential for enhanced and selective activity against cells expressing FolR a, superior inhibition of tumor growth and greater linker stability, in comparison to experiments we conducted with a benchmark FolRa-targeting molecule. We expect to submit an IND for STRO-002 in the fourth quarter of 2018.

Although we believe our product candidates have the potential to be first-in-class and/or best-in-class and to provide potent anti-tumor activity with reduced off-target toxicity, we will need to complete additional studies to determine the safety and efficacy of our product candidates. The results of these future studies may be different than the results of our earlier studies. We have not received regulatory approval for any of our product candidates, and in order to obtain regulatory approval and commercialize our product candidates, the FDA or foreign regulatory agencies will need to determine that our product candidates are safe and effective. We may not obtain regulatory approval on the timeline we currently expect, or at all, and competing therapies and products may ultimately reach the market faster or have more favorable safety and efficacy profiles than our products candidates.

The benefits of our XpressCF Platform have resulted in collaborations with leaders in the field of oncology, including Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA, or Merck, Celgene and Merck KGaA, Darmstadt, Germany (operating in the United States and Canada under the name "EMD Serono"). We have leveraged these strategic partnerships to extend our own capabilities and broaden the scope of our XpressCF Platform. To date, all of our collaborations have provided us with approximately $330.0 million in payments, which includes $43.7 million in investments in our stock. Our collaborations include:

- ***Merck Programs.*** We have granted Merck the right to jointly develop up to three research programs directed to cytokine derivatives for cancer and autoimmune disorders, including rights to certain prior cytokine-based research efforts.
- ***Celgene Programs.*** We have granted Celgene the right to jointly develop up to four anti-cancer bispecific antibodies and/or ADCs directed primarily to immuno-oncology targets. The lead candidate generated for this collaboration is a novel ADC therapeutic directed against the target BCMA for which an IND submission is expected in early 2019.
- ***EMD Serono Programs.*** We have granted EMD Serono the right to designate up to six cancer targets against which we will discover, develop and optimize up to three mono, bispecific or multi-specific ADC product candidates per target. EMD Serono has selected all six possible target antigens under the strategic research and development partnership. The most advanced candidate in this collaboration is a bispecific ADC, which is currently in preclinical development.

We intend to selectively enter into additional collaborations with partners who are seeking efficient and effective drug discovery, preclinical development and manufacturing capabilities for the creation of novel therapeutics.

Beyond these wholly owned programs and collaborations, we are developing a broader pipeline of next-generation protein therapeutics using our XpressCF Platform. Our protein engineering and chemistry efforts are focused on maximizing therapeutic indices, and our technology allows us to rapidly test our therapeutic hypothesis in significantly more product candidates than conventional protein synthesis allows in order to identify the best molecule to advance to the clinic. Our drug discovery teams are exploring novel immuno-oncology therapies, including cytokine-based therapies. We are also actively pursuing the discovery and development of other novel ADC and bispecifics and currently have four ADC and two bispecific T cell-engager discovery programs.

Our Proprietary XpressCF Platform

Our XpressCF Platform is the first and only current Good Manufacturing Practices, or cGMP, compliant scalable cell-free protein synthesis technology that has resulted in products in clinical development. Our XpressCF Platform is fundamentally different from the conventional cell-based

protein synthesis approach in that we separate the production of the cell mass from the production of the protein. We believe key advantages of our cell-free protein synthesis platform over conventional biologic drug discovery and development include:

- *Ability to Rapidly Produce and Evaluate a Wide Variety of Protein Structures In-house.* By decoupling the production of the cell-free extract from the production of the protein, we are able to stockpile large quantities of cell-free extract from which we are able to manufacture a wide variety of proteins without the need to generate individual cell lines, including cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies.
- *Ability to Incorporate Non-Natural Amino Acids.* Our technology allows for efficient incorporation of a non-natural amino acid in any location in an antibody or protein with high precision and fidelity, which we believe allows for the design of optimized protein conjugates.
- *Faster Cycle Time.* Our ability to produce thousands of protein variants in parallel overnight allows us to rapidly express, test and characterize many variants early in discovery to elucidate structure-activity relationships and identify opportunities for superior therapeutic profiles, as well as new intellectual property. We are therefore able to efficiently optimize many properties with high specificity in parallel.
- *Efficient Drug Discovery and Early Pharmacology and Safety Assessment.* Our cell-free technology creates the opportunity for accelerated pharmacology and safety assessments during the design and discovery phase of product development. This approach allows us to generate optimized proteins early in our discovery process, which can be transitioned seamlessly to clinical scale production using the same cell-free process.
- *Rapid and Predictable Scalability*. Our cell-free extract does not need to be modified in any manner as we scale from research to preclinical to clinical to commercial production. This enables us to move more rapidly to the clinic by eliminating master cell banking activities and significantly de-risks scale-up to manufacturing.

We use our XpressCF Platform to discover and develop cancer therapeutics by empirically determining the optimum structure-activity relationships for cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies and transitioning those products to cGMP compliant manufacturing. The following chart illustrates the applicability of these attributes across the range of modalities we are developing.

XpressCF Attributes for Various Therapeutic Modalities

XpressCF Attribute	ADCs	Bispecific I/O, Bispecific ADCs and Bispecific T cell-engagers	Cytokine-based therapeutics
Homogeneous Design Stable, site-specific attachment of chemical functionality	✓	✓ (if needed)	✓
Experimentally Defined Structure-Activity Relationships Rapid, direct comparison of a wide variety of protein variants	✓	✓	✓
Rapid and Efficient Transition from Discovery to the Clinic Single-source scalability from discovery to clinical / commercial	✓	✓	✓

Despite recent advancements within the field of oncology, specifically around cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies, limitations still exist. The response is

often not durable and many patients relapse or become refractory to treatment. Also, safety and tolerability concerns often limit the use of higher, potentially more efficacious doses. We believe our XpressCF Platform will provide enhanced therapeutic approaches for treating cancer to address these unmet needs.

We also intend to selectively expand the scope of our XpressCF Platform into other therapeutic areas. Due to the versatility of our platform, we can explore additional indications outside of oncology, such as autoimmune and metabolic diseases. We intend to promote further investment in and development of our XpressCF Platform to expand our pipeline of product candidates.

Our Strategy

Our goal is to use our proprietary XpressCF Platform to create cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies primarily against clinically validated targets. Key elements of our strategy are to:

- advance STRO-001 and STRO-002 through clinical development;
- develop a diverse pipeline of novel product candidates with optimal therapeutic profiles;
- strategically pursue additional collaborations to broaden the reach of our XpressCF Platform;
- maintain worldwide rights to our core product candidates; and
- selectively expand the scope of our XpressCF Platform into other therapeutic areas.

Risks Affecting Us

Our business is subject to a number of risks and uncertainties, including those highlighted in the section entitled “Risk Factors” immediately following this prospectus summary. These risks include, among others, the following:

- We have a limited operating history, a history of significant losses and may never achieve or maintain profitability.
- Even if we complete this offering and the concurrent private placement, we will need substantial additional funds to advance development of our product candidates and failure to obtain timely funding, may force us to delay, limit or terminate our product development programs, commercialization efforts or other operations.
- Our product candidates are in early stages of development and may fail in development or suffer delays that materially and adversely affect their commercial viability.
- Our business is dependent on the success of our product candidates based on our cell-free protein synthesis platform, XpressCF, and, in particular, our lead product candidates, STRO-001 and STRO-002. Existing and future preclinical studies and clinical trials of our product candidates may not be successful and if we are unable to commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.
- If we do not achieve our projected development goals in the time frames we announce and expect, the commercialization of our products may be delayed and, as a result, our stock price may decline.
- If our collaborations with third parties for development and commercialization are not successful, we may not be able to capitalize on the market potential of our XpressCF Platform and resulting product candidates.
- If we are not able to obtain and enforce patent protection for our technologies or product candidates, development and commercialization of our product candidates may be adversely affected.

- We or our collaborators may be unable to obtain, or may be delayed in obtaining, U.S. or foreign regulatory approval and, as a result, unable to commercialize our product candidates.

Concurrent Private Placement

Merck has agreed to purchase from us, concurrently with this offering in a private placement, up to $10.0 million of shares of our common stock at a price per share equal to the initial public offering price, or up to approximately 666,666 shares based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated offering price range set forth on the cover of this prospectus, subject to a 17.5% ownership cap after giving effect to the concurrent private placement and this offering. The sale of these shares to Merck will not be registered in this offering.

Corporate Information

We were incorporated under the laws of the State of Delaware in April 2003 under the name Fundamental Applied Biology, Inc. We subsequently changed our name to Sutro Biopharma, Inc. Our principal executive offices are located at 310 Utah Avenue, Suite 150, South San Francisco, California 94080, and our telephone number is (650) 392-8412. Our website address is www.sutrobio.com. The information contained on, or that can be accessed through, our website is not part of, and is not incorporated by reference into, this prospectus. Investors should not rely on any such information in deciding whether to purchase our common stock.

The marks “Sutro Biopharma,” “XpressCF” and “XpressCF+” are our registered trademarks. The Sutro logo, XtractCF and all product names are our common law trademarks. All other service marks, trademarks and trade names appearing in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and tradenames referred to in this prospectus appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor to these trademarks and tradenames.

Implications of Being an Emerging Growth Company

As a company with less than $1.07 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or JOBS Act. An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations in this prospectus;
- not being required to comply with the auditor attestation requirements on the effectiveness of our internal controls over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements (auditor discussion and analysis);
- reduced disclosure obligations regarding executive compensation arrangements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We may use these provisions until the last day of our fiscal year following the fifth anniversary of the completion of this offering. However, if certain events occur prior to the end of such five-year

period, including if we become a “large accelerated filer,” our annual gross revenues exceed $1.07 billion or we issue more than $1.0 billion of non-convertible debt in any three-year period, we will cease to be an emerging growth company prior to the end of such five-year period.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards, until those standards apply to private companies. We have elected to take advantage of the benefits of this extended transition period and, therefore, we will not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards. Until the date that we are no longer an emerging growth company or affirmatively and irrevocably opt out of the exemption provided by Section 7(a)(2)(B) of the Securities Act of 1933, as amended, upon issuance of a new or revised accounting standard that applies to our financial statements and that has a different effective date for public and private companies, we will disclose the date on which adoption is required for non-emerging growth companies and the date on which we will adopt the recently issued accounting standard.

THE OFFERING	
Common stock offered	5,000,000 shares
Option to purchase additional shares	We have granted the underwriters an option, exercisable for 30 days after the date of this prospectus, to purchase up to an additional 750,000 shares from us.
Potential insider participation	Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing shares of common stock in this offering with an aggregate value of up to approximately $30.0 million at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these parties as they will on any other shares sold to the public in this offering.
Concurrent private placement	Merck has agreed to purchase from us, concurrently with this offering in a private placement, up to $10.0 million of shares of our common stock at a price, or up to approximately 666,666 shares based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated offering price range set forth on the cover of this prospectus, per share equal to the initial public offering price, subject to a 17.5% ownership cap after giving effect to the concurrent private placement and this offering. The sale of shares in the concurrent private placement will not be registered in this offering. The closing of this offering is not conditioned upon the closing of the concurrent private placement. The shares of common stock purchased in the concurrent private placement will not be subject to any underwriting discounts or commissions. We refer to the private placement of these shares of common stock as the concurrent private placement.

Common stock to be outstanding immediately after this offering and the concurrent private placement	22,156,630 shares (or 22,906,630 shares if the underwriters exercise their option to purchase additional shares in full).
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $65.9 million (or approximately $76.3 million if the underwriters exercise their option to purchase additional shares in full), based upon the assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses. We expect that the net proceeds from the concurrent private placement will be up to approximately $10.0 million. We intend to use the net proceeds that we receive in this offering and the concurrent private placement to fund the further development of STRO-001 and STRO-002, the further development of our technology platform, including manufacturing, to broaden our pipeline of product candidates and for working capital and general corporate purposes. See the section entitled "Use of Proceeds."
Directed shares	At our request, the underwriters have reserved for sale, at the initial public offering price, up to 5% of the shares offered hereby for employees, directors and other persons associated with us who have expressed an interest in purchasing common stock in the offering. See "Underwriting" for more information.
Risk factors	You should read the section entitled "Risk Factors" in this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Proposed Nasdaq Global Market symbol	"STRO"

The number of shares of our common stock to be outstanding after this offering and the concurrent private placement is based on (i) 482,216 shares of our common stock outstanding as of August 31, 2018 and (ii) 16,007,748 shares of common stock that we expect to issue immediately prior to the completion of this offering upon the conversion of 493,056,139 shares of our outstanding redeemable convertible preferred stock as of August 31, 2018, and excludes:

- 816,618 shares of common stock issuable upon the exercise of options outstanding as of August 31, 2018 under our 2004 Stock Plan, with a weighted-average exercise price of $10.40 per share;
- 71,731 shares of common stock issuable upon the exercise of warrants to purchase 2,370,799 shares of redeemable convertible preferred stock outstanding as of August 31, 2018, with a weighted-average exercise price of $0.33 per share, which will automatically convert to warrants to purchase shares of our common stock upon the completion of this offering; and
- 5,375,957 shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of (i) 2,845,957 shares of common stock reserved for future issuance under our 2004 Stock Plan as of August 31, 2018, (ii) 2,300,000 shares of common stock reserved for future issuance under our 2018 Equity Incentive Plan, which will become effective on the date immediately prior to the date of the effectiveness of the registration statement of which this prospectus forms a part, of which shares we intend to grant equity awards consisting of 312,406 shares issuable upon the vesting of restricted stock units and 2,267,266 shares issuable upon the exercise of stock options (with an exercise price equal to the initial public offering price) effective upon the date of this prospectus and (iii) 230,000 shares of common stock reserved for future issuance under our 2018 Employee Stock Purchase Plan, which will become effective on the date of the effectiveness of the registration statement of which this prospectus forms a part. Upon completion of this offering, any remaining shares available for issuance under our 2004 Stock Plan will be added to the shares reserved under our 2018 Equity Incentive Plan and we will cease granting awards under our 2004 Stock Plan. Our 2018 Equity Incentive Plan and 2018 Employee Stock Purchase Plan also provide for automatic annual increases in the number of shares reserved under the plans each year, as more fully described in “Executive Compensation—Equity Compensation Plans and Other Benefit Plans.”

Except as otherwise indicated, all information in this prospectus assumes or gives effect to:

- the conversion of all outstanding shares of our redeemable convertible preferred stock into an aggregate of 16,007,748 shares of common stock immediately prior to the completion of this offering;
- the expiration of outstanding warrants to purchase 1,791,784 shares of redeemable convertible preferred stock and 1,099 shares of common stock immediately prior to the completion of this offering;
- the automatic conversion of outstanding warrants to purchase 2,370,799 shares of redeemable convertible preferred stock into warrants to purchase 71,731 shares of common stock upon the completion of this offering;
- the issuance and sale by us in the concurrent private placement of up to approximately 666,666 shares of common stock to Merck, based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus;
- a 1-for-1.1940912491 forward stock split of Series E redeemable convertible preferred stock, which became effective on July 26, 2018;

- a 36.3-for-1 reverse stock split of our common stock, which became effective on September 14, 2018;
- the effectiveness of our restated certificate of incorporation and restated bylaws in connection with the completion of this offering;
- no exercise of outstanding options or warrants; and
- no exercise of the underwriters' option to purchase additional shares of our common stock.

Summary Financial Data

The following tables set forth our summary statements of operations and balance sheet data. The summary statements of operations data presented below for the years ended December 31, 2016 and 2017 are derived from our audited financial statements included elsewhere in this prospectus. We derived our summary statements of operations data for the six months ended June 30, 2017 and 2018 and our summary balance sheet data as of June 30, 2018 from our unaudited interim financial statements included elsewhere in this prospectus. Our unaudited interim financial statements have been prepared in accordance with U.S. generally accepted accounting principles on the same basis as our audited annual financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal, recurring adjustments, that are necessary for the fair statement of our financial position as of June 30, 2018 and our results of operations for the six months ended June 30, 2017 and 2018. The following summary financial data should be read in conjunction with “Selected Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in any future period and our interim results for the six months ended June 30, 2018 are not necessarily indicative of the results to be expected for the full year ending December 31, 2018, or any other period. The summary financial data in this section are not intended to replace the financial statements and are qualified in their entirety by the financial statements and related notes included elsewhere in this prospectus.

	Year Ended December 31,		Six Months Ended June 30,	
	2016	2017	2017	2018
			(unaudited)	
	(in thousands, except share and per share data)			
Statements of Operations Data:				
Revenue:				
Collaboration revenue	$ 59,731	$ 51,741	$ 30,202	$ 7,031
Other revenue – related parties	—	—	—	4,466
Total revenue	59,731	51,741	30,202	11,497
Operating expenses:				
Research and development	43,550	54,639	25,830	26,833
General and administrative	14,817	16,374	7,411	8,455
Total operating expenses	58,367	71,013	33,241	35,288
Income (loss) from operations	1,364	(19,272)	(3,039)	(23,791)
Interest income	251	273	130	80
Interest expense	–	(612)	—	(784)
Other income (expense), net	87	(77)	(17)	908
Net income (loss)	$ 1,702	$ (19,688)	$ (2,926)	$ (23,587)
Net income (loss) per share attributable to common stockholders, basic and diluted(1)	$ –	$ (43.95)	$ (6.63)	$ (49.90)
Weighted-average shares used in computing net income (loss) per share attributable to common stockholders, basic and diluted(1)	407,735	447,946	441,059	472,647
Pro forma net loss per share, basic and diluted (unaudited)(1)		$ (3.54)		$ (3.50)
Weighted-average shares used in computing pro forma net loss per share, basic and diluted (unaudited)(1)		5,511,350		6,997,394

(1) See Notes 2 and 13 to our audited financial statements and Notes 2 and 10 to our unaudited interim financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net income (loss) per share attributable to common stockholders, basic and diluted pro forma net loss per share, and the weighted-average number of shares used in the computation of the per share amounts.

	As of June 30, 2018		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
		(unaudited)	
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents(4)	$ 25,420	$ 77,628	$ 154,666
Working capital	10,997	63,205	140,243
Total assets	45,181	97,389	173,239
Debt	14,802	14,802	14,802
Redeemable convertible preferred stock warrant liability	801	—	—
Redeemable convertible preferred stock	135,720	—	—
Accumulated deficit	(138,598)	(138,598)	(138,598)
Total stockholders' equity (deficit)	(132,019)	56,710	132,560

(1) The pro forma balance sheet data gives effect to (i) the receipt of $52.0 million in net proceeds from the sale of 194,465,218 shares of Series E redeemable convertible preferred stock in July 2018, (ii) the conversion of 298,590,921 outstanding shares of our redeemable convertible preferred stock as of June 30, 2018 and 194,465,218 shares of our redeemable convertible preferred stock issued in July 2018 into an aggregate of 16,007,748 shares of common stock immediately prior to the completion of this offering and (iii) the conversion of redeemable convertible preferred stock warrants into common stock warrants and the related reclassification of the redeemable convertible preferred stock warrant liability to total stockholders' equity (deficit) and (iv) the repayment of principal and interest on a $0.2 million outstanding note issued to an executive officer.

(2) The pro forma as adjusted balance sheet data gives effect to (i) the pro forma adjustments described in footnote (1) above, (ii) the receipt of $65.9 million in net proceeds from the sale of 5,000,000 shares of common stock in this offering, based upon an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses and (iii) the receipt of up to $10.0 million in net proceeds from the sale by us in the concurrent private placement of up to approximately 666,666 shares of common stock to Merck based on the assumed initial public offering price.

(3) Each $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, would increase (decrease) each of our pro forma as adjusted cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by approximately $4.7 million, assuming that the number of shares offered, as set forth on the cover of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered would increase (decrease) each of our pro forma as adjusted cash and cash equivalents, working capital, total assets and total stockholders' equity (deficit) by approximately $14.0 million, assuming the assumed initial public offering price per share as set forth on the cover of this prospectus remains the same and after deducting the estimated underwriting discounts and commissions. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price and other terms of this offering and the concurrent private placement determined at pricing.

(4) Excludes the $60.0 million upfront payment received pursuant to the August 2018 Exclusive Patent License and Research Collaboration Agreement with Merck.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making your decision to invest in shares of our common stock, you should carefully consider the risks described below, together with the other information contained in this prospectus, including our financial statements and the related notes appearing at the end of this prospectus. We cannot assure you that any of the events discussed below will not occur. These events could have a material and adverse impact on our business, financial condition, results of operations and prospects. If that were to happen, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Related to Our Business

We are a clinical stage biopharmaceutical company with a limited operating history and no products approved for commercial sale. We have a history of significant losses, expect to continue to incur significant losses for the foreseeable future and may never achieve or maintain profitability, which could result in a decline in the market value of our common stock.

We are a clinical stage biopharmaceutical company with a limited operating history on which to base your investment decision. Biotechnology product development is a highly speculative undertaking and involves a substantial degree of risk.

To date, we have tested our first clinical stage product candidate, STRO-001, in only a few clinical trial patients, have no products approved for commercial sale, have not generated any revenue from commercial product sales and, as of June 30, 2018, had an accumulated deficit of $138.6 million. For the year ended December 31, 2017 and for the six months ended June 30, 2018, our net loss was $19.7 million and $23.6 million, respectively, and for the year ended December 31, 2016, our net income was $1.7 million. Substantially all of our losses have resulted from expenses incurred in connection with our research and development programs and from general and administrative costs associated with our operations. Our technologies and product candidates are in early stages of development, and we are subject to the risks of failure inherent in the development of product candidates based on novel technologies. In addition, we have limited experience as a clinical stage company and have not yet demonstrated an ability to successfully overcome many of the risks and uncertainties frequently encountered by companies in new and rapidly evolving fields, particularly in the biotechnology industry. Furthermore, we do not expect to generate any revenue from commercial product sales for the foreseeable future, and we expect to continue to incur significant operating losses for the foreseeable future due to the cost of research and development, preclinical studies and clinical trials and the regulatory approval process for our product candidates. We expect our net losses to increase substantially as we progress further into clinical development of our lead programs and create additional infrastructure to support operations as a public company. However, the amount of our future losses is uncertain. Our ability to achieve profitability, if ever, will depend on, among other things, our, or our existing or future collaborators', successful development of product candidates, obtaining regulatory approvals to market and commercialize product candidates, manufacturing any approved products on commercially reasonable terms, establishing a sales and marketing organization or suitable third-party alternatives for any approved product and raising sufficient funds to finance business activities. If we, or our existing or future collaborators, are unable to develop our technologies and commercialize one or more of our product candidates or if sales revenue from any product candidate that receives approval is insufficient, we will not achieve profitability, which could have a material and adverse effect on our business, financial condition, results of operations and prospects. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods.

Even if we complete this offering and the concurrent private placement, we will need substantial additional funds to advance development of our product candidates. This additional financing may not be available on acceptable terms, or at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development programs, commercialization efforts or other operations.

The development of biopharmaceutical product candidates is capital-intensive. If our product candidates enter and advance through preclinical studies and clinical trials, we will need substantial additional funds to expand our development, regulatory, manufacturing, marketing and sales capabilities. We have used substantial funds to develop our technology and product candidates and will require significant funds to conduct further research and development and preclinical testing and clinical trials of our product candidates, to seek regulatory approvals for our product candidates and to manufacture and market products, if any, which are approved for commercial sale. In addition, upon the completion of this offering, we expect to incur additional costs associated with operating as a public company.

Since our inception, we have invested a significant portion of our efforts and financial resources in research and development activities for our two product candidates STRO-001, our primary clinical program, and STRO-002, our late-stage preclinical program, and the development of our in-house manufacturing capabilities. Clinical trials for our product candidates will require substantial funds to complete. As of June 30, 2018, we had $25.4 million in cash and cash equivalents. We expect to incur substantial expenditures in the foreseeable future as we seek to advance STRO-001 and STRO-002 and any future product candidates through clinical development, the regulatory approval process and, if approved, commercial launch activities, as well as in connection with the continued development of our manufacturing capabilities. Based on our current operating plan, we believe that our available cash and cash equivalents, together with the net proceeds from this offering and the concurrent private placement, will be sufficient to fund our operations through at least the next 12 months. However, our future capital requirements and the period for which we expect our existing resources to support our operations may vary significantly from what we expect and we may need to seek additional funds sooner than planned. Our monthly spending levels vary based on new and ongoing research and development and other corporate activities. Because the length of time and activities associated with successful research and development of our product candidates is highly uncertain, we are unable to estimate the actual funds we will require for development and any marketing and commercialization activities for approved products. The timing and amount of our operating expenditures will depend largely on:

- the timing and progress of preclinical and clinical development activities;
- the costs associated with the development of our internal manufacturing facility and processes;
- the number and scope of preclinical and clinical programs we decide to pursue;
- the progress of the development efforts of parties with whom we have entered or may in the future enter into collaborations and research and development agreements;
- the timing and amount of milestone and other payments we may receive under our collaboration agreements;
- our ability to maintain our current licenses and research and development programs and to establish new collaboration arrangements;
- the costs involved in prosecuting and enforcing patent and other intellectual property claims;
- the costs of manufacturing our product candidates and those of our collaborators using our proprietary XpressCF Platform;
- the cost and timing of regulatory approvals;
- the cost of commercialization activities if our product candidates or any future product candidates are approved for sale, including marketing, sales and distribution costs; and

- our efforts to enhance operational systems and hire additional personnel, including personnel to support development of our product candidates and satisfy our obligations as a public company.

If we are unable to obtain funding on a timely basis or on acceptable terms, we may have to delay, reduce or terminate our research and development programs and preclinical studies or clinical trials, limit strategic opportunities or undergo reductions in our workforce or other corporate restructuring activities. We also could be required to seek funds through arrangements with collaborators or others that may require us to relinquish rights to some of our technologies or product candidates that we would otherwise pursue on our own. We do not expect to realize revenue from sales of commercial products or royalties from licensed products in the foreseeable future, if at all, and, in no event, before our product candidates are clinically tested, approved for commercialization and successfully marketed. To date, we have primarily financed our operations through payments received under our collaboration agreements, the sale of equity securities and debt financing. We will be required to seek additional funding in the future and currently intend to do so through additional collaborations and/or licensing agreements, public or private equity offerings or debt financings, credit or loan facilities, or a combination of one or more of these funding sources. Our ability to raise additional funds will depend on financial, economic and other factors, many of which are beyond our control. Additional funds may not be available to us on acceptable terms or at all. Subject to limited exceptions, the Loan and Security Agreement prohibits us from incurring indebtedness without the prior written consent of Oxford Finance LLC, or Oxford, and Silicon Valley Bank, or SVB. If we raise additional funds by issuing equity securities, our stockholders will suffer dilution and the terms of any financing may adversely affect the rights of our stockholders. If we raise additional funds through licensing or collaboration arrangements with third parties, we may have to relinquish valuable rights to our product candidates, or grant licenses on terms that are not favorable to us. In addition, as a condition to providing additional funds to us, future investors may demand, and may be granted, rights superior to those of existing stockholders. Our current debt financing involves, and future debt financings, if available, are likely to involve, restrictive covenants limiting our flexibility in conducting future business activities, and, in the event of insolvency, debt holders would be repaid before holders of our equity securities received any distribution of our corporate assets. Failure to obtain capital when needed on acceptable terms may force us to delay, limit or terminate our product development and commercialization of our current or future product candidates, which could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our product candidates are in early stages of development and may fail in development or suffer delays that materially and adversely affect their commercial viability. If we or our collaborators are unable to complete development of or commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.

We have no products on the market and all of our product candidates for cancer therapy are in early stages of development. In particular, our most advanced product candidate, STRO-001, is in the initial stages of dose escalation in clinical trial patients. Additionally, we have programs, including those listed in the Discovery and Preclinical Programs chart included elsewhere in this prospectus, that are in earlier stages of discovery and preclinical development and may never advance to clinical-stage development. Our ability to achieve and sustain profitability depends on obtaining regulatory approvals for and successfully commercializing our product candidates, either alone or with third parties, and we cannot guarantee you that we will ever obtain regulatory approval for any of our product candidates. We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the U.S. Food and Drug Administration, or FDA. Before obtaining regulatory approval for the commercial distribution of our product candidates, we or an existing or future collaborator must conduct extensive preclinical tests and clinical trials to demonstrate the safety and efficacy in humans of our product candidates.

We may not have the financial resources to continue development of, or to modify existing or enter into new collaborations for, a product candidate if we experience any issues that delay or prevent regulatory approval of, or our ability to commercialize, product candidates, including:

- negative or inconclusive results from our clinical trials or the clinical trials of others for product candidates similar to ours, leading to a decision or requirement to conduct additional preclinical testing or clinical trials or abandon a program;
- product-related side effects experienced by patients in our clinical trials or by individuals using drugs or therapeutic biologics similar to our product candidates;
- difficulty achieving successful continued development of our internal manufacturing processes, including process development and scale-up activities to supply products for preclinical studies, clinical trials and commercial sale;
- our inability to transfer successfully our manufacturing techniques to third-party contract manufacturers;
- inability of us or any third-party contract manufacturer to scale up manufacturing of our product candidates and those of our collaborators to supply the needs of clinical trials and commercial sales, and to manufacture such products in conformity with regulatory requirements using our proprietary XpressCF Platform;
- delays in submitting investigational new drug applications, or INDs, or comparable foreign applications or delays or failures in obtaining the necessary approvals from regulators to commence a clinical trial, or a suspension or termination of a clinical trial once commenced;
- conditions imposed by the FDA or comparable foreign authorities regarding the scope or design of our clinical trials;
- delays in enrolling patients in our clinical trials;
- high drop-out rates of our clinical trial patients;
- inadequate supply or quality of product candidate components or materials or other supplies necessary for the conduct of our clinical trials;
- inability to obtain alternative sources of supply for which we have a single source for product candidate components or materials;
- greater than anticipated costs of our clinical trials;
- harmful side effects or inability of our product candidates to meet efficacy endpoints during clinical trials;
- failure to demonstrate a benefit-risk profile acceptable to the FDA or other regulatory agencies;
- unfavorable FDA or other regulatory agency inspection and review of one or more of our clinical trial sites or manufacturing facilities;
- failure of our third-party contractors or investigators to comply with regulatory requirements or otherwise meet their contractual obligations in a timely manner, or at all;
- delays and changes in regulatory requirements, policy and guidelines, including the imposition of additional regulatory oversight around clinical testing generally or with respect to our technology in particular; or
- varying interpretations of our data by the FDA and similar foreign regulatory agencies.

We or our collaborators' inability to complete development of or commercialize our product candidates or significant delays in doing so due to one or more of these factors, could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our business is dependent on the success of our product candidates based on our proprietary XpressCF Platform and, in particular, our lead product candidates, STRO-001 and STRO-002. Existing and future preclinical studies and clinical trials of our product candidates may not be successful. If we are unable to commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our efforts and financial resources in the development of our proprietary XpressCF Platform and our lead product candidates, STRO-001 and STRO-002. Our ability to generate commercial product revenues, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of STRO-001 and STRO-002. We have not previously submitted a new drug application, or NDA, or a biologics license application, or BLA, to the FDA, or similar regulatory approval filings to comparable foreign authorities, for any product candidate, and we cannot be certain that our product candidates will be successful in clinical trials or receive regulatory approval. Further, our product candidates may not receive regulatory approval even if they are successful in clinical trials. If we do not receive regulatory approvals for our product candidates, we may not be able to continue our operations. Even if we successfully obtain regulatory approvals to market our product candidates, our revenues will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights. If the markets for patient subsets that we are targeting are not as significant as we estimate, we may not generate significant revenues from sales of such products, if approved.

We plan to seek regulatory approval to commercialize our product candidates both in the United States and in selected foreign countries. While the scope of regulatory approvals generally is similar in other countries, in order to obtain separate regulatory approvals in other countries, we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy. Other countries also have their own regulations governing, among other things, clinical trials and commercial sales, as well as pricing and distribution of our product candidates, and we may be required to expend significant resources to obtain regulatory approval and to comply with ongoing regulations in these jurisdictions.

The success of STRO-001 and STRO-002 and our other product candidates will depend on many factors, including the following:

- successful enrollment of patients in, and the completion of, our clinical trials;
- receiving required regulatory approvals for the development and commercialization of our product candidates;
- establishing our commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and non-patent exclusivity for our product candidates and their components;
- enforcing and defending our intellectual property rights and claims;
- achieving desirable therapeutic properties for our product candidates' intended indications;
- launching commercial sales of our product candidates, if and when approved, whether alone or in collaboration with third parties;
- acceptance of our product candidates, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies; and
- maintaining an acceptable safety profile of our product candidates through clinical trials and following regulatory approval.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

Additionally, we have created a benchmark folate receptor-alpha, or FolR a, targeting ADC using conventional technology that results in a heterogeneous ADC mixture. We have compared STRO-002 to this benchmark molecule in multiple preclinical models. We believe the results of these tests help us understand how the therapeutic index of STRO-002 compares to competitors. However, we cannot be certain that our benchmark molecule is the same as the molecule we are attempting to recreate, and the results of the tests comparing our benchmark molecule to STRO-002 may be different than the actual results of a head-to-head test of STRO-002 against a competitor molecule. Additional preclinical and clinical testing will be needed to evaluate the therapeutic index of STRO-002 and to understand its therapeutic potential relative to other product candidates in development. While we believe our ADCs may be superior to other investigative agents in development, without head-to-head comparative data, we will not be able to make claims of superiority to other products in our promotional materials, if our product candidates are approved.

If we do not achieve our projected development goals in the time frames we announce and expect, the commercialization of our products may be delayed and, as a result, our stock price may decline.

From time to time, we estimate the timing of the anticipated accomplishment of various scientific, clinical, regulatory and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials and the submission of regulatory filings. From time to time, we may publicly announce the expected timing of some of these milestones. All of these milestones are and will be based on numerous assumptions. The actual timing of these milestones can vary dramatically compared to our estimates, in some cases for reasons beyond our control. If we do not meet these milestones as publicly announced, or at all, the commercialization of our products may be delayed or never achieved and, as a result, our stock price may decline.

Our approach to the discovery and development of our therapeutic treatments is based on novel technologies that are unproven and may not result in marketable products.

We are developing a pipeline of product candidates using our proprietary XpressCF Platform. We believe that product candidates identified with our product discovery platform may offer an improved therapeutic approach by taking advantage of precision design and rapid empirical optimization, thereby reducing the dose-limiting toxic effects associated with existing products. However, the scientific research that forms the basis of our efforts to develop product candidates based on our XpressCF Platform is ongoing. Further, the scientific evidence to support the feasibility of developing therapeutic treatments based on our XpressCF Platform is both preliminary and limited.

To date, we have tested our first clinical stage product candidate, STRO-001, in only a few clinical trial patients. We may ultimately discover that our XpressCF Platform and any product candidates resulting therefrom do not possess certain properties required for therapeutic effectiveness. XpressCF product candidates may also be unable to remain stable in the human body for the period of time required for the drug to reach the target tissue or they may trigger immune responses that inhibit the ability of the product candidate to reach the target tissue or that cause adverse side effects in humans. We currently have only limited data, and no conclusive evidence, to suggest that we can introduce these necessary properties into these product candidates derived from our XpressCF Platform. We may spend substantial funds attempting to introduce these properties and may never succeed in doing so. In addition, product candidates based on our XpressCF Platform may demonstrate different chemical and pharmacological properties in patients than they do in laboratory studies. Although our

XpressCF Platform and certain product candidates have produced successful results in animal studies, they may not demonstrate the same chemical and pharmacological properties in humans and may interact with human biological systems in unforeseen, ineffective or harmful ways. As a result, we may never succeed in developing a marketable product, we may not become profitable and the value of our common stock will decline.

The regulatory approval process for novel product candidates such as ours can be more expensive and take longer than for other, better known or extensively studied product candidates. We are not aware of any company currently developing a therapeutic using our approach to ADC development and no regulatory authority has granted approval for such a therapeutic. We believe the FDA has limited experience with therapeutics in oncology or other disease areas developed in cell-free-based synthesis systems, which may increase the complexity, uncertainty and length of the regulatory approval process for our product candidates. For example, our XpressCF ADC product candidates contain cleavable or non-cleavable linker-warhead combinations or novel warheads that may result in unforeseen events when administered in a human. We and our existing or future collaborators may never receive approval to market and commercialize any product candidate. Even if we or an existing or future collaborator obtains regulatory approval, the approval may be for targets, disease indications or patient populations that are not as broad as we intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. We or an existing or future collaborator may be required to perform additional or unanticipated clinical trials to obtain approval or be subject to post-marketing testing requirements to maintain regulatory approval. If the products resulting from our XpressCF Platform prove to be ineffective, unsafe or commercially unviable, our entire platform and pipeline would have little, if any, value, which would have a material and adverse effect on our business, financial condition, results of operations and prospects.

Results of preclinical studies and early clinical trials may not be predictive of results of future clinical trials.

The outcome of preclinical studies and early clinical trials may not be predictive of the success of later clinical trials, and interim results of clinical trials do not necessarily predict success in future clinical trials. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in earlier development, and we could face similar setbacks. The design of a clinical trial can determine whether its results will support approval of a product and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. We have limited experience in designing clinical trials and may be unable to design and execute a clinical trial to support marketing approval. In addition, preclinical and clinical data are often susceptible to varying interpretations and analyses. Many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval for the product candidates. Even if we, or future collaborators, believe that the results of clinical trials for our product candidates warrant marketing approval, the FDA or comparable foreign regulatory authorities may disagree and may not grant marketing approval of our product candidates.

In some instances, there can be significant variability in safety or efficacy results between different clinical trials of the same product candidate due to numerous factors, including changes in trial procedures set forth in protocols, differences in the size and type of the patient populations, changes in and adherence to the dosing regimen and other clinical trial protocols and the rate of dropout among clinical trial patients. If we fail to receive positive results in clinical trials of our product candidates, the development timeline and regulatory approval and commercialization prospects for our most advanced product candidates, and, correspondingly, our business and financial prospects would be negatively impacted.

The market may not be receptive to our product candidates based on a novel therapeutic modality, and we may not generate any future revenue from the sale or licensing of product candidates.

Even if regulatory approval is obtained for a product candidate, we may not generate or sustain revenue from sales of the product due to factors such as whether the product can be sold at a competitive cost and whether it will otherwise be accepted in the market. Historically, there have been concerns regarding the safety and efficacy of ADCs, and an ADC drug was voluntarily withdrawn from the market. These historical concerns may negatively impact the perception market participants have on ADCs, including our product candidates. Additionally, the product candidates that we are developing are based on our proprietary XpressCF Platform, which is a new technology. Market participants with significant influence over acceptance of new treatments, such as physicians and third- party payors, may not adopt an ADC product, or a product or treatment based on our novel cell-free production technologies, and we may not be able to convince the medical community and third-party payors to accept and use, or to provide favorable reimbursement for, any product candidates developed by us or our existing or future collaborators. Market acceptance of our product candidates will depend on, among other factors:

- the timing of our receipt of any marketing and commercialization approvals;
- the terms of any approvals and the countries in which approvals are obtained;
- the safety and efficacy of our product candidates;
- the prevalence and severity of any adverse side effects associated with our product candidates;
- limitations or warnings contained in any labeling approved by the FDA or other regulatory authority;
- relative convenience and ease of administration of our product candidates;
- the willingness of patients to accept any new methods of administration;
- the success of our physician education programs;
- the availability of coverage and adequate reimbursement from government and third-party payors;
- the pricing of our products, particularly as compared to alternative treatments; and
- the availability of alternative effective treatments for the disease indications our product candidates are intended to treat and the relative risks, benefits and costs of those treatments.

Because our product candidates are based on new technology, we expect that they will require extensive research and development and have substantial manufacturing and processing costs. In addition, our estimates regarding potential market size for any indication may be materially different from what we discover to exist at the time we commence commercialization, if any, for a product, which could result in significant changes in our business plan and have a material adverse effect on our business, financial condition, results of operations and prospects. Moreover, if any product candidate we commercialize fails to achieve market acceptance, it could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We have entered, and may in the future seek to enter, into collaborations with third parties for the development and commercialization of our product candidates using our XpressCF Platform. If we fail to enter into such collaborations, or such collaborations are not successful, we may not be able to capitalize on the market potential of our XpressCF Platform and resulting product candidates.

Since 2014, we have entered into collaborations with Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA, or Merck, Celgene Corporation, or Celgene, and Merck KGaA, Darmstadt, Germany (operating in the United States and Canada under the name “EMD Serono”) to

develop certain cancer therapeutics. In addition, we may in the future seek third-party collaborators for research, development and commercialization of other therapeutic technologies or product candidates. Biopharmaceutical companies are our prior and likely future collaborators for any marketing, distribution, development, licensing or broader collaboration arrangements. With respect to our existing collaboration agreements, and what we expect will be the case with any future collaboration agreements, we have and would expect to have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Moreover, our ability to generate revenues from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates currently pose, and will continue to pose, the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on preclinical studies or clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- collaborators with marketing and distribution rights to one or more products may not commit sufficient resources to the marketing and distribution of such product or products;
- collaborators may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to litigation or potential liability;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability;
- disputes may arise between the collaborators and us that result in the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources; and
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates.

As a result of the foregoing, our current and any future collaboration agreements may not lead to development or commercialization of our product candidates in the most efficient manner or at all. Moreover, if a collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated. Any failure to successfully develop or commercialize our product candidates pursuant to our current or any future collaboration agreements could have a material and adverse effect on our business, financial condition, results of operations and prospects.

To date, no product developed on a cell-free manufacturing platform has received approval from the FDA, so the requirements for the manufacturing of products using our XpressCF Platform are uncertain.

We have invested in our own current Good Manufacturing Practices, or cGMP, compliant manufacturing facility in San Carlos, California. In this facility, we are developing and implementing novel cell-free production technologies to supply our planned preclinical and clinical trials. However, before we may initiate a clinical trial or commercialize any of our product candidates, we must demonstrate to the FDA that the chemistry, manufacturing and controls for our product candidates meet applicable requirements, and in the European Union, or EU, a manufacturing authorization must be obtained from the appropriate EU regulatory authorities. Because no product manufactured on a cell-free manufacturing platform has yet been approved in the United States, there is no manufacturing facility that has demonstrated the ability to comply with FDA requirements, and, therefore, the timeframe for demonstrating compliance to the FDA's satisfaction is uncertain. Delays in establishing that our manufacturing process and facility comply with cGMPs or disruptions in our manufacturing processes, implementation of novel in-house technologies or scale-up activities, may delay or disrupt our development efforts.

We expect that development of our own manufacturing facility will provide us with enhanced control of material supply for preclinical studies, clinical trials and the commercial market, enable the more rapid implementation of process changes and allow for better long-term margins. However, we have limited experience as a company in establishing and operating a manufacturing facility and there exist only a small number of contract manufacturing organizations, or CMOs, with the experience necessary to manufacture our product candidates. We may have difficulty hiring experts for internal manufacturing or finding and maintaining relationships with external CMOs and, accordingly, our production capacity could be limited.

Our existing collaborations with Merck, Celgene and EMD Serono are important to our business. If our collaborators cease development efforts under our existing or future collaboration agreements, or if any of those agreements are terminated, these collaborations may fail to lead to commercial products and we may never receive milestone payments or future royalties under these agreements.

We have entered into collaborations with other biotechnology companies to develop several of our product candidates, and such collaborations currently represent a significant portion of our product pipeline. Substantially all of our revenue to date has been derived from our existing collaboration agreements with Merck, Celgene and EMD Serono, and a significant portion of our future revenue and cash resources is expected to be derived from these agreements or other similar agreements into which we may enter in the future. Revenue from research and development collaborations depends upon continuation of the collaborations, payments for research and development services and product supply, and the achievement of milestones, contingent payments and royalties, if any, derived from future products developed from our research. If we are unable to successfully advance the development of our product candidates or achieve milestones, revenue and cash resources from milestone payments under our collaboration agreements will be substantially less than expected.

We are unable to predict the success of our collaborations and we may not realize the anticipated benefits of our strategic collaborations. Our collaborators have discretion in determining and directing the efforts and resources, including the ability to discontinue all efforts and resources, they apply to the development and, if approval is obtained, commercialization and marketing of the product candidates covered by such collaborations. As a result, our collaborators may elect to de-prioritize our programs, change their strategic focus or pursue alternative technologies in a manner that results in reduced, delayed or no revenue to us. Our collaborators may have other marketed products and product candidates under collaboration with other companies, including some of our competitors, and their

corporate objectives may not be consistent with our best interests. Our collaborators may also be unsuccessful in developing or commercializing our products. If our collaborations are unsuccessful, our business, financial condition, results of operations and prospects could be adversely affected. In addition, any dispute or litigation proceedings we may have with our collaborators in the future could delay development programs, create uncertainty as to ownership of intellectual property rights, distract management from other business activities and generate substantial expense.

Moreover, to the extent that any of our existing or future collaborators were to terminate a collaboration agreement, we may be forced to independently develop these product candidates, including funding preclinical studies or clinical trials, assuming marketing and distribution costs and defending intellectual property rights, or, in certain instances, abandon product candidates altogether, any of which could result in a change to our business plan and have a material adverse effect on our business, financial condition, results of operations and prospects.

We may not successfully engage in strategic transactions, including any additional collaborations we seek, which could adversely affect our ability to develop and commercialize product candidates, impact our cash position, increase our expenses and present significant distractions to our management.

From time to time, we may consider strategic transactions, such as additional collaborations, acquisitions of companies, asset purchases and out- or in-licensing of product candidates or technologies that we believe will complement or augment our existing business. In particular, we will evaluate and, if strategically attractive, seek to enter into additional collaborations, including with major biotechnology or biopharmaceutical companies. The competition for collaborators is intense, and the negotiation process is time-consuming and complex. Any new collaboration may be on terms that are not optimal for us, and we may not be able to maintain any new collaboration if, for example, development or approval of a product candidate is delayed, sales of an approved product candidate do not meet expectations or the collaborator terminates the collaboration. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future strategic partners. Our ability to reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the strategic partner's resources and expertise, the terms and conditions of the proposed collaboration and the proposed strategic partner's evaluation of a number of factors. These factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. Moreover, if we acquire assets with promising markets or technologies, we may not be able to realize the benefit of acquiring such assets due to an inability to successfully integrate them with our existing technologies and we may encounter numerous difficulties in developing, manufacturing and marketing any new products resulting from a strategic acquisition that delay or prevent us from realizing their expected benefits or enhancing our business.

We cannot assure you that following any such collaboration, or other strategic transaction, we will achieve the expected synergies to justify the transaction. For example, such transactions may require us to incur non-recurring or other charges, increase our near- and long-term expenditures and pose significant integration or implementation challenges or disrupt our management or business. These transactions would entail numerous operational and financial risks, including exposure to unknown liabilities, disruption of our business and diversion of our management's time and attention in order to manage a collaboration or develop acquired products, product candidates or technologies, incurrence of substantial debt or dilutive issuances of equity securities to pay transaction consideration or costs, higher than expected collaboration, acquisition or integration costs, write-downs of assets or goodwill

or impairment charges, increased amortization expenses, difficulty and cost in facilitating the collaboration or combining the operations and personnel of any acquired business, impairment of relationships with key suppliers, manufacturers or customers of any acquired business due to changes in management and ownership and the inability to retain key employees of any acquired business. Also, such strategic alliance, joint venture or acquisition may be prohibited. For example, our Loan and Security Agreement, in the absence of SVB's prior written consent, restricts our ability to pursue certain mergers, acquisitions, amalgamations or consolidations that we may believe to be in our best interest.

Accordingly, although there can be no assurance that we will undertake or successfully complete any transactions of the nature described above, any transactions that we do complete may be subject to the foregoing or other risks and would have a material and adverse effect on our business, financial condition, results of operations and prospects. Conversely, any failure to enter any additional collaboration or other strategic transaction that would be beneficial to us could delay the development and potential commercialization of our product candidates and have a negative impact on the competitiveness of any product candidate that reaches market.

We expect to rely on third parties to conduct certain of our preclinical studies or clinical trials. If those third parties do not perform as contractually required, fail to satisfy regulatory or legal requirements or miss expected deadlines, our development program could be delayed with potentially material and adverse effects on our business, financial condition, results of operations and prospects.

We have relied in some cases and intend to rely in the future on third-party clinical investigators, clinical research organizations, or CROs, clinical data management organizations and consultants to assist or provide the design, conduct, supervision and monitoring of preclinical studies and clinical trials of our product candidates. Because we intend to rely on these third parties and will not have the ability to conduct all preclinical studies or clinical trials independently, we will have less control over the timing, quality and other aspects of preclinical studies and clinical trials than we would have had we conducted them on our own. These investigators, CROs and consultants will not be our employees and we will have limited control over the amount of time and resources that they dedicate to our programs. These third parties may have contractual relationships with other entities, some of which may be our competitors, which may draw time and resources from our programs. The third parties with which we may contract might not be diligent, careful or timely in conducting our preclinical studies or clinical trials, resulting in the preclinical studies or clinical trials being delayed or unsuccessful.

If we cannot contract with acceptable third parties on commercially reasonable terms, or at all, or if these third parties do not carry out their contractual duties, satisfy legal and regulatory requirements for the conduct of preclinical studies or clinical trials or meet expected deadlines, our clinical development programs could be delayed and otherwise adversely affected. In all events, we will be responsible for ensuring that each of our preclinical studies and clinical trials are conducted in accordance with the general investigational plan and protocols for the trial. The FDA requires preclinical studies to be conducted in accordance with good laboratory practices and clinical trials to be conducted in accordance with good clinical practices, including for designing, conducting, recording and reporting the results of preclinical studies and clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of clinical trial participants are protected. Our reliance on third parties that we do not control will not relieve us of these responsibilities and requirements. Any adverse development or delay in our preclinical studies or clinical trials as a result of our reliance on third parties could have a material and adverse effect on our business, financial condition, results of operations and prospects.

If we are unable to obtain sufficient raw and intermediate materials on a timely basis or if we experience other manufacturing or supply difficulties, our business may be adversely affected.

The manufacture of certain of our product candidates requires the timely delivery of sufficient amounts of raw and intermediate materials. We work closely with our suppliers to ensure the continuity of supply, but cannot guarantee these efforts will always be successful. Further, while efforts are made to diversify our sources of raw and intermediate materials, in certain instances we acquire raw and intermediate materials from a sole supplier. While we believe that alternative sources of supply exist where we rely on sole supplier relationships, there can be no assurance that we will be able to quickly establish additional or replacement sources for some materials. A reduction or interruption in supply, and an inability to develop alternative sources for such supply, could adversely affect our ability to manufacture our product candidates in a timely or cost-effective manner.

We currently manufacture a portion of our product candidates internally and also rely on third-party manufacturing and supply partners to supply components of our product candidates. Our inability to manufacture sufficient quantities of our product candidates, or the loss of our third-party suppliers, or our or their failure to comply with applicable regulatory requirements or to supply sufficient quantities at acceptable quality levels or prices, or at all, would materially and adversely affect our business.

Manufacturing is a vital component of our business strategy. To ensure timely and consistent product supply we currently use a hybrid product supply approach wherein certain elements of our product candidates are manufactured internally at our manufacturing facilities in San Carlos, California, and other elements are manufactured at qualified third-party CMOs. Since our own manufacturing facilities may be limited or unable to manufacture certain of our preclinical and clinical trial product materials and supplies, we rely on third-party contract manufacturers to manufacture such clinical trial product materials and supplies for our or our collaborator's needs. There can be no assurance that our preclinical and clinical development product supplies will not be limited, interrupted, or of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of our manufacturer could require significant effort and expertise because there may be a limited number of qualified replacements.

The manufacturing process for a product candidate is subject to FDA and foreign regulatory authority review. We, and our suppliers and manufacturers, must meet applicable manufacturing requirements and undergo rigorous facility and process validation tests required by regulatory authorities in order to comply with regulatory standards, such as cGMPs. If we or our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or comparable foreign regulatory authorities, we may not be able to rely on our or their manufacturing facilities for the manufacture of elements of our product candidates. Moreover, we do not control the manufacturing process at our contract manufacturers, and are completely dependent on them for compliance with current regulatory requirements. In the event that any of our manufacturers fails to comply with such requirements or to perform its obligations in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, we may be forced to manufacture the materials ourselves or enter into an agreement with another third party, which we may not be able to do on reasonable terms, if at all. In some cases, the technical skills or technology required to manufacture our product candidates may be unique or proprietary to the original manufacturer and we may have difficulty applying such skills or technology ourselves, or in transferring such to another third party. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to enable us, or to have another third party, manufacture our product candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines; and we may be required to repeat some of the development

program. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop product candidates in a timely manner or within budget.

We expect to continue to rely on third-party manufacturers if we receive regulatory approval for any product candidate. To the extent that we have existing, or enter into future, manufacturing arrangements with third parties, we will depend on these third parties to perform their obligations in a timely manner consistent with contractual and regulatory requirements, including those related to quality control and assurance. If we are unable to obtain or maintain third-party manufacturing for product candidates, or to do so on commercially reasonable terms, we may not be able to develop and commercialize our product candidates successfully. Our or a third party's failure to execute on our manufacturing requirements and comply with cGMPs could adversely affect our business in a number of ways, including:

- an inability to initiate or continue clinical trials of product candidates under development;
- delay in submitting regulatory applications, or receiving regulatory approvals, for product candidates;
- loss of the cooperation of an existing or future collaborator;
- subjecting third-party manufacturing facilities or our manufacturing facilities to additional inspections by regulatory authorities;
- requirements to cease distribution or to recall batches of our product candidates; and
- in the event of approval to market and commercialize a product candidate, an inability to meet commercial demands for our products.

Additionally, we and our contract manufacturers may experience manufacturing difficulties due to resource constraints or as a result of labor disputes or unstable political environments. If we or our contract manufacturers were to encounter any of these difficulties, our ability to provide our product candidates to patients in pre-clinical and clinical trials, or to provide product for treatment of patients once approved, would be jeopardized.

We, or third-party manufacturers, may be unable to successfully scale-up manufacturing of our product candidates in sufficient quality and quantity, which would delay or prevent us from developing our product candidates and commercializing approved products, if any.

In order to conduct clinical trials of our product candidates, we will need to manufacture them in large quantities. We, or any manufacturing partners, may be unable to successfully increase the manufacturing capacity for any of our product candidates in a timely or cost-effective manner, or at all. In addition, quality issues may arise during scale-up activities. If we, or any manufacturing partners, are unable to successfully scale up the manufacture of our product candidates in sufficient quality and quantity, the development, testing, and clinical trials of that product candidate may be delayed or infeasible, and regulatory approval or commercial launch of any resulting product may be delayed or not obtained, which could significantly harm our business.

The manufacture of biologics is complex and we or our third-party manufacturers may encounter difficulties in production. If we or any of our third-party manufacturers encounter such difficulties, our ability to provide supply of our product candidates for clinical trials, our ability to obtain marketing approval, or our ability to provide supply of our products for patients, if approved, could be delayed or stopped.

Our product candidates are considered to be biologics and the process of manufacturing biologics is complex, time-consuming, highly regulated and subject to multiple risks. We and our contract manufacturers must comply with cGMPs, regulations and guidelines for the manufacturing of biologics used in clinical trials and, if approved, marketed products. To date, we and our contract manufacturers have limited experience in the manufacturing of cGMP batches of our product candidates.

Manufacturing biologics is highly susceptible to product loss due to contamination, equipment failure, improper installation or operation of equipment, vendor or operator error, inconsistency in yields, variability in product characteristics and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered at our manufacturing facilities or those of our third-party manufacturers, such facilities may need to be closed for an extended period of time to investigate and remedy the contamination, which could delay clinical trials and adversely harm our business. Moreover, if the FDA determines that our manufacturing facilities or those of our third-party manufacturers are not in compliance with FDA laws and regulations, including those governing cGMPs, the FDA may deny BLA approval until the deficiencies are corrected or we replace the manufacturer in our BLA with a manufacturer that is in compliance.

In addition, there are risks associated with large scale manufacturing for clinical trials or commercial scale including, among others, cost overruns, potential problems with process scale-up, process reproducibility, stability issues, compliance with cGMPs, lot consistency and timely availability of raw materials. Even if we or our collaborators obtain regulatory approval for any of our product candidates, there is no assurance that manufacturers will be able to manufacture the approved product to specifications acceptable to the FDA or other regulatory authorities, to produce it in sufficient quantities to meet the requirements for the potential launch of the product or to meet potential future demand. If our manufacturers are unable to produce sufficient quantities for clinical trials or for commercialization, commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and prospects.

Scaling up a biologic manufacturing process is a difficult and uncertain task, and we may not be successful in transferring our production system or our third-party manufacturers may not have the necessary capabilities to complete the implementation and development process. If we are unable to adequately validate or scale-up the manufacturing process at our own manufacturing facilities or those of our current manufacturers, we will need to transfer to another manufacturer and complete the manufacturing validation process, which can be lengthy. If we are able to adequately validate and scale-up the manufacturing process for our product candidates at our manufacturing facility or with a contract manufacturer, we will still need to negotiate with such contract manufacturer an agreement for commercial supply and it is not certain we will be able to come to agreement on terms acceptable to us.

We cannot assure you that any stability or other issues relating to the manufacture of any of our product candidates or products will not occur in the future. If we or our third-party manufacturers were to encounter any of these difficulties, our ability to provide any product candidates to patients in planned clinical trials and products to patients, once approved, would be jeopardized. Any delay or interruption in the supply of clinical trial supplies could delay the completion of planned clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense or terminate clinical trials completely. Any adverse developments affecting clinical or commercial manufacturing of our product candidates or products may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our product candidates or products. We may also have to take inventory write-offs and incur other charges and expenses for product candidates or products that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives. Accordingly, failures or difficulties faced at any level of our supply chain could adversely affect our business and delay or impede the development and commercialization of any of our product candidates or products, if approved, and could have an adverse effect on our business, prospects, financial condition and results of operations.

As part of our process development efforts, we also may make changes to our manufacturing processes at various points during development, for various reasons, such as controlling costs, achieving scale, decreasing processing time, increasing manufacturing success rate or other reasons. Such changes carry the risk that they will not achieve their intended objectives, and any of these changes could cause our product candidates to perform differently and affect the results of our ongoing clinical trials or future clinical trials. In some circumstances, changes in the manufacturing process may require us to perform *ex vivo* comparability studies and to collect additional data from patients prior to undertaking more advanced clinical trials. For instance, changes in our process during the course of clinical development may require us to show the comparability of the product used in earlier clinical phases or at earlier portions of a trial to the product used in later clinical phases or later portions of the trial.

We may not be successful in our efforts to use our XpressCF Platform to expand our pipeline of product candidates and develop marketable products.

The success of our business depends in large part upon our ability to identify, develop and commercialize products based on our XpressCF Platform. STRO-001 and STRO-002 are our primary clinical and late-stage preclinical programs and our research programs may fail to identify other potential product candidates for clinical development for a number of reasons. Our research methodology may be unsuccessful in identifying potential product candidates or our potential product candidates may be shown to have harmful side effects or may have other characteristics that may make the products unmarketable or unlikely to receive marketing approval. If any of these events occur, we may be forced to abandon our development efforts for a program or for multiple programs, which would materially harm our business and could potentially cause us to cease operations. Research programs to identify new product candidates require substantial technical, financial and human resources. We may focus our efforts and resources on potential programs or product candidates that ultimately prove to be unsuccessful.

We may expend our limited resources to pursue a particular product candidate and fail to capitalize on product candidates that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus our research and development efforts on certain selected product candidates. As a result, we may forgo or delay pursuit of opportunities with other product candidates that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable product candidates. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

Failure to successfully validate, develop and obtain regulatory approval for companion diagnostics for our product candidates could harm our drug development strategy and operational results.

If companion diagnostics are developed in conjunction with clinical programs, the FDA may require regulatory approval of a companion diagnostic as a condition to approval of the product candidate. For example, if we use a diagnostic test to determine which patients are most likely to benefit from STRO-001 for the treatment of multiple myeloma and non-Hodgkin lymphoma by designing our pivotal trial or trials of STRO-001 in that indication to require that clinical trial patients have elevated CD74 expression as a criterion for enrollment, then we will likely be required to obtain FDA approval or

clearance of a companion diagnostic, concurrent with approval of STRO-001, to test for elevated CD74 expression; we may also be required to demonstrate to the FDA the predictive utility of the companion diagnostic—namely, that the diagnostic selects for patients in whom the biologic therapy will be effective or more effective compared to patients not selected for by the diagnostic. Similarly, as we are developing STRO-002 for a potential indication in patients with elevated FOLR a expression levels, we will likely be required to obtain FDA approval or clearance of a companion diagnostic, concurrent with approval of STRO-002, to test for elevated FOLR a expression. We do not have experience or capabilities in developing or commercializing diagnostics and plan to rely in large part on third parties to perform these functions. We do not currently have any agreement in place with any third party to develop or commercialize companion diagnostics for any of our product candidates. Companion diagnostics are subject to regulation by the FDA and foreign regulatory authorities as medical devices and require separate regulatory approval or clearance prior to commercialization.

If we or our collaborators, or any third party, are unable to successfully develop companion diagnostics for our product candidates, or experience delays in doing so:

- the development of our product candidates may be adversely affected if we are unable to appropriately select patients for enrollment in our planned clinical trials;
- our product candidates may not receive marketing approval if their safe and effective use depends on a companion diagnostic; and
- we may not realize the full commercial potential of any product candidates that receive marketing approval if, among other reasons, we are unable to appropriately identify patients with the specific genetic alterations targeted by our product candidates.

In addition, although we believe genetic testing is becoming more prevalent in the diagnosis and treatment of various diseases and conditions, our product candidates may be perceived negatively compared to alternative treatments that do not require the use of companion diagnostics, either due to the additional cost of the companion diagnostic or the need to complete additional procedures to identify genetic markers prior to administering our product candidates. If any of these events were to occur, our business would be harmed, possibly materially.

We face competition from entities that have developed or may develop product candidates for cancer, including companies developing novel treatments and technology platforms. If these companies develop technologies or product candidates more rapidly than we do or their technologies are more effective, our ability to develop and successfully commercialize product candidates may be adversely affected.

The development and commercialization of drugs and therapeutic biologics is highly competitive. Our product candidates, if approved, will face significant competition and our failure to effectively compete may prevent us from achieving significant market penetration. Most of our competitors have significantly greater resources than we do and we may not be able to successfully compete. We compete with a variety of multinational biopharmaceutical companies, specialized biotechnology companies and emerging biotechnology companies, as well as with technologies and product candidates being developed at universities and other research institutions. Our competitors have developed, are developing or will develop product candidates and processes competitive with our product candidates and processes. Competitive therapeutic treatments include those that have already been approved and accepted by the medical community and any new treatments, including those based on novel technology platforms, that enter the market. We believe that a significant number of products are currently under development, and may become commercially available in the future, for the treatment of conditions for which we are trying, or may try, to develop product candidates. There is intense and rapidly evolving competition in the biotechnology, biopharmaceutical and antibody and immunoregulatory therapeutics fields. While we believe that our XpressCF Platform, associated

intellectual property and our scientific and technical know-how give us a competitive advantage in this space, competition from many sources exists or may arise in the future. Our competitors include larger and better funded biopharmaceutical, biotechnological and therapeutics companies, including companies focused on cancer immunotherapies, such as AstraZeneca PLC, Bristol-Myers Squibb Company, or BMS, GlaxoSmithKline PLC, Merck & Co., Inc., Novartis AG, Pfizer Inc., or Pfizer, Roche Holding Ltd, Sanofi S.A and companies focused on ADCs, such as Pfizer, ImmunoGen, Inc., or Immunogen, Seattle Genetics, Inc., or Seattle Genetics, and Genentech, Inc., or Genentech, as well as numerous small companies. Moreover, we also compete with current and future therapeutics developed at universities and other research institutions.

We are aware of several companies that are developing ADCs, bispecific antibodies and cancer immunotherapies. Many of these companies are well-capitalized and, in contrast to us, have significant clinical experience, and may include our existing or future collaborators. In addition, these companies compete with us in recruiting scientific and managerial talent.

Our success will depend partially on our ability to develop and protect therapeutics that are safer and more effective than competing products. Our commercial opportunity and success will be reduced or eliminated if competing products are safer, more effective, or less expensive than the therapeutics we develop.

If our lead product candidates are approved, they will compete with a range of therapeutic treatments that are either in development or currently marketed. Currently marketed oncology drugs and therapeutics range from ADCs, such as Genentech's Kadcyla, to immune checkpoint inhibitors such as BMS's Opdivo to T cell-engager immunotherapies such as Amgen, Inc.'s Blincyto. In addition, numerous compounds are in clinical development for cancer treatment. With respect to B cell based malignancies, such as multiple myeloma, the most common treatments are chemotherapeutic compounds, radiation therapy, stem cell transplantation and immunomodulating agents. The clinical development pipeline for cancer includes small molecules, antibodies, vaccines, cell therapies and immunotherapies from a variety of companies and institutions.

Many of our competitors have significantly greater financial, technical, manufacturing, marketing, sales and supply resources or experience than we have. If we successfully obtain approval for any product candidate, we will face competition based on many different factors, including the safety and effectiveness of our products, the ease with which our products can be administered and the extent to which patients accept relatively new routes of administration, the timing and scope of regulatory approvals for these products, the availability and cost of manufacturing, marketing and sales capabilities, price, reimbursement coverage and patent position. Competing products could present superior treatment alternatives, including by being more effective, safer, less expensive or marketed and sold more effectively than any products we may develop. Competitive products may make any products we develop obsolete or noncompetitive before we recover the expense of developing and commercializing our product candidates. Such competitors could also recruit our employees, which could negatively impact our level of expertise and our ability to execute our business plan.

Any inability to attract and retain qualified key management and technical personnel would impair our ability to implement our business plan.

Our success largely depends on the continued service of key management, advisors and other specialized personnel, including William J. Newell, our chief executive officer, Edward Albini, our chief financial officer, Trevor J. Hallam, Ph.D., our chief scientific officer, Arturo Molina, M.D., our chief medical officer and Shabbir T. Anik, Ph.D., our chief technical operations officer. The loss of one or more members of our management team or other key employees or advisors could delay our research and development programs and have a material and adverse effect on our business, financial condition, results of operations and prospects. The relationships that our key managers have cultivated

within our industry make us particularly dependent upon their continued employment with us. We are dependent on the continued service of our technical personnel because of the highly technical nature of our product candidates and XpressCF Platform technologies and the specialized nature of the regulatory approval process. Because our management team and key employees are not obligated to provide us with continued service, they could terminate their employment with us at any time without penalty. Our future success will depend in large part on our continued ability to attract and retain other highly qualified scientific, technical and management personnel, as well as personnel with expertise in clinical testing, manufacturing, governmental regulation and commercialization. We face competition for personnel from other companies, universities, public and private research institutions, government entities and other organizations. If we are unable to continue to attract and retain high-quality personnel, the rate and success at which we can discover and develop product candidates will be limited which could have a material and adverse effect on our business, financial condition, results of operations and prospects.

We will need to grow our organization, and we may experience difficulties in managing our growth and expanding our operations.

As of June 30, 2018, we had 128 full-time employees. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to expand our employee base for managerial, operational, financial and other resources. In addition, we have limited experience in product development and have just begun our first clinical trial for our first product candidate. As our product candidates enter and advance through preclinical studies and clinical trials, we will need to expand our development, regulatory and manufacturing capabilities or contract with other organizations to provide these capabilities for us. In the future, we expect to have to manage additional relationships with collaborators or partners, suppliers and other organizations. Our ability to manage our operations and future growth will require us to continue to improve our operational, financial and management controls, reporting systems and procedures. We may not be able to implement improvements to our management information and control systems in an efficient or timely manner and may discover deficiencies in existing systems and controls. Our inability to successful managing our growth and expand our operations could have a material and adverse effect on our business, financial condition, results of operations and prospects.

If any of our product candidates are approved for marketing and commercialization and we are unable to develop sales, marketing and distribution capabilities on our own or enter into agreements with third parties to perform these functions on acceptable terms, we will be unable to commercialize successfully any such future products.

We currently have no sales, marketing or distribution capabilities or experience. If any of our product candidates are approved, we will need to develop internal sales, marketing and distribution capabilities to commercialize such products, which would be expensive and time consuming, or enter into collaborations with third parties to perform these services. If we decide to market our products directly, we will need to commit significant financial and managerial resources to develop a marketing and sales force with technical expertise and supporting distribution, administration and compliance capabilities. If we rely on third parties with such capabilities to market our products or decide to co-promote products with collaborators, we will need to establish and maintain marketing and distribution arrangements with third parties, and there can be no assurance that we will be able to enter into such arrangements on acceptable terms or at all. In entering into third-party marketing or distribution arrangements, any revenue we receive will depend upon the efforts of the third parties and there can be no assurance that such third parties will establish adequate sales and distribution capabilities or be successful in gaining market acceptance of any approved product. If we are not successful in commercializing any product approved in the future, either on our own or through third parties, our business, financial condition, results of operations and prospects could be materially and adversely affected.

Our future growth may depend, in part, on our ability to operate in foreign markets, where we would be subject to additional regulatory burdens and other risks and uncertainties.

Our future growth may depend, in part, on our ability to develop and commercialize our product candidates in foreign markets for which we may rely on collaboration with third parties. We are not permitted to market or promote any of our product candidates before we receive regulatory approval from the applicable regulatory authority in that foreign market, and may never receive such regulatory approval for any of our product candidates. To obtain separate regulatory approval in many other countries, we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of our product candidates, and we cannot predict success in these jurisdictions. If we fail to comply with the regulatory requirements in international markets and receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed and our business will be adversely affected. We may not obtain foreign regulatory approvals on a timely basis, if at all. Our failure to obtain approval of any of our product candidates by regulatory authorities in another country may significantly diminish the commercial prospects of that product candidate and our business, financial condition, results of operations and prospects could be materially and adversely affected. Moreover, even if we obtain approval of our product candidates and ultimately commercialize our product candidates in foreign markets, we would be subject to the risks and uncertainties, including the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements and reduced protection of intellectual property rights in some foreign countries.

Price controls imposed in foreign markets may adversely affect our future profitability.

In some countries, particularly member states of the EU, the pricing of prescription drugs is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after receipt of marketing approval for a product. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various EU member states and parallel distribution, or arbitrage between low-priced and high-priced member states, can further reduce prices. In some countries, we or current or future collaborators may be required to conduct a clinical trial or other studies that compare the cost-effectiveness of our therapeutic candidates to other available therapies in order to obtain or maintain reimbursement or pricing approval. Publication of discounts by third-party payors or authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries. If reimbursement of any product candidate approved for marketing is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business, financial condition, results of operations or prospects could be materially and adversely affected.

Our business entails a significant risk of product liability and our ability to obtain sufficient insurance coverage could have a material and adverse effect on our business, financial condition, results of operations and prospects.

As we are conducting clinical trials of our product candidates we may be exposed to significant product liability risks inherent in the development, testing, manufacturing and marketing of therapeutic treatments. Product liability claims could delay or prevent completion of our development programs. If we succeed in marketing products, such claims could result in an FDA investigation of the safety and effectiveness of our products, our manufacturing processes and facilities or our marketing programs and potentially a recall of our products or more serious enforcement action, limitations on the approved indications for which they may be used or suspension or withdrawal of approvals. Regardless of the merits or eventual outcome, liability claims may also result in decreased demand for our products,

injury to our reputation, costs to defend the related litigation, a diversion of management's time and our resources, substantial monetary awards to trial participants or patients and a decline in our stock price. While we currently have product liability insurance that we believe is appropriate for our stage of development, we may need to obtain higher levels prior to later stages of clinical development or marketing any of our product candidates. Any insurance we have or may obtain may not provide sufficient coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance at a reasonable cost to protect us against losses caused by product liability claims that could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

As with all companies, we are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with FDA regulations, provide accurate information to the FDA, comply with manufacturing standards we may establish, comply with federal and state healthcare fraud and abuse laws and regulations, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a material and adverse effect on our business, financial condition, results of operations and prospects, including the imposition of significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, the curtailment or restructuring of our operations, loss of eligibility to obtain approvals from the FDA, exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, integrity oversight and reporting obligations, or reputational harm.

We depend on our information technology systems, and any failure of these systems, or those of our CROs or other contractors or consultants we may utilize, could harm our business. Security breaches, loss of data, and other disruptions could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business, results of operations, financial condition and prospects.

We collect and maintain information in digital form that is necessary to conduct our business, and we are increasingly dependent on information technology systems and infrastructure to operate our business. In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information and personal information. It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such confidential information. We have established physical, electronic and organizational measures to safeguard and secure our systems to prevent a data compromise, and rely on commercially available systems, software, tools, and monitoring to provide security for our information technology systems and the processing, transmission and storage of digital information. We have also outsourced elements of our information technology infrastructure, and as a result a number of third-party vendors may or

could have access to our confidential information. Our internal information technology systems and infrastructure, and those of our current and any future collaborators, contractors and consultants and other third parties on which we rely, are vulnerable to damage from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyber-attacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization.

The risk of a security breach or disruption or data loss, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. In addition, the prevalent use of mobile devices that access confidential information increases the risk of data security breaches, which could lead to the loss of confidential information or other intellectual property. The costs to us to mitigate network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and while we have implemented security measures to protect our data security and information technology systems, our efforts to address these problems may not be successful, and these problems could result in unexpected interruptions, delays, cessation of service and other harm to our business and our competitive position. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Moreover, if a computer security breach affects our systems or results in the unauthorized release of personally identifiable information, our reputation could be materially damaged. In addition, such a breach may require notification to governmental agencies, the media or individuals pursuant to various federal and state privacy and security laws, if applicable, including the Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and its implementing rules and regulations, as well as regulations promulgated by the Federal Trade Commission and state breach notification laws. We would also be exposed to a risk of loss or litigation and potential liability, which could materially adversely affect our business, results of operations, financial condition and prospects.

Our information technology systems could face serious disruptions that could adversely affect our business.

Our information technology and other internal infrastructure systems, including corporate firewalls, servers, leased lines and connection to the Internet, face the risk of systemic failure that could disrupt our operations. A significant disruption in the availability of our information technology and other internal infrastructure systems could cause interruptions and delays in our research and development and manufacturing work.

The terms of our Loan and Security Agreement require us to meet certain covenants and place restrictions on our operating and financial flexibility. If we raise additional capital through debt financing, the terms of any new debt could further restrict our ability to operate our business.

The Loan and Security Agreement is secured by a lien covering all of our assets, excluding our intellectual property and certain other assets. Subject to the terms of the Loan and Security Agreement, we have the option to prepay all, but not less than all, of the amounts borrowed under the Loan and Security Agreement, subject to certain penalty payments, prior to the August 1, 2021 maturity date, at which time all amounts borrowed will be due and payable.

In connection with the Loan and Security Agreement, we issued Oxford and SVB warrants to purchase shares of Series D-2 redeemable convertible preferred stock, which, in connection with the initial closing of our Series E redeemable preferred stock financing, converted into warrants to purchase Series E redeemable convertible preferred stock.

The Loan and Security Agreement contains customary affirmative and negative covenants, indemnification provisions and events of default. The affirmative covenants include, among others, covenants requiring us to maintain our legal existence and governmental approvals, deliver certain financial reports and maintain certain intellectual property rights. The negative covenants include, among others, restrictions on transferring or licensing our assets, changing our business, incurring additional indebtedness, engaging in mergers or acquisitions, paying dividends or making other distributions, and creating other liens on our assets, in each case subject to customary exceptions. If we default under the Loan and Security Agreement, the lenders will be able to declare all obligations immediately due and payable and take control of our collateral, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. Further, if we are liquidated, the rights of Oxford and SVB to repayment would be senior to the rights of the holders of our common stock to receive any proceeds from the liquidation. Oxford, acting as collateral agent for the lenders, could declare a default under the Loan and Security Agreement upon the occurrence of any event that Oxford and SVB interpret as a material adverse change as defined under the Loan and Security Agreement, thereby requiring us to repay the loan immediately or to attempt to reverse the declaration of default through negotiation or litigation. Any declaration by the collateral agent of an event of default could significantly harm our business and prospects and could cause the price of our common stock to decline. If we raise any additional debt financing, the terms of such additional debt could further restrict our operating and financial flexibility.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be affected adversely.

Our research, development and manufacturing involves the use of hazardous chemicals and materials, including radioactive materials. We maintain quantities of various flammable and toxic chemicals in our facilities in South San Francisco and San Carlos, California that are required for our research, development and manufacturing activities. We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous chemicals and materials. We believe our procedures for storing, handling and disposing these materials in our South San Francisco and San Carlos facilities comply with the relevant guidelines of the two municipalities, the counties of San Francisco and San Mateo, the state of California and the Occupational Safety and Health Administration of the U.S. Department of Labor. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards mandated by applicable regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of animals and biohazardous materials. Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of these materials, this insurance may not provide adequate coverage against potential liabilities. While we maintain pollution legal liability insurance for our manufacturing facility in San Carlos, California, we do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological or hazardous materials in our other locations. Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. We may incur substantial costs to comply with, and substantial fines or penalties if we violate, any of these laws or regulations.

Our current operations are in two cities in the San Francisco Bay Area, and we or the third parties upon whom we depend may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Our current operations are located in our facilities in South San Francisco and San Carlos, California. Any unplanned event, such as earthquake, flood, fire, explosion, extreme weather condition,

medical epidemic, power shortage, telecommunication failure or other natural or manmade accidents or incidents that result in us being unable to fully utilize our facilities, or the manufacturing facilities of our third-party contract manufacturers, may have a material and adverse effect on our ability to operate our business, particularly on a daily basis, and have significant negative consequences on our financial and operating conditions. Loss of access to these facilities may result in increased costs, delays in the development of our product candidates or interruption of our business operations. Earthquakes or other natural disasters could further disrupt our operations, and have a material and adverse effect on our business, financial condition, results of operations and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as our research or manufacturing facilities or the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible, for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which could have a material adverse effect on our business. As part of our risk management policy, we maintain insurance coverage at levels that we believe are appropriate for our business. However, in the event of an accident or incident at these facilities, we cannot assure you that the amounts of insurance will be sufficient to satisfy any damages and losses. If our facilities, or the manufacturing facilities of our third-party contract manufacturers, are unable to operate because of an accident or incident or for any other reason, even for a short period of time, any or all of our research and development programs may be harmed. Any business interruption could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an “ownership change” (generally defined as a greater than 50 percentage points change (by value) in the ownership of its equity over a rolling three-year period), the corporation’s ability to use its pre-change net operating loss, or NOL, carryforwards and certain other pre-change tax attributes to offset its post-change income and taxes may be limited. We have experienced such ownership changes in the past, and we may have experienced a further ownership change in connection with the Series E redeemable convertible preferred stock financing, as a result of the price at which the shares were issued and the number of shares that were issued. Moreover, we may experience ownership changes in the future as a result of this offering and the concurrent private placement or subsequent shifts in our stock ownership, some of which are outside our control. As of December 31, 2017, we had federal NOL carryforwards of approximately $91.6 million, and our ability to utilize those NOL carryforwards could be limited by an “ownership change” as described above, which could result in increased tax liability to our company.

On December 22, 2017, the current U.S. presidential administration, signed into law the Tax Cuts and Jobs Act of 2017, or the Tax Reform Act. The legislation significantly changes U.S. tax law by, among other things, lowering the corporate income tax rates. The Tax Reform Act permanently reduces the U.S. corporate income tax rate from a maximum of 35% to a flat 21% rate, effective January 1, 2018. Additionally, the Tax Reform Act will no longer allow deductions for compensation in excess of $1.0 million for certain employees, even if paid as commissions or performance-based compensation. We may be subject to these limitations as provided for under Section 162(m) of the Code in the future. The Tax Reform Act also limits the amount taxpayers are able to deduct for federal NOL carryforwards generated in taxable years beginning after December 31, 2017 to 80% of the taxpayer’s taxable income. The law also generally repeals all carrybacks. However, any NOLs generated in taxable years after December 31, 2017 can be carried forward indefinitely. Losses arising in taxable years beginning before December 31, 2017 may still be carried back two years and are

subject to their current expiration period. As of December 31, 2017, we have approximately $91.6 million of federal NOLs that were generated prior to 2018 which will expire at various dates beginning in 2032, if not used to reduce income taxes payable in the future. Federal NOLs generated by us subsequent to 2017 may only offset 80% of taxable income.

The Securities and Exchange Commission, or SEC, staff issued Staff Accounting Bulletin No. 118 to address the application of generally accepted accounting principles in the United States in situations when a registrant does not have the necessary information available, prepared or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Reform Act. We have recognized provision tax impacts related to the revaluation of deferred tax assets and liabilities and included this amount in our financial statements for the year ended December 31, 2017. The ultimate impact may differ from these provision amounts, due to, among other things, additional analysis, changes in interpretations and assumptions we have made, additional regulatory guidance that may be issued and actions we may take as a result of the Tax Reform Act. The accounting is expected to be complete when the 2017 U.S. corporate income tax return is filed in 2018.

Risks Related to Intellectual Property

If we are not able to obtain and enforce patent protection for our technologies or product candidates, development and commercialization of our product candidates may be adversely affected.

Our success depends in part on our ability to obtain and maintain patents and other forms of intellectual property rights, including in-licenses of intellectual property rights of others, for our product candidates, methods used to manufacture our product candidates and methods for treating patients using our product candidates, as well as our ability to preserve our trade secrets, to prevent third parties from infringing upon our proprietary rights and to operate without infringing upon the proprietary rights of others. As of June 30, 2018, we solely own 25 issued patents and 93 pending patent applications; and, under an exclusive, worldwide license agreement with The Board of Trustees of the Leland Stanford Junior University, the Stanford Agreement, we licensed 59 issued patents with claims relating to methods related to expression of the protein components of our product candidates using our XpressCF Platform. We may not be able to apply for patents on certain aspects of our product candidates in a timely fashion or at all. Further, we may not be able to prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. We may not have the right to control the preparation, filing and prosecution of all patent applications that we license from third parties, or to maintain the rights to patents licensed to third parties. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. Our existing issued and granted patents and any future patents we obtain may not be sufficiently broad to prevent others from using our technology or from developing competing products and technology. There is no guarantee that any of our pending patent applications will result in issued or granted patents, that any of our issued or granted patents will not later be found to be invalid or unenforceable or that any issued or granted patents will include claims that are sufficiently broad to cover our product candidates or to provide meaningful protection from our competitors. Moreover, the patent position of biotechnology and biopharmaceutical companies can be highly uncertain because it involves complex legal and factual questions. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our current and future proprietary technology and product candidates are covered by valid and enforceable patents or are effectively maintained as trade secrets. If third parties disclose or misappropriate our proprietary rights, it may materially and adversely affect our position in the market.

The U.S. Patent and Trademark Office, or USPTO, and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other provisions during the patent process. There are situations in which noncompliance can result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case. The standards applied by the USPTO and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in biotechnology and biopharmaceutical patents. As such, we do not know the degree of future protection that we will have on our proprietary products and technology. While we will endeavor to try to protect our product candidates with intellectual property rights such as patents, as appropriate, the process of obtaining patents is time consuming, expensive and sometimes unpredictable.

Once granted, patents may remain open to opposition, interference, re-examination, post-grant review, *inter partes* review, nullification or derivation action in court or before patent offices or similar proceedings for a given period after allowance or grant, during which time third parties can raise objections against such initial grant. In the course of such proceedings, which may continue for a protracted period of time, the patent owner may be compelled to limit the scope of the allowed or granted claims thus attacked, or may lose the allowed or granted claims altogether. In addition, there can be no assurance that:

- others will not or may not be able to make, use or sell compounds that are the same as or similar to our product candidates but that are not covered by the claims of the patents that we own or license;
- we or our licensors, or our existing or future collaborators are the first to make the inventions covered by each of our issued patents and pending patent applications that we own or license;
- we or our licensors, or our existing or future collaborators are the first to file patent applications covering certain aspects of our inventions;
- others will not independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- a third party may not challenge our patents and, if challenged, a court would hold that our patents are valid, enforceable and infringed;
- any issued patents that we own or have licensed will provide us with any competitive advantages, or will not be challenged by third parties;
- we may develop additional proprietary technologies that are patentable;
- the patents of others will not have a material or adverse effect on our business, financial condition, results of operations and prospects; and
- our competitors do not conduct research and development activities in countries where we do not have enforceable patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets.

If we or our licensors or collaborators fail to maintain the patents and patent applications covering our product candidates, our competitors might be able to enter the market, which could have a material and adverse effect on our business, financial condition, results of operations and prospects.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patent protection for certain aspects of our product candidates, we also consider trade secrets, including confidential and unpatented know-how important to the maintenance of our competitive position. We protect trade secrets and confidential and unpatented know-how, in

part, by entering into non-disclosure and confidentiality agreements with parties who have access to such knowledge, such as our employees, corporate collaborators, outside scientific collaborators, CROs, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants that obligate them to maintain confidentiality and assign their inventions to us. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time- consuming, and the outcome is unpredictable. In addition, some courts in the United States and certain foreign jurisdictions are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed which could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Other companies or organizations may challenge our or our licensors' patent rights or may assert patent rights that prevent us from developing and commercializing our products.

Therapeutics in oncology or other disease areas developed in cell-free-based synthesis systems are a relatively new scientific field. We have obtained grants and issuances of, and have obtained a license from a third party on an exclusive basis to, patents related to our proprietary XpressCF Platform. The issued patents and pending patent applications in the United States and in key markets around the world that we own or license claim many different methods, compositions and processes relating to the discovery, development, manufacture and commercialization of antibody-based and other therapeutics.

As the field of antibody-based therapeutics continues to mature, patent applications are being processed by national patent offices around the world. There is uncertainty about which patents will issue and, if they do, as to when, to whom, and with what claims. In addition, third parties may attempt to invalidate our intellectual property rights. Even if our rights are not directly challenged, disputes could lead to the weakening of our intellectual property rights. Our defense against any attempt by third parties to circumvent or invalidate our intellectual property rights could be costly to us, could require significant time and attention of our management and could have a material and adverse effect on our business, financial condition, results of operations and prospects or our ability to successfully compete.

We may not be able to protect our intellectual property rights throughout the world.

Obtaining a valid and enforceable issued or granted patent covering our technology in the United States and worldwide can be extremely costly, and our or our licensors' or collaborators' intellectual property rights may not exist in some countries outside the United States or may be less extensive in some countries than in the United States. In jurisdictions where we or our licensors or collaborators have not obtained patent protection, competitors may seek to use our or their technology to develop their own products and further, may export otherwise infringing products to territories where we or they have patent protection, but where it is more difficult to enforce a patent as compared to the United States. Competitor products may compete with our future products in jurisdictions where we do not have issued or granted patents or where our or our licensors' or collaborators' issued or granted patent claims or other intellectual property rights are not sufficient to prevent competitor activities in these jurisdictions. The legal systems of certain countries, particularly certain developing countries, make it difficult to enforce patents and such countries may not recognize other types of intellectual property protection, particularly relating to biopharmaceuticals. This could make it difficult for us or our licensors or collaborators to prevent the infringement of our or their patents or marketing of competing products in violation of our or their proprietary rights generally in certain jurisdictions. Proceedings to enforce our

patent rights in foreign jurisdictions could result in substantial cost and divert our and our licensors' or collaborators' efforts and attention from other aspects of our business, could put our and our licensors' or collaborators' patents at risk of being invalidated or interpreted narrowly and our and our licensors' or collaborators' patent applications at risk of not issuing and could provoke third parties to assert claims against us or our licensors or collaborators. We or our licensors or collaborators may not prevail in any lawsuits that we or our licensors or collaborators initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful.

We generally file a provisional patent application first (a priority filing) at the USPTO. An international application under the Patent Cooperation Treaty, PCT, is usually filed within twelve months after the priority filing. Based on the PCT filing, national and regional patent applications may be filed in the United States, EU, Japan, Australia and Canada and, depending on the individual case, also in any or all of, inter alia, Brazil, China, Hong Kong, India, Israel, Mexico, New Zealand, Russia, South Africa, South Korea and other jurisdictions. We have so far not filed for patent protection in all national and regional jurisdictions where such protection may be available. In addition, we may decide to abandon national and regional patent applications before grant. Finally, the grant proceeding of each national or regional patent is an independent proceeding which may lead to situations in which applications might in some jurisdictions be refused by the relevant registration authorities, while granted by others. It is also quite common that depending on the country, various scopes of patent protection may be granted on the same product candidate or technology.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws in the United States, and many companies have encountered significant difficulties in protecting and defending such rights in such jurisdictions. If we or our licensors or collaborators encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished and we may face additional competition from others in those jurisdictions. Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors or collaborators are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position in the relevant jurisdiction may be impaired and our business, financial condition, results of operations and prospects may be adversely affected.

We, our licensors or collaborators, or any future strategic partners may need to resort to litigation to protect or enforce our patents or other proprietary rights, all of which could be costly, time consuming, delay or prevent the development and commercialization of our product candidates, or put our patents and other proprietary rights at risk.

Competitors may infringe our patents or other intellectual property. If we were to initiate legal proceedings against a third party to enforce a patent covering one of our products or our technology, the defendant could counterclaim that our patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that an individual connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability during patent litigation is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on one or more of our products or

certain aspects of our platform technology. Such a loss of patent protection could have a material and adverse effect on our business, financial condition, results of operations and prospects. Interference or derivation proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms or at all, or if a non-exclusive license is offered and our competitors gain access to the same technology. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions, or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of our common stock. Patents and other intellectual property rights also will not protect our technology if competitors design around our protected technology without legally infringing our patents or other intellectual property rights.

Intellectual property rights of third parties could adversely affect our ability to commercialize our product candidates, and we, our licensors or collaborators, or any future strategic partners may become subject to third party claims or litigation alleging infringement of patents or other proprietary rights or seeking to invalidate patents or other proprietary rights. We might be required to litigate or obtain licenses from third parties in order to develop or market our product candidates. Such litigation or licenses could be costly or not available on commercially reasonable terms.

We, our licensors or collaborators, or any future strategic partners may be subject to third-party claims for infringement or misappropriation of patent or other proprietary rights. There is a substantial amount of litigation, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, oppositions and *inter partes* review proceedings before the USPTO, and corresponding foreign patent offices. There are many issued and pending patents that might claim aspects of our product candidates and modifications that we may need to apply to our product candidates. There are also many issued patents that claim antibodies, or portions of antibodies, linkers, or cytotoxic warheads that may be relevant for the products we wish to develop. Thus, it is possible that one or more organizations will hold patent rights to which we will need a license. If those organizations refuse to grant us a license to such patent rights on reasonable terms, we may not be able to market products or perform research and development or other activities covered by these patents which could have a material and adverse effect on our business, financial condition, results of operations and prospects. We are obligated under certain of our license and collaboration agreements to indemnify and hold harmless our licensors or collaborators for damages arising from intellectual property infringement by use. For example, we are obligated under the Stanford Agreement to indemnify and hold harmless Stanford for damages arising from intellectual property infringement by us resulting from exercise of the license from Stanford. If we, our licensors or collaborators, or any future strategic partners are found to infringe a third-party patent or other intellectual property rights, we could be required to pay damages, potentially including treble damages, if we are found to have infringed willfully. In addition, we, our licensors or collaborators, or any future strategic partners may choose to seek, or be required to seek, a license from a third party, which may not be available on acceptable terms, if at all. Even if a license can be obtained on acceptable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us. If we fail to obtain a required license, we or our existing or future collaborators may be unable to effectively market product candidates based on our technology, which could limit our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations. In addition, we may find it necessary to pursue claims or initiate lawsuits to protect or enforce our patent or other intellectual property rights. The cost to us in defending or initiating any

litigation or other proceeding relating to patent or other proprietary rights, even if resolved in our favor, could be substantial, and litigation could divert our management's attention. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and limit our ability to continue our operations.

Because the antibody-based therapeutics landscape is still evolving, it is difficult to conclusively assess our freedom to operate without infringing on third-party rights. There are numerous companies that have pending patent applications and issued patents broadly covering antibodies generally, covering antibodies directed against the same targets as, or targets similar to, those we are pursuing, or covering linkers and cytotoxic warheads similar to those that we are using in our product candidates. For example, we are aware of an issued patent, expected to expire in 2023, which has claims relating to methods of treating CD74-positive multiple myeloma with an ADC targeting CD74. If valid and not yet expired when, and if, we receive marketing approval for STRO-001, we may need to seek a license to this patent, which may not be available on commercially reasonable terms or at all. Failure to receive a license could delay commercialization of STRO-001. Our competitive position may suffer if patents issued to third parties or other third-party intellectual property rights cover our products or product candidates or elements thereof, or our manufacture or uses relevant to our development plans. In such cases, we may not be in a position to develop or commercialize products or product candidates until such patents expire or unless we successfully pursue litigation to nullify or invalidate the third-party intellectual property right concerned, or enter into a license agreement with the intellectual property right holder, if available on commercially reasonable terms. There may be issued patents of which we are not aware, held by third parties that, if found to be valid and enforceable, could be alleged to be infringed by our XpressCF Platform and related technologies and product candidates. There also may be pending patent applications of which we are not aware that may result in issued patents, which could be alleged to be infringed by our XpressCF Platform and related technologies and product candidates. If such an infringement claim should be brought and be successful, we may be required to pay substantial damages, including potentially treble damages and attorneys' fees for willful infringement, and we may be forced to abandon our product candidates or seek a license from any patent holders. No assurances can be given that a license will be available on commercially reasonable terms, if at all.

It is also possible that we have failed to identify relevant third-party patents or applications. For example, U.S. applications filed before November 29, 2000 and certain U.S. applications filed after that date that will not be filed outside the United States remain confidential until patents issue. Patent applications in the United States and elsewhere are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Therefore, patent applications covering our products or platform technology could have been filed by others without our knowledge. Additionally, pending patent applications that have been published can, subject to certain limitations, be later amended in a manner that could cover our platform technology, our products or the use of our products. Third-party intellectual property right holders may also actively bring infringement claims against us. We cannot guarantee that we will be able to successfully settle or otherwise resolve such infringement claims. If we are unable to successfully settle future claims on terms acceptable to us, we may be required to engage in or continue costly, unpredictable and time-consuming litigation and may be prevented from or experience substantial delays in marketing our products. Parties making claims against us may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or administrative proceedings, there is a risk that some of our confidential information could be compromised by disclosure. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have material adverse effect on our ability to

raise additional funds or otherwise have a material adverse effect on our business, results of operations, financial condition and prospects. If we fail in any such dispute, in addition to being forced to pay damages, we may be temporarily or permanently prohibited from commercializing any of our product candidates that are held to be infringing. We might, if possible, also be forced to redesign product candidates so that we no longer infringe the third-party intellectual property rights. Any of these events, even if we were ultimately to prevail, could require us to divert substantial financial and management resources that we would otherwise be able to devote to our business and could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Litigation or other legal proceedings relating to intellectual property claims, with or without merit, is unpredictable and generally expensive and time consuming and is likely to divert significant resources from our core business, including distracting our technical and management personnel from their normal responsibilities. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Moreover, such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities.

We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources and more mature and developed intellectual property portfolios. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating or from successfully challenging our intellectual property rights. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

If we fail to comply with our obligations under any license, collaboration or other agreements, we may be required to pay damages and could lose intellectual property rights that are necessary for developing and protecting our product candidates or we could lose certain rights to grant sublicenses.

Our current licenses impose, and any future licenses we enter into are likely to impose, various development, commercialization, funding, milestone, royalty, diligence, sublicensing, insurance, patent prosecution and enforcement and/or other obligations on us. If we breach any of these obligations, or use the intellectual property licensed to us in an unauthorized manner, we may be required to pay damages and the licensor may have the right to terminate the license, which could result in us being unable to develop, manufacture and sell any future products that are covered by the licensed technology or enable a competitor to gain access to the licensed technology. Moreover, our licensors may own or control intellectual property that has not been licensed to us and, as a result, we may be subject to claims, regardless of their merit, that we are infringing or otherwise violating the licensor's rights. In addition, while we cannot determine currently the amount of the royalty obligations we would be required to pay on sales of future products, if any, the amounts may be significant. The amount of our future royalty obligations will depend on the technology and intellectual property we use in products that we successfully develop and commercialize, if any. Therefore, even if we successfully develop and commercialize products, we may be unable to achieve or maintain profitability.

Moreover, disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our product candidates, technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights under our collaborative development relationships;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners; and
- the priority of invention of patented technology.

In addition, the agreements under which we currently license intellectual property or technology from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations, and prospects. Moreover, if disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates, which could have a material adverse effect on our business, financial conditions, results of operations, and prospects.

We may be subject to claims that we or our employees or consultants have wrongfully used or disclosed alleged trade secrets of our employees' or consultants' former employers or their clients. These claims may be costly to defend and if we do not successfully do so, we may be required to pay monetary damages and may lose valuable intellectual property rights or personnel.

Many of our employees were previously employed at universities or biotechnology or biopharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper our ability to commercialize, or prevent us from commercializing, our product candidates, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management.

Patent terms may be inadequate to protect our competitive position on our product candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S. non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering our product candidates are obtained, once the patent life has expired, we may be open to competition from competitive products, including generics or biosimilars. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents

protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to be paid to the USPTO and various governmental patent agencies outside of the United States in several stages over the lifetime of the patents and/or applications. We have systems in place to remind us to pay these fees, and we employ an outside firm and/or rely on our outside counsel to pay these fees due to non-U.S. patent agencies. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market and this circumstance would have a material adverse effect on our business.

Changes in U.S. patent and ex-U.S. patent laws could diminish the value of patents in general, thereby impairing our ability to protect our products.

Changes in either the patent laws or interpretation of the patent laws in the United States or in other ex-U.S. jurisdictions could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents. In the United States, numerous recent changes to the patent laws and proposed changes to the rules of the USPTO that may have a significant impact on our ability to protect our technology and enforce our intellectual property rights. For example, the America Invents Act, enacted within the last several years involves significant changes in patent legislation. The U.S. Supreme Court has ruled on several patent cases in recent years, some of which cases either narrow the scope of patent protection available in certain circumstances or weaken the rights of patent owners in certain situations. For example, the decision by the U.S. Supreme Court in Association for Molecular Pathology v. Myriad Genetics, Inc. precludes a claim to a nucleic acid having a stated nucleotide sequence that is identical to a sequence found in nature and unmodified. We currently are not aware of an immediate impact of this decision on our patents or patent applications because we are developing product candidates that contain modifications that we believe are not found in nature. However, this decision has yet to be clearly interpreted by courts and by the USPTO. We cannot assure you that the interpretations of this decision or subsequent rulings will not adversely impact our patents or patent applications. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by the U.S. Congress, the federal courts and the USPTO, and similar legislative and regulatory bodies in other countries in which may pursue patent protection, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

If our trademarks and trade names are not adequately protected, then we may not be able to build name recognition in our markets of interest and our business may be adversely affected.

Our trademarks or trade names may be challenged, infringed, circumvented or declared generic or determined to be infringing on other marks. We may not be able to protect our rights to these

trademarks and trade names or may be forced to stop using these names, which we need for name recognition by potential partners or customers in our markets of interest. If we are unable to establish name recognition based on our trademarks and trade names, we may not be able to compete effectively which could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to Government Regulation

Clinical development involves a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results. If we are unable to develop, obtain regulatory approval for and commercialize our product candidates, or experience significant delays in doing so, our business will be materially harmed.

All of our product candidates are in preclinical or early clinical development and their risk of failure is high. It is impossible to predict when or if any of our product candidates will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical studies and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the development process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits, despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or safety profiles, notwithstanding promising results in earlier trials.

We commenced a Phase 1 clinical trial of STRO-001, an ADC directed against CD74, for certain cancers in April 2018, and we plan to submit an IND for STRO-002, an ADC directed against Folate Receptor alpha, for certain cancers to the FDA in the fourth quarter of 2018. Commencing our future clinical trials is subject to finalizing the trial design and submitting an IND or similar submission with the FDA or similar foreign regulatory authority. Even after we submit our IND or comparable submissions in other jurisdictions, the FDA or other regulatory authorities could disagree that we have satisfied their requirements to commence our clinical trials or disagree with our study design, which may require us to complete additional preclinical studies or amend our protocols or impose stricter conditions on the commencement of clinical trials.

We or our collaborators may experience delays in completing our preclinical studies and initiating or completing clinical trials of our product candidates. We do not know whether planned preclinical studies and clinical trials will be completed on schedule or at all, or whether planned clinical trials will begin on time, need to be redesigned, have patients enrolled on time or be completed on schedule, if at all. We or our collaborators may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval to commercialize our product candidates. Our development programs may be delayed for a variety of reasons, including delays related to:

- the FDA or other regulatory authorities requiring us or our collaborators to submit additional data or imposing other requirements before permitting us to initiate a clinical trial;
- obtaining regulatory approval to commence a clinical trial;
- the FDA or other regulatory authorities placing a clinical trial on clinical hold;
- reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites;

- clinical trials of our product candidates producing negative or inconclusive results, and we or our collaborators deciding, or regulators requiring us, to conduct additional clinical trials, including testing in more subjects, or abandoning product development programs;
- third-party contractors used by us or our collaborators failing to comply with regulatory requirements or meet their contractual obligations in a timely manner, or at all;
- obtaining institutional review board, or IRB, approval at each clinical trial site;
- recruiting suitable patients to participate in a clinical trial;
- developing and validating any companion diagnostic that would be used in a clinical trial;
- cost of clinical trials being greater than anticipated;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates being insufficient or inadequate;
- having patients complete a clinical trial or return for post-treatment follow-up;
- clinical trial sites deviating from trial protocol or dropping out of a trial;
- adding new clinical trial sites; or
- manufacturing sufficient quantities of our product candidates for use in clinical trials.

Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, competing clinical trials and clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new drugs or therapeutic biologics that may be approved for the indications being investigated by us. Furthermore, we expect to rely on our collaborators, CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and, while we expect to enter into agreements governing their committed activities, we have limited influence over their actual performance.

We could encounter delays if prescribing physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles.

Further, a clinical trial may be suspended or terminated by us, our collaborators, the IRBs of the institutions in which such trials are being conducted, the Data Safety Monitoring Board for such trial or placed on clinical hold by the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug or therapeutic biologic, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences could materially and adversely affect our business, financial condition, results of operations and prospects. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

We and/or our collaborators may be unable to obtain, or may be delayed in obtaining, U.S. or foreign regulatory approval and, as a result, unable to commercialize our product candidates.

Our product candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, approval, recordkeeping, reporting, labeling, storage, packaging, advertising and promotion, pricing, marketing and distribution of drugs and therapeutic biologics. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process are required to be completed successfully in the United States and in many foreign jurisdictions before a new drug or therapeutic biologic can be marketed. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. It is possible that none of the product candidates we may develop, either alone or with our collaborators, will obtain the regulatory approvals necessary for us or our existing or future collaborators to begin selling them.

Although our employees have experience in conducting and managing clinical trials from prior employment at other companies, we, as a company, have no prior experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. The time required to obtain FDA and other approvals is unpredictable but typically takes many years following the commencement of clinical trials, depending upon the type, complexity and novelty of the product candidate. The standards that the FDA and its foreign counterparts use when regulating us require judgment and can change, which makes it difficult to predict with certainty their application. Any analysis we perform of data from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We or our collaborators may also encounter unexpected delays or increased costs due to new government regulations, for example, from future legislation or administrative action, or from changes in FDA policy during the period of product development, clinical trials and FDA regulatory review. It is impossible to predict whether legislative changes will be enacted, or whether FDA or foreign regulations, guidance or interpretations will be changed, or the impact of such changes, if any.

Given that the product candidates we are developing, either alone or with our collaborators, represent a new approach to the manufacturing and type of therapeutic biologics, the FDA and its foreign counterparts have not yet established any definitive policies, practices or guidelines in relation to these product candidates. Moreover, the FDA may respond to any BLA, that we may submit by defining requirements that we do not anticipate. Such responses could delay clinical development of our product candidates. In addition, because there may be approved treatments for some of the diseases for which we may seek approval, in order to receive regulatory approval, we may need to demonstrate through clinical trials that the product candidates we develop to treat these diseases, if any, are not only safe and effective, but safer or more effective than existing products. Furthermore, in recent years, there has been increased public and political pressure on the FDA with respect to the approval process for new drugs and therapeutic biologics, and FDA standards, especially regarding product safety, appear to have become more stringent.

Any delay or failure in obtaining required approvals could have a material and adverse effect on our ability to generate revenues from the particular product candidate for which we are seeking approval. Furthermore, any regulatory approval to market a product may be subject to limitations on the approved uses for which we may market the product or on the labeling or other restrictions. In addition, the FDA has the authority to require a risk evaluation and mitigation strategies, or REMS, plan as part of a BLA or after approval, which may impose further requirements or restrictions on the distribution or use of an approved biologic, such as limiting prescribing to certain physicians or medical centers that have undergone specialized training, limiting treatment to patients who meet certain safe-use criteria and requiring treated patients to enroll in a registry. These limitations and restrictions may limit the size of the market for the product and affect reimbursement by third-party payors.

We are also subject to numerous foreign regulatory requirements governing, among other things, the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process varies among countries and may include all of the risks associated with FDA approval process described above, as well as risks attributable to the satisfaction of local regulations in foreign jurisdictions. Moreover, the time required to obtain approval may differ from that required to obtain FDA approval. FDA approval does not ensure approval by regulatory authorities outside the United States and vice versa. Any delay or failure to obtain U.S. or foreign regulatory approval for a product candidate could have a material and adverse effect on our business, financial condition, results of operations and prospects.

Delays in obtaining regulatory approval of our manufacturing process may delay or disrupt our commercialization efforts. To date, no product using a cell-free manufacturing process in the United States has received approval from the FDA.

Before we can begin to commercially manufacture our product candidates in third-party or our own facilities, we must obtain regulatory approval from the FDA for a BLA that describes in detail the chemistry, manufacturing, and controls for the product. A manufacturing authorization must also be obtained from the appropriate EU regulatory authorities. The timeframe required to obtain such approval or authorization is uncertain. In addition, we must pass a pre-approval inspection of our manufacturing facility by the FDA before any of our product candidates can obtain marketing approval, if ever. In order to obtain approval, we will need to ensure that all of our processes, methods and equipment are compliant with cGMP, and perform extensive audits of vendors, contract laboratories and suppliers. If any of our vendors, contract laboratories or suppliers is found to be out of compliance with cGMP, we may experience delays or disruptions in manufacturing while we work with these third parties to remedy the violation or while we work to identify suitable replacement vendors. The cGMP requirements govern quality control of the manufacturing process and documentation policies and procedures. In complying with cGMP, we will be obligated to expend time, money and effort in production, record keeping and quality control to assure that the product meets applicable specifications and other requirements. If we fail to comply with these requirements, we would be subject to possible regulatory action and may not be permitted to sell any products that we may develop.

Even if we receive regulatory approval for any of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions and market withdrawal. We may also be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

Any regulatory approvals that we or our existing or future collaborators obtain for our product candidates may also be subject to limitations on the approved indicated uses for which a product may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product candidate.

In addition, if the FDA or a comparable foreign regulatory authority approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, import, export, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. The FDA has significant post-market authority, including the authority to require labeling changes based on new safety information and to require post-market studies or clinical trials to evaluate safety risks related to the use of a product or to require withdrawal of the product from the market. The FDA also has the authority to require a REMS plan after approval, which may impose further requirements or restrictions on the distribution or use of an

approved drug or therapeutic biologic. The manufacturing facilities we use to make a future product, if any, will also be subject to periodic review and inspection by the FDA and other regulatory agencies, including for continued compliance with cGMP requirements. The discovery of any new or previously unknown problems with our third-party manufacturers, manufacturing processes or facilities may result in restrictions on the product, manufacturer or facility, including withdrawal of the product from the market. If we rely on third-party manufacturers, we will not have control over compliance with applicable rules and regulations by such manufacturers. Any product promotion and advertising will also be subject to regulatory requirements and continuing regulatory review. If we or our existing or future collaborators, manufacturers or service providers fail to comply with applicable continuing regulatory requirements in the United States or foreign jurisdictions in which we seek to market our products, we or they may be subject to, among other things, fines, warning letters, holds on clinical trials, delay of approval or refusal by the FDA or similar foreign regulatory bodies to approve pending applications or supplements to approved applications, suspension or withdrawal of regulatory approval, product recalls and seizures, administrative detention of products, refusal to permit the import or export of products, operating restrictions, injunction, civil penalties and criminal prosecution.

Subsequent discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning or untitled letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or our strategic partners;
- suspension or revocation of product license approvals;
- product seizure or detention or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

The FDA policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. For example, in December 2016, the 21st Century Cures Act, or Cures Act, was signed into law. The Cures Act, among other things, is intended to modernize the regulation of drugs and biologics and to spur innovation, but its ultimate implementation is unclear. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability, which would adversely affect our business.

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the current U.S. presidential administration may impact our business and industry. Namely, the current U.S. presidential administration has taken several executive actions, including the issuance of a number of executive orders, that could impose significant burdens on, or otherwise materially delay, the FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. Notably, on January 23, 2017, the current U.S. presidential administration ordered a hiring freeze for all executive departments and agencies, including the FDA, which prohibited the FDA from filling employee vacancies or creating new positions. Under the terms of the executive order, the freeze was to remain in effect until implementation of a plan recommended by the Director for the Office of Management and Budget, or OMB, in consultation with the Director of the Office of Personnel Management, to reduce the size of the federal workforce through attrition. While the general

hiring freeze was lifted on April 12, 2017, the FDA remained under a hiring freeze until May 25, 2017. However, the fiscal 2018 budget proposal for the FDA still calls for overall reductions in the FDA workforce, mostly through attrition. We believe an under-staffed FDA could result in delays in the FDA's responsiveness or in its ability to review submissions or applications, issue regulations or guidance, or implement or enforce regulatory requirements in a timely fashion or at all. Moreover, on January 30, 2017, the current U.S. presidential administration issued an executive order, applicable to all executive agencies, including the FDA, which requires that for each notice of proposed rulemaking or final regulation to be issued in fiscal year 2017, the agency shall identify at least two existing regulations to be repealed, unless prohibited by law. These requirements are referred to as the "two-for-one" provisions. This executive order includes a budget neutrality provision that requires the total incremental cost of all new regulations in the 2017 fiscal year, including repealed regulations, to be no greater than zero, except in limited circumstances. For fiscal years 2018 and beyond, the executive order requires agencies to identify regulations to offset any incremental cost of a new regulation and approximate the total costs or savings associated with each new regulation or repealed regulation. In interim guidance issued by the Office of Information and Regulatory Affairs within OMB on February 2, 2017, the administration indicates that the "two-for-one" provisions may apply not only to agency regulations, but also to significant agency guidance documents. It is difficult to predict how these requirements will be implemented, and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose constraints on the FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted.

We may face difficulties from healthcare legislative reform measures.

Existing regulatory policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Healthcare and Education Reconciliation Act, or together, the ACA, was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things, (i) subjected therapeutic biologics to potential competition by lower-cost biosimilars by creating a licensure framework for follow on biologic products, (ii) proscribed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs and therapeutic biologics that are inhaled, infused, instilled, implanted or injected, (iii) increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, (iv) established annual fees and taxes on manufacturers of certain branded prescription drugs and therapeutic biologics, (v) established a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs and therapeutic biologics to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs and therapeutic biologics to be covered under Medicare Part D, (vi) expanded eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability, (vii) expanded the entities eligible for discounts under the Public Health program (viii) created a new Patient-Centered Outcomes Research Institute to oversee,

identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research and (ix) established a Center for Medicare Innovation at the Centers for Medicare & Medicaid Services, or CMS, to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

The current U.S. presidential administration and U.S. Congress have sought, and we expect they will continue to, seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. Since January 2017, the current U.S. presidential administration has issued two executive orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. For example, on October 12, 2017, the current U.S. presidential administration issued an executive order that expands the use of association health plans and allows anyone to purchase short-term health plans that provide temporary, limited insurance. This executive order also calls for the halt of federal payments to health insurers for cost-sharing reductions previously available to lower-income Americans to afford coverage. There is still uncertainty with respect to the impact this executive order could have on coverage and reimbursement for healthcare items and services covered by plans that were authorized by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, two bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Reform Act, among other things, includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". Additionally, on January 22, 2018, the current U.S. presidential administration signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Further, the Bipartisan Budget Act of 2018, or the BBA, among other things, amends the ACA, effective January 1, 2019, to increase from 50 percent to 70 percent the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole". More recently, in July 2018, CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. There is still uncertainty with respect to the impact the current U.S. presidential administration and Congress may have, if any, and any changes will likely take time to unfold, and could have an impact on coverage and reimbursement for healthcare items and services covered by plans that were authorized by the ACA. However, we cannot predict the ultimate content, timing or effect of any healthcare reform legislation or the impact of potential legislation on us.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted to reduce healthcare expenditures. U.S. federal government agencies also currently face potentially significant spending reductions, which may further impact healthcare expenditures. On August 2, 2011, the Budget Control Act of 2011 among other things, created measures for spending reductions by Congress. A joint select committee on deficit reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2027 unless additional Congressional action is taken. Moreover, on January 2, 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased

the statute of limitations period for the government to recover overpayments to providers from three to five years. If federal spending is further reduced, anticipated budgetary shortfalls may also impact the ability of relevant agencies, such as the FDA or the National Institutes of Health to continue to function at current levels. Amounts allocated to federal grants and contracts may be reduced or eliminated. These reductions may also impact the ability of relevant agencies to timely review and approve research and development, manufacturing, and marketing activities, which may delay our ability to develop, market and sell any products we may develop.

Moreover, payment methodologies, including payment for companion diagnostics, may be subject to changes in healthcare legislation and regulatory initiatives. For example, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or MMA, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for physician-administered drugs. In addition, this legislation provided authority for limiting the number of drugs that will be covered in any therapeutic class. While the MMA only applies to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates. Therefore, any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private payors. In addition, CMS has begun bundling the Medicare payments for certain laboratory tests ordered while a patient received services in a hospital outpatient setting and, beginning in 2018, CMS will pay for clinical laboratory services based on a weighted average of reported prices that private payors, Medicare Advantage plans, and Medicaid Managed Care plans pay for laboratory services. Further, on March 16, 2018, CMS finalized its National Coverage Determination, or NCD, for certain diagnostic laboratory tests using next generation sequencing that are approved by the FDA as a companion *in vitro* diagnostic and used in a cancer with an FDA-approved companion diagnostic indication. Under the NCD, diagnostic tests that gain FDA approval or clearance as an *in vitro* companion diagnostic will automatically receive full coverage and be available for patients with recurrent, metastatic relapsed, refractory or stages III and IV cancer. Additionally, the NCD extended coverage to repeat testing when the patient has a new primary diagnosis of cancer.

Recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the current U.S. presidential administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Additionally, on May 11, 2018, the current U.S. presidential administration laid out the administration's "Blueprint" to reduce the cost of prescription medications while preserving innovation and cures. While the Department of Health and Human Services, or HHS, is soliciting feedback on some of these measures, other actions may be immediately implemented by HHS under existing authority. Although a number of these, and other potential, proposals will require authorization through additional legislation to become effective, Congress and the current U.S. presidential administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing. We expect that additional state and federal healthcare reform measures will be

adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our product candidates or companion diagnostics or additional pricing pressures.

Additionally, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Bellina Right to Try Act of 2017 was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase I clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA authorization under an FDA expanded access program.

We expect that the ACA, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products.

Our operations and relationships with healthcare providers, healthcare organizations, customers and third-party payors will be subject to applicable anti-bribery, anti-kickback, fraud and abuse, transparency and other healthcare laws and regulations, which could expose us to, among other things, enforcement actions, criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens and diminished profits and future earnings.

Our current and future arrangements with healthcare providers, healthcare organizations, third-party payors and customers expose us to broadly applicable anti-bribery, fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we research, market, sell and distribute our product candidates. In addition, we may be subject to patient data privacy and security regulation by the U.S. federal government and the states and the foreign governments in which we conduct our business. Restrictions under applicable federal and state anti-bribery and healthcare laws and regulations, include the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, individuals and entities from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal and state healthcare program such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;
- the federal criminal and civil false claims and civil monetary penalties laws, including the federal False Claims Act, which can be imposed through civil whistleblower or qui tam actions against individuals or entities, prohibits, among other things, knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent, knowingly making, using or causing to be made or used, a false record or statement material to a false or fraudulent claim, or from knowingly making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. In addition, certain marketing practices, including off-label promotion, may also violate false claims laws. Moreover, the government may assert that a claim including items and services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act;
- HIPAA, which imposes criminal and civil liability, prohibits, among other things, knowingly and willfully executing, or attempting to execute a scheme to defraud any healthcare benefit

program, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statement in connection with the delivery of or payment for healthcare benefits, items or services; similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation;

- HIPAA, as amended by HITECH, which impose obligations on certain healthcare providers, health plans, and healthcare clearinghouses, known as covered entities, as well as their business associates that perform certain services involving the storage, use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security, and transmission of individually identifiable health information, and require notification to affected individuals and regulatory authorities of certain breaches of security of individually identifiable health information;
- the federal legislation commonly referred to as Physician Payments Sunshine Act, enacted as part of the ACA, and its implementing regulations, which requires certain manufacturers of covered drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid, or the Children's Health Insurance Program, with certain exceptions, to report annually to CMS information related to certain payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by the physicians described above and their immediate family members, with the information made publicly available on a searchable website;
- the U.S. Foreign Corrupt Practices Act of 1977, as amended, which prohibits, among other things, U.S. companies and their employees and agents from authorizing, promising, offering, or providing, directly or indirectly, corrupt or improper payments or anything else of value to foreign government officials, employees of public international organizations and foreign government owned or affiliated entities, candidates for foreign political office, and foreign political parties or officials thereof;
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, that may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; and
- certain state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government in addition to requiring drug and therapeutic biologics manufacturers to report information related to payments to physicians and other healthcare providers or marketing expenditures and pricing information, state and local laws that require the registration of pharmaceutical sales representatives, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

If we or our collaborators, manufacturers or service providers fail to comply with applicable federal, state or foreign laws or regulations, we could be subject to enforcement actions, which could affect our ability to develop, market and sell our products successfully and could harm our reputation and lead to reduced acceptance of our products by the market. These enforcement actions include, among others:

- exclusion from participation in government-funded healthcare programs; and
- exclusion from eligibility for the award of government contracts for our products.

Efforts to ensure that our current and future business arrangements with third parties comply with applicable healthcare laws and regulations could involve substantial costs. It is possible that governmental authorities will conclude that our business practices do not comply with current or future statutes, regulations, agency guidance or case law involving applicable fraud and abuse or other

healthcare laws and regulations. If our operations are found to be in violation of any such requirements, we may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, the curtailment or restructuring of our operations, loss of eligibility to obtain approvals from the FDA, exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, integrity oversight and reporting obligations, or reputational harm, any of which could adversely affect our financial results. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action against us for an alleged or suspected violation could cause us to incur significant legal expenses and could divert our management's attention from the operation of our business, even if our defense is successful. In addition, achieving and sustaining compliance with applicable laws and regulations may be costly to us in terms of money, time and resources.

Even if we are able to commercialize any product candidate, such product candidate may become subject to unfavorable pricing regulations or third-party coverage and reimbursement policies, which would harm our business.

The regulations that govern regulatory approvals, pricing and reimbursement for new drugs and therapeutic biologics vary widely from country to country. Some countries require approval of the sale price of a drug or therapeutic biologic before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription biopharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain regulatory approval.

Our ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government authorities, private health insurers and other organizations. Even if we succeed in bringing one or more products to the market, these products may not be considered cost-effective, and the amount reimbursed for any products may be insufficient to allow us to sell our products on a competitive basis. Because our programs are in the early stages of development, we are unable at this time to determine their cost effectiveness or the likely level or method of coverage and reimbursement. Increasingly, the third-party payors who reimburse patients or healthcare providers, such as government and private insurance plans, are requiring that drug companies provide them with predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts reimbursed for biopharmaceutical products. If the price we are able to charge for any products we develop, or the coverage and reimbursement provided for such products, is inadequate in light of our development and other costs, our return on investment could be affected adversely.

There may be significant delays in obtaining reimbursement for newly approved drugs or therapeutic biologics, and coverage may be more limited than the purposes for which the drug or therapeutic biologic is approved by the FDA or similar foreign regulatory authorities. Moreover, eligibility for reimbursement does not imply that any drug or therapeutic biologic will be reimbursed in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution.

Interim reimbursement levels for new drugs or therapeutic biologics, if applicable, may also be insufficient to cover our costs and may not be made permanent. Reimbursement rates may be based on payments allowed for lower cost drugs or therapeutic biologics that are already reimbursed, may be incorporated into existing payments for other services and may reflect budgetary constraints or

imperfections in Medicare data. Net prices for drugs or therapeutic biologics may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs or therapeutic biologics from countries where they may be sold at lower prices than in the United States. Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for new drugs or therapeutic biologics that we develop and for which we obtain regulatory approval could have a material and adverse effect on our business, financial condition, results of operations and prospects.

If in the future we are unable to establish U.S. or global sales and marketing capabilities or enter into agreements with third parties to sell and market our product candidates, we may not be successful in commercializing our product candidates if they are approved and we may not be able to generate any revenue.

We currently do not have a marketing or sales team for the marketing, sales and distribution of any of our product candidates that are able to obtain regulatory approval. To commercialize any product candidates after approval, we must build on a territory-by-territory basis marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. If our product candidates receive regulatory approval, we may decide to establish an internal sales or marketing team with technical expertise and supporting distribution capabilities to commercialize our product candidates, which will be expensive and time consuming and will require significant attention of our executive officers to manage. For example, some state and local jurisdictions have licensing and continuing education requirements for pharmaceutical sales representatives, which requires time and financial resources. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of any of our product candidates that we obtain approval to market.

With respect to the commercialization of all or certain of our product candidates, we may choose to collaborate, either globally or on a territory-by-territory basis, with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems. If we are unable to enter into such arrangements when needed on acceptable terms, or at all, we may not be able to successfully commercialize any of our product candidates that receive regulatory approval or any such commercialization may experience delays or limitations. If we are not successful in commercializing our product candidates, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses.

Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

With the enactment of the Biologics Price Competition and Innovation Act of 2009, or BPCIA, an abbreviated pathway for the approval of biosimilar and interchangeable biological products was created. The abbreviated regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as interchangeable based on its similarity to an existing reference product. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the original branded product is approved under a BLA. On March 6, 2015, the FDA approved the first biosimilar product under the BPCIA. However, the law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when the processes intended to implement BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that if any of our product candidates are approved as a biological product under a BLA, it should qualify for the 12-year period of exclusivity. However, there is a risk that the FDA will not consider any of our product candidates to be reference products for competing products, potentially creating the opportunity for biosimilar competition sooner than anticipated. Additionally, this period of regulatory exclusivity does not apply to companies pursuing regulatory approval via their own traditional BLA, rather than via the abbreviated pathway. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products that may be approved in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

If any of our product candidates receives marketing approval and we or others later identify undesirable side effects caused by the product candidate, our ability to market and derive revenue from the product candidates could be compromised.

Undesirable side effects caused by our product candidates could cause regulatory authorities to interrupt, delay or halt clinical trials and could result in more restrictive labeling or the delay or denial of regulatory approval by the FDA or other regulatory authorities. We have only recently initiated our first clinical trial for the first of our product candidates. Given its nature as an ADC, it is likely that there may be side effects associated with its use. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects. In such an event, our clinical trials could be suspended or terminated and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates for any or all targeted indications. Such side effects could also affect patient recruitment or the ability of enrolled patients to complete the clinical trial or result in potential product liability claims. Any of these occurrences may materially and adversely affect our business, financial condition, results of operations and prospects.

Further, clinical trials by their nature utilize a sample of the potential patient population. With a limited number of patients and limited duration of exposure, rare and severe side effects of our product candidates may only be uncovered with a significantly larger number of patients exposed to the product candidate.

In the event that any of our product candidates receive regulatory approval and we or others identify undesirable side effects caused by one of our products, any of the following adverse events could occur:

- regulatory authorities may withdraw their approval of the product or seize the product;
- we may be required to recall the product or change the way the product is administered to patients;
- additional restrictions may be imposed on the marketing of the particular product or the manufacturing processes for the product or any component thereof;
- we may be subject to fines, injunctions or the imposition of civil or criminal penalties;
- regulatory authorities may require the addition of labeling statements, such as a black boxed warning or a contraindication;
- we may be required to create a Medication Guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients;
- the product may become less competitive; and
- our reputation may suffer.

Any of these occurrences could have a material and adverse effect on our business, financial condition, results of operations and prospects.

If we decide to pursue a Fast Track Designation by the FDA, it may not lead to a faster development or regulatory review or approval process.

We may seek Fast Track Designation for one or more of our product candidates. If a drug or biologic is intended for the treatment of a serious or life-threatening condition and the drug or biologic demonstrates the potential to address unmet medical needs for this condition, the product sponsor may apply for FDA Fast Track Designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive Fast Track Designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw Fast Track Designation if it believes that the designation is no longer supported by data from our clinical development program.

If we decide to seek Orphan Drug Designation for some of our product candidates, we may be unsuccessful or may be unable to maintain the benefits associated with Orphan Drug Designation, including the potential for supplemental market exclusivity.

As part of our business strategy, we may seek Orphan Drug Designation for one or more of our product candidates, and we may be unsuccessful. Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs and therapeutic biologics for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug or therapeutic biologic as an orphan drug if it is a drug or therapeutic biologic intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug or therapeutic biologic will be recovered from sales in the United States. In the United States, Orphan Drug Designation entitles a party to financial incentives such as opportunities for grant funding toward clinical trial costs, tax advantages and user fee waivers. In addition, if a product that has Orphan Drug Designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or where the manufacturer is unable to assure sufficient product quantity.

Even if we obtain Orphan Drug Designation for our product candidates in specific indications, we may not be the first to obtain marketing approval of these product candidates for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs or therapeutic biologics with different principal molecular structural features can be approved for the same condition. Even after an orphan product is approved, the FDA can subsequently approve the same drug or therapeutic biologic with the same principal molecular structural features for the same condition if the FDA concludes that the later drug or therapeutic biologic is safer, more effective or makes a major contribution to patient care. Orphan Drug Designation neither shortens the development time or regulatory review time of a drug or therapeutic biologic nor gives the drug or therapeutic biologic any advantage in the regulatory review or approval process. In addition, while we may seek Orphan Drug Designation for our product candidates, we may never receive such designations.

The recent tax reform legislation, which was signed into law on December 22, 2017 reduced the amount of the qualified clinical research costs for a designated orphan product that a sponsor may

claim as a credit from 50% to 25%. Thus, further limiting the advantage and may impact our future business strategy of seeking the Orphan Drug Designation.

Risks Related to Our Common Stock and This Offering

Our quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expense related to the ongoing development of our XpressCF Platform, our product candidates or future development programs;
- results of preclinical and clinical trials, or the addition or termination of clinical trials or funding support by us, or existing or future collaborators or licensing partners;
- our execution of any additional collaboration, licensing or similar arrangements, and the timing of payments we may make or receive under existing or future arrangements or the termination or modification of any such existing or future arrangements;
- any intellectual property infringement lawsuit or opposition, interference or cancellation proceeding in which we may become involved;
- additions and departures of key personnel;
- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs, joint ventures, strategic investments or changes in business strategy;
- if any of our product candidates receives regulatory approval, the terms of such approval and market acceptance and demand for such product candidates;
- regulatory developments affecting our product candidates or those of our competitors; and
- changes in general market and economic conditions.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our common stock to fluctuate substantially. We believe that quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

The market price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering and the concurrent private placement is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. As a result of this volatility, investors may not be able to sell their common stock at or above the initial public offering price. The market price for our common stock may be influenced by many factors, including the other risks described in this section of the prospectus entitled “Risk Factors” and the following:

- results of preclinical studies and clinical trials of our product candidates, or those of our competitors or our existing or future collaborators;
- regulatory or legal developments in the United States and other countries, especially changes in laws or regulations applicable to our product candidates;
- the success of competitive products or technologies;
- introductions and announcements of new products by us, our future commercialization partners, or our competitors, and the timing of these introductions or announcements;

- actions taken by regulatory agencies with respect to our products, clinical studies, manufacturing process or sales and marketing terms;
- actual or anticipated variations in our financial results or those of companies that are perceived to be similar to us;
- the success of our efforts to acquire or in-license additional technologies, products or product candidates;
- developments concerning any future collaborations, including but not limited to those with our sources of manufacturing supply and our commercialization partners;
- market conditions in the pharmaceutical and biotechnology sectors;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures or capital commitments;
- developments or disputes concerning patents or other proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our product candidates and products;
- our ability or inability to raise additional capital and the terms on which we raise it;
- the recruitment or departure of key personnel;
- changes in the structure of healthcare payment systems;
- actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our common stock, other comparable companies or our industry generally;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- announcement and expectation of additional financing efforts;
- speculation in the press or investment community;
- trading volume of our common stock;
- sales of our common stock by us or our stockholders;
- the concentrated ownership of our common stock;
- changes in accounting principles;
- terrorist acts, acts of war or periods of widespread civil unrest;
- natural disasters and other calamities; and
- general economic, industry and market conditions.

In addition, the stock market in general, and the markets for pharmaceutical, biopharmaceutical and biotechnology stocks in particular, have experienced extreme price and volume fluctuations that have been often unrelated or disproportionate to the operating performance of the issuer. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks, including those described in this "Risk Factors" section, could have a dramatic and adverse impact on the market price of our common stock.

You will experience immediate and substantial dilution as a result of this offering and the concurrent private placement and may experience additional dilution in the future.

If you purchase common stock in this offering, assuming an initial public offering price of $15.00 per share, the midpoint of the estimated price range set forth on the cover of this prospectus, you will incur immediate and substantial dilution of $9.02 per share, representing the difference between the assumed initial public offering price of $15.00 per share and our pro forma net tangible book value per share as of June 30, 2018 after giving effect to this offering and the concurrent private placement and

the conversion of all outstanding shares of our redeemable convertible preferred stock upon the completion of this offering and the concurrent private placement.

Moreover, we issued options in the past to acquire common stock at prices significantly below the assumed initial public offering price. As of June 30, 2018, there were 820,875 shares of common stock subject to outstanding options under our 2004 Stock Plan. To the extent that these outstanding options and options granted in the future are ultimately exercised, you will incur further dilution.

The future sale and issuance of equity or of debt securities that are convertible into equity will dilute our share capital.

We may choose to raise additional capital in the future, depending on market conditions, strategic considerations and operational requirements. To the extent that additional capital is raised through the sale and issuance of shares or other securities convertible into shares, our stockholders will be diluted. Future issuances of our common stock or other equity securities, or the perception that such sales may occur, could adversely affect the trading price of our common stock and impair our ability to raise capital through future offerings of shares or equity securities. No prediction can be made as to the effect, if any, that future sales of common stock or the availability of common stock for future sales will have on the trading price of our common stock.

An active and liquid trading market for our common stock may not develop and you may not be able to resell your shares of common stock at or above the public offering price.

Prior to this offering, no market for shares of our common stock existed and an active trading market for our shares may never develop or be sustained following this offering. The initial public offering price for our common stock will be determined through negotiations with the underwriters and the negotiated price may not be indicative of the market price of our common stock after this offering. The market value of our common stock may decrease from the initial public offering price. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. Furthermore, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic collaborations or acquire companies or products by using our shares of common stock as consideration.

A sale of a substantial number of shares of our common stock may cause the price of our common stock to decline.

Based on shares outstanding as of June 30, 2018, and giving effect to the issuance and sale of Series E redeemable convertible preferred stock in July 2018, upon completion of this offering and the concurrent private placement, we will have outstanding a total of 22,153,791 shares of common stock. Of these shares, only 5,000,000 shares of common stock sold in this offering, or 5,750,000 shares if the underwriters exercise their option to purchase additional shares in full, will be freely tradable, without restriction, in the public market immediately after this offering. The 666,666 shares expected to be sold in the concurrent private placement will be freely tradeable, subject to limitations set forth under Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. Each of our officers, directors, substantially all of our stockholders and participants in our directed share program have entered or will enter into lock-up agreements with the underwriters that restrict their ability to sell or transfer their shares. The lock-up agreements pertaining to this offering will expire 180 days from the date of this prospectus. However, our underwriters may, in their sole discretion, permit our officers, directors, other current stockholders and participants in our directed share program who are subject to the contractual lock-up to sell shares prior to the expiration of the lock-up agreements. After the lock-up agreements expire, based on shares outstanding as of June 30, 2018, up to an additional 16,487,125

shares of common stock will be eligible for sale in the public market, approximately 8,032,407 of which are held by our officers, directors and their affiliated entities, and will be subject to volume limitations under Rule 144 under the Securities Act. In addition, 820,875 shares of our common stock that are subject to outstanding options as of June 30, 2018 will become eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements, the lock-up agreements and Rules 144 and 701 under the Securities Act.

After this offering and concurrent private placement, the holders of an aggregate of 16,023,174 shares of our outstanding common stock as of June 30, 2018 will have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or our stockholders. We also intend to register shares of common stock that we may issue under our equity incentive plans. Once we register these shares, they will be able to be sold freely in the public market upon issuance, subject to the 180-day lock-up period under the lock-up agreements described above and in the section entitled “Underwriting.”

We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common stock. However, future sales of substantial amounts of our common stock in the public market, including shares issued upon exercise of outstanding options or warrants, or the perception that such sales may occur, could adversely affect the market price of our common stock.

We also expect that significant additional capital may be needed in the future to continue our planned operations. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock.

We will have broad discretion in the use of the net proceeds from this offering and the concurrent private placement and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and the concurrent private placement, and you will be relying on the judgment of our management regarding the application of these proceeds. You will not have the opportunity, as part of your investment decision, to assess whether we are using the proceeds appropriately. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering and the concurrent private placement in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. If no or few securities or industry analysts commence coverage of us, the trading price for our common stock could be impacted negatively. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our preclinical studies and clinical trials and operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of such analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause a decline in our stock price or trading volume.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Based on the beneficial ownership of our common stock as of August 31, 2018, prior to this offering and the concurrent private placement, our executive officers, directors and affiliates beneficially owned approximately 50.3% of our voting stock and, upon the completion of this offering and the concurrent private placement, that same group will hold approximately 37.8% of our outstanding voting stock (assuming no exercise of the underwriters' option to purchase additional shares, no exercise of outstanding options or warrants and no purchases of shares in this offering and the concurrent private placement by any of this group, with the exception of Merck in connection with the concurrent private placement), in each case assuming the conversion of all outstanding shares of our redeemable convertible preferred stock into shares of our common stock and the net exercise of warrants outstanding that would otherwise expire upon the completion of this offering. As a result, these stockholders, if acting together, will continue to have significant influence over the outcome of corporate actions requiring stockholder approval, including the election of directors, amendment of our organizational documents, any merger, consolidation or sale of all or substantially all of our assets and any other significant corporate transaction. The interests of these stockholders may not be the same as or may even conflict with your interests. For example, these stockholders could delay or prevent a change of control of our company, even if such a change of control would benefit our other stockholders, which could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company or our assets and might affect the prevailing market price of our common stock. The significant concentration of stock ownership may adversely affect the trading price of our common stock due to investors' perception that conflicts of interest may exist or arise.

We are an "emerging growth company" and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including (i) not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, (ii) reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and (iii) exemptions from the requirements of holding nonbinding advisory stockholder votes on executive compensation and stockholder approval of any golden parachute payments not approved previously. In addition, as an emerging growth company, we are only required to provide two years of audited financial statements and two years of selected financial data in this prospectus.

We could be an emerging growth company for up to five years following the completion of this offering, although circumstances could cause us to lose that status earlier, including if we are deemed to be a "large accelerated filer," which occurs when the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30, or if we have total annual gross revenue of $1.07 billion or more during any fiscal year before that time, in which cases we would no longer be an emerging growth company as of the following December 31, or if we issue more than $1.0 billion in non-convertible debt during any three-year period before that time, in which case we would no longer be an emerging growth company immediately. Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and in our periodic

reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our share price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have elected to take advantage of the benefits of this extended transition period. Our financial statements may therefore not be comparable to those of companies that comply with such new or revised accounting standards. Until the date that we are no longer an "emerging growth company" or affirmatively and irrevocably opt out of the exemption provided by Section 7(a)(2)(B) of the Securities Act, upon issuance of a new or revised accounting standard that applies to our financial statements and that has a different effective date for public and private companies, we will disclose the date on which adoption is required for non-emerging growth companies and the date on which we will adopt the recently issued accounting standard.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Our restated certificate of incorporation and our restated bylaws that will be in effect upon completion of this offering contain provisions that could delay or prevent a change in control of our company. These provisions could also make it difficult for stockholders to elect directors who are not nominated by current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions:

- establish a classified board of directors so that not all members of our board are elected at one time;
- permit only the board of directors to establish the number of directors and fill vacancies on the board;
- provide that directors may only be removed "for cause" and only with the approval of two-thirds of our stockholders;
- require super-majority voting to amend some provisions in our restated certificate of incorporation and restated bylaws;
- authorize the issuance of "blank check" preferred stock that our board could use to implement a stockholder rights plan;
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- prohibit cumulative voting; and
- establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at annual stockholder meetings.

In addition, our restated certificate of incorporation, to the fullest extent permitted by law, will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, or the DGCL, our restated certificate of incorporation, or our restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. Furthermore, our amended and restated bylaws will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. These choice of forum

provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provisions contained in our restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

In addition, Section 203 of the DGCL may discourage, delay or prevent a change in control of our company. Section 203 imposes certain restrictions on mergers, business combinations and other transactions between us and holders of 15% or more of our common stock.

We will incur increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives and corporate governance practices.

As a public company, and particularly after we are no longer an emerging growth company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, the listing requirements of the Nasdaq Global Market and other applicable securities rules and regulations impose various requirements on public companies, including establishment and maintenance of effective disclosure and financial controls and corporate governance practices. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time consuming and costly. For example, we expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain sufficient coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers. Moreover, these rules and regulations are often subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices.

We are not currently required to comply with the SEC's rules that implement Section 404 of the Sarbanes-Oxley Act, and are therefore not required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. Pursuant to Section 404, we will be required to furnish a report by our management on our internal control over financial reporting. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. To achieve compliance with Section 404 within the prescribed period, we will be engaged in a process to document and evaluate our internal control over financial reporting, which is both costly and challenging. In this regard, we will need to continue to dedicate internal resources, potentially engage outside consultants and adopt a detailed work plan to assess and document the adequacy of internal control over financial reporting, continue steps to improve control processes as appropriate, validate through testing that controls are functioning as documented and implement a continuous reporting and improvement process for internal control over financial reporting. Despite our efforts, there is a risk that we will not be able to conclude, within the prescribed timeframe or at all, that our internal control over financial reporting is effective as required by Section 404. If we identify one or more material weaknesses, it could result in an adverse reaction in the financial markets due to a loss of confidence in the reliability of our financial statements. In addition, if we are not able to continue to meet these requirements, we may not be able to remain listed on the Nasdaq Global Market.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our common stock may be volatile and, in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Use of Proceeds,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Business” contains forward-looking statements. The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

MARKET AND INDUSTRY DATA

This prospectus contains estimates and other statistical data made by independent parties and by us relating to our industry and the markets in which we operate, including our general expectations and market position, market opportunity, the incidence of certain medical conditions and other industry data. These data, to the extent they contain estimates or projections, involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates or projections. Industry publications and other reports we have obtained from independent parties generally state that the data contained in these publications or other reports have been obtained in good faith or from sources considered to be reliable, but they do not guarantee the accuracy or completeness of such data. The industry in which we operate is subject to risks and uncertainties due to a variety of factors, including those described in the section entitled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in these publications and reports.

USE OF PROCEEDS

We estimate that the net proceeds from our sale of 5,000,000 shares of common stock in this offering at an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses, will be approximately $65.9 million, or $76.3 million if the underwriters exercise their option to purchase additional shares in full. We expect that the net proceeds from the concurrent private placement will be up to approximately $10.0 million.

Each $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, would increase (decrease) the net proceeds to us from this offering by $4.7 million, assuming the number of shares offered, as set forth on the cover of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered would increase (decrease) the net proceeds that we receive from this offering by $14.0 million, assuming that the assumed initial public offering price remains the same and after deducting the estimated underwriting discounts and commissions.

Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA, or Merck, a holder of approximately 12.5% of our outstanding common stock, has agreed to purchase from us, concurrently with this offering in a private placement, up to $10.0 million of shares of our common stock at a price per share equal to the initial public offering price, or up to approximately 666,666 shares based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated offering price range set forth on the cover of this prospectus, subject to a 17.5% ownership cap after giving effect to the concurrent private placement and this offering.

We currently intend to use the net proceeds we receive from this offering and the concurrent private placement as follows:

- approximately $35.0 million to $40.0 million to fund further development of STRO-001 into 2021;
- approximately $30.0 million to $35.0 million to fund further development of STRO-002 into 2021;
- any remaining amounts to fund the further development of our technology platform, including manufacturing, to broaden our pipeline of product candidate and to fund working capital and general corporate purposes.

Based on our planned use of the net proceeds, we estimate such funds, together with our existing cash and cash equivalents, will be sufficient for us to fund our operating expenses and capital expenditure requirements into 2021.

The expected use of the net proceeds from the offering and the concurrent private placement represents our intentions based upon our current plans and business conditions. The amounts we actually expend in these areas, and the timing thereof, may vary significantly from our current intentions and will depend on a number of factors, including the success of research and product development efforts, cash generated from future operations and actual expenses to operate our business. We may use a portion of the net proceeds for the acquisition of, or investment in, businesses that complement our business, although we have no present commitments or agreements.

The amounts and timing of our clinical expenditures and the extent of clinical development may vary significantly depending on numerous factors, including the status, results and timing of our current

preclinical studies and clinical trials and those which we may commence in the future, the product approval process with the FDA and other regulatory agencies, our current collaborations and any new collaborations we may enter into with third parties and any unforeseen cash needs. As a result, we cannot predict with any certainty all of the particular uses for the net proceeds or the amounts that we will actually spend on the uses set forth above. Accordingly, our management will have broad discretion in the application of the net proceeds, and investors will be relying on the judgment of our management regarding the application of the net proceeds of this offering and the concurrent private placement.

The expected net proceeds of this offering and the concurrent private placement will not be sufficient for us to fund any of our product candidates through regulatory approval, and we will need to raise substantial additional capital to complete the development and commercialization of our product candidates.

Pending the uses described above, we intend to invest the net proceeds from this offering and the concurrent private placement in short term, investment-grade interest-bearing securities such as money market accounts, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any cash dividends on our common stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant. In addition, under the terms of our current loan and security agreement, we are prohibited from paying cash dividends or making any distribution on account of our capital stock without the consent of Silicon Valley Bank and Oxford Finance LLC. See the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" for a description of the restrictions on our ability to pay dividends.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of June 30, 2018 on:

- an actual basis;
- a pro forma basis, giving effect to (i) the receipt of $52.0 million in net proceeds from the sale of 194,465,218 shares of Series E redeemable convertible preferred stock in July 2018, (ii) the conversion of 298,590,921 outstanding shares of our redeemable convertible preferred stock as of June 30, 2018 and 194,465,218 outstanding shares of our redeemable convertible preferred stock issued in July 2018 into an aggregate of 16,007,748 shares of common stock immediately prior to the completion of this offering, (iii) the conversion of the redeemable convertible preferred stock warrants into common stock warrants and the related reclassification of the redeemable convertible preferred stock warrant liability to total stockholders' equity (deficit), (iv) the repayment of principal and interest on a $0.2 million outstanding note issued to an executive officer and (v) the effectiveness of our restated certificate of incorporation in connection with the completion of this offering; and
- a pro forma as adjusted basis, giving effect to (i) the pro forma adjustments described above, (ii) the sale of 5,000,000 shares of common stock in this offering, based upon an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses and (iii) the issuance and sale by us in the concurrent private placement of up to approximately 666,666 shares of common stock to Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA, or Merck, based on the assumed initial public offering price.

The pro forma as adjusted information set forth in the table below is illustrative only and will be adjusted based on the actual initial public offering price and other terms of this offering and the concurrent private placement determined at pricing.

You should read this table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited financial statements and related notes, each included elsewhere in this prospectus.

	As of June 30, 2018		
	Actual	Pro Forma	Pro Forma As Adjusted(1)
	(Unaudited) (in thousands, except share and per share data)		
Cash and cash equivalents(2)	$ 25,420	$ 77,628	$ 154,666
Debt	$ 14,802	$ 14,802	$ 14,802
Redeemable convertible preferred stock warrant liability	801	–	–
Redeemable convertible preferred stock, $0.001 par value—366,402,781 shares authorized; 298,590,921 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma or pro forma as adjusted	135,720	–	–
Stockholders' equity (deficit):			
Preferred stock, $0.001 par value: no shares authorized, issued and outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding pro forma and pro forma as adjusted	–	–	–
Common stock, $0.001 par value—540,000,000 shares authorized; 479,377 shares issued and outstanding, actual; 300,000,000 shares authorized; 16,487,125 shares issued and outstanding, pro forma; 22,153,791 shares issued and outstanding, pro forma as adjusted	–	16	22
Note receivable from stockholder	(208)	–	–
Additional paid-in-capital	6,787	195,292	271,136
Accumulated deficit	(138,598)	(138,598)	(138,598)
Total stockholders' equity (deficit)	(132,019)	56,710	132,560
Total capitalization	$ 19,304	$ 71,512	$ 147,362

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, would increase (decrease) each of our pro forma as adjusted cash and cash equivalents, additional paid-in-capital, total stockholders' equity (deficit) and total capitalization by approximately $4.7 million, assuming that the number of shares offered remains the same and after deducting the estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered would increase (decrease) each of our pro forma as adjusted cash and cash equivalents, additional paid-in-capital, total stockholders' equity (deficit) and total capitalization by approximately $14.0 million, assuming the assumed initial public offering price remains the same and after deducting the estimated underwriting discounts and commissions.

The table above excludes the following shares:

- 820,875 shares of common stock issuable upon the exercise of options outstanding as of June 30, 2018 under our 2004 Stock Plan, with a weighted-average exercise price of $10.41 per share;
- 71,731 shares of common stock issuable upon the exercise of warrants to purchase 2,097,260 shares of redeemable convertible preferred stock outstanding as of June 30, 2018, with a weighted-average exercise price of $0.37 per share (which in connection with the July 2018 closing of the Series E redeemable convertible preferred stock financing were adjusted such that they represent warrants to purchase a total of 2,370,799 shares of redeemable convertible preferred stock), which will automatically convert to warrants to purchase shares of our common stock upon the completion of this offering; and

- 4,221,759 shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of (i) 1,691,759 shares of common stock reserved for future issuance under our 2004 Stock Plan as of June 30, 2018, (ii) 2,300,000 shares of common stock reserved for future issuance under our 2018 Equity Incentive Plan, which will become effective on the date immediately prior to the date of the effectiveness of the registration statement of which this prospectus forms a part, of which shares we intend to grant equity awards consisting of 312,406 shares issuable upon the vesting of restricted stock units and 2,267,266 shares issuable upon the exercise of stock options (with an exercise price equal to the initial public offering price) effective upon the date of this prospectus and (iii) 230,000 shares of common stock reserved for future issuance under our 2018 Employee Stock Purchase Plan, which will become effective on the date of the effectiveness of the registration statement of which this prospectus forms a part. Upon completion of this offering, any remaining shares available for issuance under our 2004 Stock Plan will be added to the shares reserved under our 2018 Equity Incentive Plan and we will cease granting awards under our 2004 Stock Plan. Our 2018 Equity Incentive Plan and 2018 Employee Stock Purchase Plan also provide for automatic annual increases in the number of shares reserved under the plans, as more fully described in “Executive Compensation—Equity Compensation Benefit Plans and Other Benefit Plans.”

(2) Excludes the $60.0 million upfront payment received pursuant to the August 2018 Exclusive Patent License and Research Collaboration Agreement with Merck.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after this offering and the concurrent private placement.

Net tangible book value (deficit) per share is determined by dividing our total tangible assets (which excludes deferred offering costs) less our total liabilities and redeemable convertible preferred stock by the number of shares of common stock outstanding. Our historical net tangible book value (deficit) as of June 30, 2018 was $(133.2) million, or $(277.88) per share, based on 479,377 shares of common stock outstanding as of June 30, 2018. Our pro forma net tangible book value as of June 30, 2018 was approximately $55.5 million, or $3.37 per share of common stock. Our pro forma net tangible book value per share represents the amount of our total tangible assets (which excludes deferred offering costs) reduced by the amount of our total liabilities and divided by the total number of shares of our common stock outstanding as of June 30, 2018, after giving effect to (i) the receipt of $52.0 million in net proceeds from the sale of 194,465,218 shares of Series E redeemable convertible preferred stock in July 2018 and (ii) the conversion of 298,590,921 outstanding shares of our redeemable convertible preferred stock as of June 30, 2018 and 194,465,218 outstanding shares of our redeemable convertible preferred stock issued in July 2018 into an aggregate of 16,007,748 shares of common stock immediately prior to the completion of this offering.

Net tangible book value dilution per share to new investors in this offering and the concurrent private placement represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the concurrent private placement and the pro forma as adjusted net tangible book value per share of common stock immediately after completion of this offering and the concurrent private placement. After giving effect to (i) the pro forma adjustments set forth above, (ii) our sale in this offering of 5,000,000 shares of our common stock at an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses and (iii) the issuance and sale by us in the concurrent private placement of up to approximately 666,666 shares of common stock to Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA based on the assumed initial public offering price, our pro forma as adjusted net tangible book value as of June 30, 2018 would have been approximately $132.6 million, or $5.98 per share of our common stock. This represents an immediate increase in pro forma net tangible book value of $2.61 per share to our existing stockholders and an immediate dilution of $9.02 per share to investors in this offering and the concurrent private placement, as illustrated in the following table:

Assumed initial public offering price, per share		$15.00
Pro forma net tangible book value per share as of June 30, 2018	$3.37	
Increase in pro forma net tangible book value per share attributable to new investors in this offering and the concurrent private placement	2.61	
Pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement		5.98
Dilution per share to new investors in this offering and the concurrent private placement		$ 9.02

Each $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value by $4.7 million, or $0.23 per

share and the dilution in pro forma as adjusted net tangible book value per share to new investors in this offering and the concurrent private placement by $0.77 per share, assuming the number of shares offered, as set forth on the cover of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. Similarly, each increase of 1,000,000 shares in the number of shares of common stock offered in this offering and the concurrent private placement would increase our pro forma as adjusted net tangible book value by approximately $14.0 million, or approximately $0.35 per share, and would increase dilution per share to new investors in this offering and the concurrent private placement by approximately $0.35 per share and each decrease of 1,000,000 shares in the number of shares of common stock offered in this offering and the concurrent private placement would decrease our pro forma as adjusted net tangible book value by approximately $14.0 million, or approximately $0.37 per share, and would decrease dilution per share to new investors in this offering and the concurrent private placement by approximately $0.37 per share, assuming the assumed initial public offering price per share remains the same and after deducting the estimated underwriting discounts and commissions. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price and other terms of this offering and the concurrent private placement determined at pricing.

If the underwriters exercise their option in full to purchase additional shares, the pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement would be $6.24 per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $2.87 per share and the dilution to new investors in this offering and the concurrent private placement would be $8.76 per share.

The following table shows, as of June 30, 2018, on a pro forma as adjusted basis described above, the differences between the existing stockholders and the purchasers of shares in this offering and the concurrent private placement with respect to the number of shares purchased from us, the total consideration paid, which includes net proceeds received from the issuance of common and redeemable convertible preferred stock, cash received from the exercise of stock options, and the value of any stock issued for services and the average price paid per share (in thousands, except per share amounts and percentages):

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	16,487,125	74.4%	$133,065,000	61.0%	$ 8.07
Concurrent private placement investor	666,666	3.0	10,000,000	4.6	$ 15.00
New public investors	5,000,000	22.6	75,000,000	34.4	$ 15.00
Total	22,153,791	100.0%	$218,065,000	100.0%	

Each $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated price range set forth on the cover of this prospectus, would increase (decrease) total consideration paid by new investors and total consideration paid by all stockholders by approximately $5.0 million, assuming that the number of shares offered, as set forth on the cover of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. Similarly, each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered in this offering would increase (decrease) total consideration paid by new investors and total consideration paid by all stockholders by approximately $15.0 million, assuming the assumed initial public offering price remains the same and after deducting the estimated underwriting discounts and commissions.

In addition, to the extent that any outstanding options or warrants are exercised, investors in this offering will experience further dilution.

Except as otherwise indicated, the above discussion and tables assume no exercise of the underwriters' option to purchase additional shares. If the underwriters exercise their option to purchase additional shares in full, our existing stockholders would own 74.9% and our new investors would own 25.1% of the total number of shares of our common stock outstanding upon the completion of this offering and the concurrent private placement.

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing shares of common stock in this offering with an aggregate value of approximately $30.0 million at the initial public offering price. As these indications of interest are non-binding, the foregoing discussion and table do not reflect the potential purchase of any shares in this offering by these parties.

The number of shares of common stock outstanding as of June 30, 2018 excludes:

- 820,875 shares of common stock issuable upon the exercise of options outstanding as of June 30, 2018 under our 2004 Stock Plan, with a weighted-average exercise price of $10.41 per share;
- 71,731 shares of common stock issuable upon the exercise of warrants to purchase 2,097,260 shares of redeemable convertible preferred stock outstanding as of June 30, 2018 with a weighted-average exercise price of $0.37 per share (which in connection with the July 2018 closing of the Series E redeemable convertible preferred stock financing were adjusted such that they represent warrants to purchase a total of 2,370,799 shares of redeemable convertible preferred stock), which will automatically convert to warrants to purchase share of our common stock upon the completion of this offering; and
- 4,221,759 shares of common stock reserved for future issuance under our stock-based compensation plans, consisting of (i) 1,691,759 shares of common stock reserved for future issuance under our 2004 Stock Plan as of June 30, 2018, (ii) 2,300,000 shares of common stock reserved for future issuance under our 2018 Equity Incentive Plan, which will become effective on the date immediately prior to the date of the effectiveness of the registration statement of which this prospectus forms a part, of which shares we intend to grant equity awards consisting of 312,406 shares issuable upon the vesting of restricted stock units and 2,267,266 shares issuable upon the exercise of stock options (with an exercise price equal to the initial public offering price) effective upon the date of this prospectus and (iii) 230,000 shares of common stock reserved for future issuance under our 2018 Employee Stock Purchase Plan, which will become effective on the date of the effectiveness of the registration statement of which this prospectus forms a part. Upon completion of this offering, any remaining shares available for issuance under our 2004 Stock Plan will be added to the shares reserved under our 2018 Equity Incentive Plan and we will cease granting awards under our 2004 Stock Plan. Our 2018 Equity Incentive Plan and 2018 Employee Stock Purchase Plan also provide for automatic annual increases in the number of shares reserved under the plans, as more fully described in "Executive Compensation—Equity Compensation Benefit Plans and Other Benefit Plans."

SELECTED FINANCIAL DATA

The following tables set forth our selected statements of operations and balance sheet data. The selected statements of operations data presented below for the years ended December 31, 2016 and 2017 and the selected balance sheet data as of December 31, 2016 and 2017 are derived from our audited financial statements included elsewhere in this prospectus, which financial statements have been audited by Ernst & Young LLP, our independent registered public accounting firm. The Ernst & Young LLP audit report on the financial statements for the year ended December 31, 2017 includes an explanatory paragraph that describes an uncertainty about our ability to continue as a going concern. We derived our summary statements of operations data for the six months ended June 30, 2017 and 2018 and our summary balance sheet data as of June 30, 2018 from our unaudited interim financial statements included elsewhere in this prospectus. Our unaudited interim financial statements have been prepared in accordance with U.S. generally accepted accounting principles on the same basis as our audited annual financial statements and, in the opinion of management, reflect all adjustments, consisting only of normal, recurring adjustments, that are necessary for the fair statement of our financial position as of June 30, 2018 and our results of operations for the six months ended June 30, 2017 and 2018. The following selected financial data below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in any future period and our interim results for the six months ended June 30, 2018 are not necessarily indicative of the results to be expected for the full year ending December 31, 2018, or any other period. The selected financial data in this section are not intended to replace the financial statements and are qualified in their entirety by the financial statements and related notes included elsewhere in this prospectus.

	Year Ended December 31,		Six Months Ended June 30,	
	2016	2017	2017	2018
			(unaudited)	
	(in thousands, except share and per share data)			
Statements of Operations Data:				
Revenue:				
Collaboration revenue	$ 59,731	$ 51,741	$ 30,202	$ 7,031
Other revenue – related parties	—	—	—	4,466
Total revenue	59,731	51,741	30,202	11,497
Operating expenses:				
Research and development	43,550	54,639	25,830	26,833
General and administrative	14,817	16,374	7,411	8,455
Total operating expenses	58,367	71,013	33,241	35,288
Income (loss) from operations	1,364	(19,272)	(3,039)	(23,791)
Interest income	251	273	130	80
Interest expense	–	(612)	–	(784)
Other income (expense), net	87	(77)	(17)	908
Net income (loss)	$ 1,702	$ (19,688)	$ (2,926)	$ (23,587)
Net income (loss) per share attributable to common stockholders, basic and diluted(1)	$ –	$ (43.95)	$ (6.63)	$ (49.90)
Weighted-average shares used in computing net income (loss) per share attributable to common stockholders, basic and diluted(1)	407,735	447,946	441,059	472,647
Pro forma net loss per share, basic and diluted (unaudited)(1)		$ (3.54)		$ (3.50)
Weighted-average shares used in computing pro forma net loss per share, basic and diluted (unaudited)(1)		5,511,350		6,997,394

(1) See Notes 2 and 13 to our audited financial statements and Notes 2 and 10 to our unaudited interim financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net income (loss) per share attributable to common stockholders, basic and diluted pro forma net loss per share and the weighted-average number of shares used in the computation of the per share amounts.

	As of December 31,		As of June 30,
	2016	2017	2018
			(unaudited)
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$ 11,593	$ 22,020	$ 25,420
Marketable securities	35,928	–	–
Working capital (deficit)	(493)	(6,327)	10,997
Total assets	69,277	40,769	45,181
Debt	–	14,634	14,802
Redeemable convertible preferred stock warrant liability	1,193	1,708	801
Redeemable convertible preferred stock	102,505	102,505	135,720
Accumulated deficit	(95,323)	(115,011)	(138,598)
Total stockholders' deficit	(90,901)	(109,001)	(132,019)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section of this prospectus entitled "Selected Financial Data" and our financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations, intentions and beliefs. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section of this prospectus entitled "Risk Factors."

Overview

We are a clinical stage drug discovery, development and manufacturing company focused on leveraging our proprietary integrated cell-free protein synthesis platform, XpressCF, to create a broad variety of optimally designed, next-generation protein therapeutics for cancer and autoimmune disorders. We aim to design therapeutics using the most potent modalities, including cytokine-based immuno-oncology therapeutics, antibody-drug conjugates, or ADCs, and bispecific antibodies that are directed primarily against clinically validated targets where the current standard of care is suboptimal. Our platform allows us to accelerate the discovery and development of molecules by enabling the rapid and systematic evaluation of protein structure-activity relationships to create optimized homogeneous product candidates. Our mission is to transform the lives of patients by using our XpressCF Platform to create medicines with improved therapeutic profiles for areas of unmet need.

Once identified, production of protein drug candidates can be rapidly and predictably scaled in our current Good Manufacturing Practices compliant manufacturing facility. We have the ability to manufacture our cell-free extract that supports our production of proteins on a large scale using a semi-continuous fermentation process. Our two most advanced product candidates are wholly owned: STRO-001, an ADC directed against CD74, for patients with multiple myeloma and non-Hodgkin lymphoma; and STRO-002, an ADC directed against folate receptor-alpha, or FolRa, for patients with ovarian and endometrial cancers. STRO-001 is currently enrolling patients in a Phase 1 trial, with initial safety data expected in mid-2019. We plan to submit an investigational new drug, or IND, application for STRO-002 to the U.S. Food and Drug Administration in the fourth quarter of 2018. We have also entered into multi-target, product-focused collaborations with leaders in the field of oncology, including a cytokine derivatives collaboration with Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA, or Merck, a B cell maturation antigen, or BCMA, and an immuno-oncology directed alliance with Celgene Corporation, or Celgene, and an oncology-focused collaboration with Merck KGaA, Darmstadt, Germany (operating in the United States and Canada under the name "EMD Serono").

Since the commencement of our operations, we have devoted substantially all of our resources to performing research and development and manufacturing activities in support of our own product development efforts and those of our collaborators, raising capital to support and expand such activities and providing general and administrative support for these operations. We have funded our operations to date primarily from upfront, milestone and other payments under our collaboration agreements with Merck, Celgene and EMD Serono, the issuance and sale of redeemable convertible preferred stock and debt proceeds.

We have not generated any revenue from commercial product sales and have no products for commercial sale. We had a net loss of $19.7 million for the year ended December 31, 2017 and a net loss of $23.6 million for the six months ended June 30, 2018. Although we had net income for the year

ended December 31, 2016 of $1.7 million, we cannot assure you that we will ever be profitable again or that we will generate positive cash flow from operating activities. As of June 30, 2018, we had an accumulated deficit of $138.6 million. We do not expect to generate any revenue from commercial product sales unless and until we successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years. If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. We expect our operating expenses to significantly increase as we continue to develop, and seek regulatory approvals for, our product candidates, engage in other research and development activities, expand our pipeline of product candidates, continue to develop our manufacturing facility and capabilities, maintain and expand our intellectual property portfolio, seek regulatory and marketing approval for any product candidates that we may develop, acquire or in-license other assets or technologies, ultimately establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval and operate as a public company. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our clinical trials, our expenditures on other research and development activities and the timing of achievement and receipt of upfront, milestones and other collaboration agreement payments.

As of December 31, 2017 and June 30, 2018, we had $22.0 million and $25.4 million, respectively, in cash and cash equivalents. We completed an equity financing and obtained $52.0 million in gross proceeds from the sale of our Series E redeemable convertible preferred stock in July 2018. In July 2018, we entered into an Exclusive Patent License and Research Collaboration Agreement, or the 2018 Merck Agreement, with Merck to jointly develop up to three research programs focusing on cytokine derivatives for cancer and autoimmune disorders. Under the 2018 Merck Agreement, we received an upfront payment of $60.0 million in August 2018 for our commitment to the research and development of the target programs. We expect that the net proceeds from this offering and the concurrent private placement, together with our existing cash and cash equivalents, the proceeds from our recent Series E financing and Merck collaboration will be sufficient to fund our operations through at least the next 12 months. We will need substantial additional funding in addition to the net proceeds of this offering and the concurrent private placement to support our continuing operations and pursue our long-term business plan. We may seek additional funding through the issuance of our common stock, other equity or debt financings, or collaborations or partnerships with other companies. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our clinical development efforts for our product candidates and other research activities, payments received under any future or existing license and collaboration agreements, and development and manufacturing activities. We may not be able to raise additional capital on terms acceptable to us, or at all. Any failure to raise capital as and when needed would compromise our ability to execute on our business plan and may cause us to significantly delay, scale back or discontinue the development of some of our programs or curtail any efforts to expand our product pipeline.

Collaboration and License Agreements

Merck Agreement

In July 2018, we entered into the 2018 Merck Agreement with Merck to jointly develop up to three research programs focusing on cytokine derivatives for cancer and autoimmune disorders.

Upon signing the 2018 Merck Agreement, Merck agreed to pay us an upfront payment of $60.0 million, which we received in August 2018, for the research and development of two target programs, and Merck purchased $20.0 million in Series E redeemable convertible preferred stock from us. Under the 2018 Merck Agreement, we are eligible to receive financial support for our research and development efforts based on an agreed-upon level of full-time equivalent personnel effort and related

reimbursement rate. Additionally, we are eligible to receive another milestone payment if a third target program is selected, and Merck has agreed to purchase up to $10.0 million of our common stock concurrently with the closing of this offering.

Under the terms of the 2018 Merck Agreement, we are eligible to receive aggregate milestone payments of up to $1.6 billion, assuming the development and sale of all therapeutic candidates and all possible indications identified under the collaboration. If one or more products from each of the target programs are developed for non-oncology or a single indication, we will be eligible for reduced aggregate milestone payments. In addition, we are eligible to receive tiered royalties ranging from mid-single digit to low teen percentages on the worldwide sales of any commercial products that may result from the collaboration.

Celgene Agreements

In September 2014, we entered into a Collaboration and License Agreement with Celgene, or the 2014 Celgene Agreement, to discover and develop bispecific antibodies and/or ADCs focused primarily on the field of immuno-oncology using our XpressCF Platform. Under the 2014 Celgene Agreement, we received upfront payments totaling $95.0 million in September 2014, which included an $11.9 million equity investment, and additional payments totaling $60.0 million.

In August 2017, we entered into an Amended and Restated Collaboration and License Agreement with Celgene, or the 2017 Celgene Agreement, to refocus our 2014 Celgene Agreement on four programs that are advancing through preclinical development, including an ADC program targeting BCMA. Upon signing the 2017 Celgene Agreement, we received an option fee payment of $12.5 million in August 2017 and are eligible to receive a second option fee payment of $12.5 million following the first IND clearance, if any, for one of the four programs, if Celgene desires to maintain its option to acquire the U.S. rights to develop and commercialize a second collaboration program to reach IND status. If Celgene exercises its option to acquire from us the U.S. rights to a second collaboration program, it will make an option exercise fee payment to us, the amount of which depends on which program reaches IND status.

Under the terms of the 2017 Celgene Agreement, we are eligible to receive a potential future payment for manufacturing activities of $10.0 million. We are also entitled to receive financial support for research and development services to be assigned to us by Celgene, based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate. In addition, for licensed products for which Celgene holds worldwide rights, we are eligible to receive aggregate milestone and option fee payments of up to $295.0 million for certain licensed products and up to $393.7 million for certain other licensed products under the collaboration, if approved in multiple indications, and, depending on the licensed product, tiered royalties ranging from single digit to low teen percentages on worldwide sales of any commercial products that may result from the 2017 Celgene Agreement. For licensed products for which Celgene holds ex-U.S. rights, we will also be eligible to receive pre-commercial contingent payments and tiered royalties ranging from mid to high single digit percentages.

We recognized revenue from the Celgene agreements of $54.0 million and $44.6 million during the years ended December 31, 2016 and 2017, respectively, and $26.5 million and $3.4 million during the six months ended June 30 2017 and 2018, respectively. As of December 31, 2016 and 2017 and June 30, 2018, there was $39.5 million, $18.0 million and $14.8 million, respectively, of deferred revenue related to payments received by us under the Celgene agreements.

EMD Serono Agreement

We entered into a Collaboration Agreement with EMD Serono in May 2014, or the Collaboration Agreement, which was replaced by a License Agreement with EMD Serono in September 2014, or the MDA Agreement, to develop ADCs for multiple cancer targets.

Upon signing the Collaboration Agreement, we received $10.0 million in an upfront payment. In addition, upon signing the MDA Agreement, we received an additional $10.0 million in an upfront payment and receive financial support for our research and development services based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate. As of June 30, 2018, we had received approximately $7.0 million in funding support since inception for research and development services. We anticipate entering into a manufacturing supply agreement with EMD Serono to provide them with product candidate materials for IND-enabling and clinical studies.

We are eligible to receive up to $52.5 million for each product developed under the MDA Agreement, primarily from pre-commercial contingent payments. In addition, we are eligible to receive tiered royalties ranging from low to mid single digit percentages, along with certain additional one-time royalties, on worldwide sales of any commercial products that may result from the MDA Agreement.

We recognized revenue from the MDA Agreement of $5.7 million and $7.1 million during the years ended December 31, 2016 and 2017, respectively, and $3.7 million and $3.7 million during the six months ended June 30, 2017 and 2018, respectively. As of December 31, 2016 and 2017 and June 30, 2018, there was $10.0 million, $5.9 million and $3.8 million, respectively, of deferred revenue related to payments received by us under the MDA Agreement.

Financial Operations Overview

Total Revenue

We have no products approved for commercial sale and have not generated any revenue from commercial product sales. Our total revenue to date has been generated principally from our collaboration and license agreements with Celgene and EMD Serono, and to a lesser extent, from manufacturing, supply and services and products we provide to Celgene and SutroVax, Inc., or SutroVax.

Collaboration Revenue

Collaboration revenue consists of revenue received from upfront, milestone and contingent payments received from our collaborators. We recognize revenue from nonrefundable upfront license payments over the term of our estimated period of performance under the agreements. In addition to receiving upfront payments, we may also be entitled to milestone and other contingent payments upon achieving predefined objectives. Revenue from milestones, if they are nonrefundable and deemed substantive, are recognized upon successful accomplishment of the performance obligations. To the extent that non-substantive milestones are achieved, and we have remaining performance obligations, such payments are deferred and recognized as revenue over the estimated remaining period of performance.

We expect that any collaboration revenue we generate principally from our current collaboration and license agreements with Merck, Celgene and EMD Serono, and from any future collaboration partners, will fluctuate in the future as a result of the timing and amount of upfront, milestones and other collaboration agreement payments. We will begin recognizing revenue under the 2018 Merck Agreement in the third quarter of 2018.

Other Revenue – Related Parties

Other revenue – related parties consists of revenue received from development, manufacturing and supply chain management services, including clinical product supply, that we provide to Celgene and from extracts and custom reagents that we provide to SutroVax. We recognize revenue when the services or products are provided. We expect other revenue – related parties will fluctuate from period to period as a result of the timing of ordering and providing such services and products.

Operating Expenses

Research and Development

Research and development expenses represent costs incurred in performing research, development and manufacturing activities in support of our own product development efforts and those of our collaborators, and include salaries, employee benefits, stock-based compensation, laboratory supplies, outsourced research and development expenses, professional services and allocated facilities-related costs. We expense both internal and external research and development costs as they are incurred. Non-refundable advance payments for services that will be used or rendered for future research and development activities are recorded as prepaid expenses and recognized as expenses as the related services are performed.

We expect our research and development expenses to increase substantially in absolute dollars in the future as we advance our product candidates into and through preclinical studies and clinical trials, pursue regulatory approval of our product candidates, expand our pipeline of product candidates and continue to develop our manufacturing facility and capabilities. The process of conducting the necessary preclinical and clinical research to obtain regulatory approval is costly and time consuming. The actual probability of success for our product candidates may be affected by a variety of factors including: the safety and efficacy of our product candidates, early clinical data, investment in our clinical programs, the ability of collaborators to successfully develop our licensed product candidates, competition, manufacturing capability and commercial viability. We may never succeed in achieving regulatory approval for any of our product candidates. As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of our product candidates.

The following table summarizes our research and development expenses incurred during the periods indicated. The internal costs include personnel, facility costs and research and scientific related activities associated with our pipeline. The external program costs reflect external costs attributable to our clinical development candidates and preclinical candidates selected for further development. Such expenses include third-party costs for preclinical and clinical studies and research services, and other consulting costs.

	Year Ended December 31,		Six Months Ended June 30,	
	2016	2017	2017	2018
			(unaudited)	
	(in thousands)			
Internal Costs:				
Research and drug discovery	$ 17,040	$ 15,636	$ 7,748	$ 7,620
Process and product development	8,224	8,195	4,196	4,185
Manufacturing	14,496	19,769	8,035	8,266
Clinical development	–	843	327	599
Total internal costs	39,760	44,443	20,306	20,670
External Program Costs:				
Research and drug discovery	1,650	1,090	498	515
Toxicology and translational science	138	3,767	2,699	1,122
Process and product development	158	208	44	240
Manufacturing	1,844	4,198	2,075	2,946
Clinical development	–	933	208	1,340
Total external program costs	3,790	10,196	5,524	6,163
Total research and development expenses	$ 43,550	$ 54,639	$ 25,830	$ 26,833

General and Administrative

Our general and administrative expenses consist primarily of personnel costs, expenses for outside professional services, including legal, human resource, audit, accounting and tax services and allocated facilities-related costs. Personnel costs include salaries, employee benefits and stock-based compensation. We expect to incur additional expenses as a result of this offering and operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission, or SEC, and listing standards applicable to companies listed on a national securities exchange, additional insurance expenses, investor relations activities and other administrative and professional services. We also expect to increase the size of our administrative function to support the anticipated growth of our business.

Interest Income

Interest income consists primarily of interest received on our invested funds.

Interest Expense

Interest expense includes interest incurred on our debt and amortization of debt issuance costs.

Other Income (Expense), Net

Other income (expense), net primarily includes gains and losses from the remeasurement of our liabilities related to our redeemable convertible preferred stock warrants. We will continue to adjust the liability for changes in estimated fair value until the earlier of the exercise of the warrants, expiration of the warrants, or conversion of the redeemable convertible preferred stock warrants upon the

completion of a liquidation event, including the completion of an initial public offering, into common stock warrants. At such time, the redeemable convertible preferred stock warrant liability will be reclassified to additional paid-in-capital and we will no longer record any related periodic fair value adjustments.

Comparison of the Six Months Ended June 30, 2017 and 2018

	Six Months Ended June 30,			
	2017	2018	$ Change	% Change
	(unaudited) (in thousands except percentages)			
Collaboration revenue	$30,202	$ 7,031	$(23,171)	(77)%
Other revenue—related parties	—	4,466	4,466	*
Total revenue	30,202	11,497	(18,705)	(62)
Operating expenses:				
Research and development	25,830	26,833	1,003	4
General and administrative	7,411	8,455	1,044	14
Total operating expenses	33,241	35,288	2,047	6
Income (loss) from operations	(3,039)	(23,791)	(20,752)	*
Interest income	130	80	(50)	(38)%
Interest expense	—	(784)	(784)	*
Other income (expense), net	(17)	908	925	*
Net loss	$ (2,926)	$(23,587)	$(20,661)	*

* Percentage not meaningful

Revenue

We have recognized revenue as follows during the periods indicated:

	Six Months Ended June 30,	
	2017	2018
	(unaudited) (in thousands)	
Collaboration revenue:		
Celgene:		
Amortization of up-front payments	$ 13,713	$ 3,257
Research and development services	—	98
Milestones and contingent payments	12,825	—
Total	26,538	3,355
EMD Serono:		
Amortization of up-front payments	2,060	2,066
Research and development services	1,604	1,610
Total	3,664	3,676
Total collaboration revenue	$ 30,202	$ 7,031
Other revenue—related parties:		
Celgene:		
Development and manufacturing services and clinical product supply	$ —	$ 3,564
SutroVax:		
Supply and other	—	902
Total other revenue—related parties	$ —	$ 4,466

Total revenue decreased by $18.7 million, or 62%, during the six months ended June 30, 2018 compared to the six months ended June 30, 2017. The decrease was due to the decline in collaboration revenue of $23.2 million due primarily to a decrease of $12.8 million recognized from milestones and contingent payments from Celgene and the decline in collaboration revenue of $10.5 million recognized from the up-front nonrefundable payment of $83.1 million received in 2014 under the 2014 Celgene Agreement, as the remaining deferred revenue balance, as of the effective date of the 2017 Celgene Agreement, along with the payments under the 2017 Celgene Agreement, will be recognized ratably starting in August 2017 and ending in September 2020. The decrease was partially offset by a $3.6 million increase in other revenue recognized from development and clinical manufacturing services and supplies provided to Celgene, and an increase of $0.9 million in supplies and other revenue provided to SutroVax.

Research and Development Expense

Research and development expense increased by $1.0 million, or 4%, during the six months ended June 30, 2018 compared to the six months ended June 30, 2017. The increase was primarily due to increased costs incurred under the Celgene agreements partially offset by the decrease from personnel-related costs of $0.3 million for the six months ended June 30, 2018 being classified to general and administrative expense effective January 2018, as the underlying activities are now more focused on operational matters.

General and Administrative Expense

General and administrative expense increased by $1.0 million, or 14%, during the six months ended June 30, 2018 compared to the six months ended June 30, 2017. The increase was due to $0.6 million in personnel-related expenses from higher headcount and $0.3 million from the inclusion of the personnel-related costs previously in research and development expense effective in January 2018.

Interest Expense

Interest expense increased by $0.8 million during the six months ended June 30, 2018 compared to the six months ended June 30, 2017, due to interest incurred under a loan and security agreement that we entered into with Oxford Finance LLC, or Oxford, and Silicon Valley Bank, or SVB, in August 2017.

Other Income (Expense), Net

Other income (expense), net changed by $0.9 million during the six months ended June 30, 2018 compared to the six months ended June 30, 2017. The change was primarily due to the gain of $0.9 million for the change in the estimated fair value of our redeemable convertible preferred stock warrants during the six months ended June 30, 2018.

Comparison of the Years Ended December 31, 2016 and 2017

	Year Ended December 31,			
	2016	2017	$ Change	% Change
	(in thousands except percentages)			
Collaboration revenue	$59,731	$ 51,741	$ (7,990)	(13)%
Operating expenses:				
Research and development	43,550	54,639	11,089	25
General and administrative	14,817	16,374	1,557	11
Total operating expenses	58,367	71,013	12,646	22
Income (loss) from operations	1,364	(19,272)	(20,636)	*
Interest income	251	273	22	9
Interest expense	–	(612)	(612)	*
Other income (expense), net	87	(77)	(164)	*
Net income (loss)	$ 1,702	$(19,688)	$(21,390)	*

* Percentage not meaningful

Collaboration Revenue

We have recognized revenue from our collaboration agreements as follows during the periods indicated:

	Year Ended December 31,	
	2016	2017
	(in thousands)	
Celgene:		
Amortization of up-front payment	$27,730	$16,694
Research and development services	–	660
Milestones and contingent payments	26,271	27,252
Total	54,001	44,606
EMD Serono:		
Amortization of up-front payment	4,120	4,120
Research and development services	1,610	3,015
Total	5,730	7,135
Total collaboration revenue	$59,731	$51,741

Revenue decreased by $8.0 million, or 13%, during the year ended December 31, 2017 compared to the year ended December 31, 2016. The decrease was due to the decline in collaboration revenue of $11.0 million recognized from the up-front nonrefundable payment of $83.1 million received in 2014 under the 2014 Celgene Agreement, as the remaining deferred revenue balance, as of the effective date of the 2017 Celgene Agreement, along with the payments under the 2017 Celgene Agreement, will be recognized ratably starting in August 2017 and ending in September 2020. The decrease was partially offset by a $1.0 million increase in revenue recognized from milestones and contingent payments from Celgene and an increase of an aggregate of $2.1 million in research and development services for Celgene and EMD Serono.

Research and Development Expense

Research and development expense increased by $11.1 million, or 25%, during the year ended December 31, 2017 compared to the year ended December 31, 2016. The increase was due to an

increase of $3.4 million in personnel-related expenses due to headcount growth, an increase of $2.4 million in consulting and other external services, an increase of $1.7 million in facilities-related costs, as a result of increased research and development activities in support of our own product development efforts and those of our collaborators, and a net increase of $0.9 million in preclinical and pharmacology research spending as well as manufacturing supplies and production materials. The increase in research and development expense also reflects an impairment charge of $2.7 million pertaining to certain custom-built manufacturing equipment that failed to meet our acceptance criteria.

General and Administrative Expense

General and administrative expense increased by $1.6 million, or 11%, during the year ended December 31, 2017 compared to the year ended December 31, 2016. The increase was due to an increase of $0.5 million in equipment-related expenses and an increase of $0.7 million in personnel-related expenses due to higher headcount. In addition, we incurred an additional $0.4 million related to external investor relations services and professional services fees.

Interest Expense

Interest expense increased by $0.6 million during the year ended December 31, 2017 compared to the year ended December 31, 2016. The increase was due to the interest incurred under a loan and security agreement that we entered into in August 2017. We had no outstanding debt in 2016.

Other Income (Expense), Net

Other income (expense), net increased by $0.2 million during the year ended December 31, 2017 compared to the year ended December 31, 2016. The increase was primarily due to the change in estimated fair value of our Series B and Series C redeemable convertible preferred stock warrants.

Liquidity and Capital Resources

Sources of Liquidity

Since inception, we have funded our operations primarily by payments received from our collaborators, net proceeds from the sale of our redeemable convertible preferred stock and debt proceeds. Our expenditures are primarily related to research, development and manufacturing activities. At December 31, 2017 and June 30, 2018, we had available cash and cash equivalents of $22.0 million and $25.4 million, respectively. As of June 30, 2018, our outstanding debt was $14.8 million, which is net of $0.4 million unamortized debt discount, and we had an accumulated deficit of $138.6 million.

In July 2018, we completed a closing of the Series E redeemable convertible preferred stock financing that resulted in gross proceeds of $52.0 million. In combination with the $33.4 million in gross proceeds we raised in the May and June 2018 closings of the Series E redeemable convertible preferred stock financing, the total gross proceeds from the Series E redeemable convertible preferred stock financing were $85.4 million. Additionally, in July 2018, we entered into the 2018 Merck Agreement, pursuant to which we received an upfront payment of $60.0 million in August 2018.

In August 2017, we entered into a loan and security agreement with Oxford and SVB under which we borrowed $15.0 million. The loan is due in 30 monthly installments from March 2019 through its repayment in August 2021, with interest-only monthly payments until March 2019. If certain qualified funding events occur, the loan will be due in 24 monthly installments from September 2019 through repayment on August 2021, with interest-only payments until September 2019.

The interest charges on the loan are based on a floating rate that equals the greater of 7.39% or the sum of the 30-day U.S. Dollar London Interbank Offered Rate, or LIBOR, plus 6.40%. In addition,

we will make a final payment equal to 3.83% of the original principal amount of the loan, or $574,500, which will be accrued over the term of the loan using the effective-interest method.

The loan is secured by all our assets, excluding intellectual property and certain other assets. The loan contains customary affirmative and restrictive covenants, including with respect to our ability to enter into fundamental transactions, incur additional indebtedness, grant liens, pay any dividend or make any distributions to our holders, make investments, merge or consolidate with any other person, or engage in transactions with our affiliates, but does not include any financial covenants. The loan agreement provides that an event of default will occur if, among other triggers, there occurs any circumstances that could reasonably be expected to result in a material adverse effect on our business, operations or condition, or on our ability to perform our obligations under the loan. We have disclosed that there was substantial doubt about our ability to continue as going concern as of December 31, 2017 given our continuing operating losses and our then-available capital resources, which could have been deemed to be an event of default if such condition was considered to have a material adverse effect on our business, operations or condition. As a result, at December 31, 2017, we classified the entire debt balance as a current liability given that a determination of such an event of default was outside of our control. However, as of June 30, 2018, our existing cash and cash equivalents, proceeds from our Series E redeemable convertible preferred stock financing, the upfront payment under the 2018 Merck Agreement and proceeds from this offering and the concurrent private placement will be sufficient to fund our operating requirements for at least the next 12 months, and therefore, we do not believe that the prior doubt about our ability to continue as a going concern has a material adverse effect on our business. Based on the proceeds from our July 2018 Series E convertible redeemable preferred stock financing and the $60.0 million upfront payment from Merck described above, as of June 30, 2018, we classified $2.0 million of the outstanding debt balance as current and the remainder as non-current, which reflects the scheduled repayments under the loan.

The loan agreement also includes customary representations and warranties, other events of default and termination provisions. We were in compliance with all covenants under the loan as of December 31, 2017 and June 30, 2018.

Funding Requirements

Based on our planned operations and the proceeds from our July 2018 Series E redeemable convertible preferred stock financing and the $60.0 million upfront payment from Merck, we expect that our current cash and cash equivalents will be sufficient to fund our operations for at least 12 months after the date the unaudited interim financial statements are issued. However, we will need to raise additional capital through equity or debt financing, or potential additional collaboration proceeds prior to achieving commercialization of our products. As noted in our 2017 audited financial statements, there were conditions that raised substantial doubt about our ability to continue as a going concern for a period of one year from the date of the issuance of our 2017 financial statements. Our ability to continue as a going concern is dependent upon our ability to successfully secure sources of financing and ultimately achieve profitable operations.

We will require additional financing to fund working capital and pay our obligations. We may seek to raise any necessary additional capital through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. There can be no assurance that we will be successful in acquiring additional funding at levels sufficient to fund our operations or on terms favorable to us. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of or suspend one or more of our pre-clinical and clinical studies, research and development programs or commercialization efforts. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates and the extent to which we may enter into additional collaborations with third parties to participate in their development and commercialization, we are

unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical studies. Our future funding requirements will depend on many factors, including the following:

- the scope, rate of progress, results and cost of our clinical trials, preclinical studies and other related activities;
- the cost of manufacturing clinical supplies, and establishing commercial supplies, of our product candidates and any products that we may develop;
- the receipt of any future payments from current or potential collaborators;
- the number and characteristics of product candidates that we pursue;
- the cost, timing and outcomes of regulatory approvals;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- the terms and timing of any other collaborative, licensing and other arrangements that we may establish;
- the timing, receipt and amount of sales, profit sharing or royalties, if any, from our potential products;
- the cost of preparing, filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- the extent to which we acquire or invest in businesses, products or technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

To the extent that we raise additional capital through additional collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our product candidates, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we do raise additional capital through public or private equity or convertible debt offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

Cash Flows

The following table summarizes our cash flows during the periods indicated:

	Year Ended December 31,		Six Months Ended June 30,	
	2016	2017	2017	2018
			(unaudited)	
	(in thousands)			
Cash used in operating activities	$(13,160)	$(37,074)	$(30,196)	$(28,955)
Cash provided by (used in) investing activities	9,591	32,602	24,816	(400)
Cash provided by financing activities	184	14,639	38	32,755
Net (decrease) increase in cash and cash equivalents and restricted cash	$ (3,385)	$ 10,167	$ (5,342)	$ 3,400

Cash Flows from Operating Activities

Cash used in operating activities for the six months ended June 30, 2018 was $29.0 million. Our net loss of $23.6 million was decreased by non-cash charges of $2.3 million for depreciation and amortization and $0.5 million for stock-based compensation, which were partially offset by the gain of $0.9 million for the change in fair value of our redeemable convertible preferred stock warrant liability.

Cash used in operating activities reflected a change in net operating assets of $7.2 million, primarily due to a decrease in our deferred revenue balance of $5.3 million from the recognition of revenue pertaining to payments received from our collaborators Celgene and EMD Serono during prior periods, an increase in accounts receivable of $1.6 million due to higher research and development services revenues from our collaborators Celgene and EMD Serono and a $0.7 million decrease in accounts payable due to the timing of payments.

Cash used in operating activities for the six months ended June 30, 2017 was $30.2 million. Our net loss of $2.9 million was decreased by non-cash charges of $2.6 million for depreciation and amortization and $0.5 million for stock-based compensation. Cash used in operating activities reflected a change in net operating assets of $30.6 million, primarily due to a decrease in our deferred revenue balance of $28.6 million from the recognition of revenue pertaining to payments received from our collaborators Celgene and EMD Serono during prior periods and a decrease in accrued bonus compensation of $0.9 million driven primarily by the payment of prior year accrued bonuses, which were offset by an increase in the current period accrual due to higher headcount and a decrease of $0.8 million in accounts payable due to timing of payments.

Cash used in operating activities for the year ended December 31, 2017 was $37.1 million. Our net loss of $19.7 million was decreased by non-cash charges of $5.0 million for depreciation and amortization, $2.7 million for an impairment charge on certain equipment, $1.4 million for stock-based compensation and $0.4 million in other non-cash charges. Cash used in operating activities reflected a change in net operating assets of $26.9 million, primarily due to a decrease in our deferred revenue balance of $25.6 million from the recognition of revenue pertaining to payments received from our collaborators Celgene and EMD Serono during prior periods, and an increase in accounts receivable of $1.0 million due to higher research and development services revenues from our collaborators Celgene and EMD Serono.

Cash used in operating activities for the year ended December 31, 2016 was $13.2 million. Our net income of $1.7 million was increased by non-cash charges of $5.7 million for depreciation and amortization, $1.0 million for stock-based compensation and $0.2 million for amortization of premium on marketable securities. Cash used in operating activities reflected a decrease in net operating assets of $21.7 million, primarily due to a decrease in our deferred revenue balance of $23.1 million from the recognition of revenue pertaining to payments received from our collaborators Celgene and EMD Serono during prior periods, an increase in accrued bonus compensation of $1.2 million driven primarily by higher headcount and an increase of $0.9 million in accounts payable due to a higher level of research and development activities.

Cash Flows from Investing Activities

Cash used in investing activities of $0.4 million for the six months ended June 30, 2018 was related to purchases of property and equipment, principally for laboratory and manufacturing equipment and leasehold improvements.

Cash provided by investing activities of $24.8 million for the six months ended June 30, 2017 was related to proceeds from maturities of marketable securities of $27.9 million and sales of marketable securities of $3.8 million, partially offset by purchases of marketable securities of $5.0 million and purchases of property and equipment of $1.8 million, principally for laboratory and manufacturing equipment and leasehold improvements.

Cash provided by investing activities of $32.6 million for the year ended December 31, 2017 was related to proceeds from maturities of marketable securities of $34.9 million and sales of marketable securities of $15.2 million, partially offset by purchases of marketable securities of $14.2 million and purchases of property and equipment of $3.3 million, principally for laboratory and manufacturing equipment and leasehold improvements.

Cash provided by investing activities of $9.6 million for the year ended December 31, 2016 was related to proceeds from maturities of marketable securities of $57.8 million and sales of marketable securities of $8.5 million, partially offset by purchases of marketable securities of $52.3 million and purchases of property and equipment of $4.4 million, principally for laboratory and manufacturing equipment and leasehold improvements.

Cash Flows from Financing Activities

Cash provided by financing activities of $32.8 million for the six months ended June 30, 2018 was primarily related to the net proceeds from our issuance of Series E redeemable convertible preferred stock of $33.2 million, partially offset by the payment of $0.5 million in financing costs related to this offering.

Cash provided by financing activities of $38,000 for the six months ended June 30, 2017 was related to proceeds from the issuances of common stock from the exercise of stock options.

Cash provided by financing activities of $14.6 million for the year ended December 31, 2017 was primarily related to the proceeds from our debt with Oxford and SVB, net of issuance costs, of $14.8 million and partially offset by the payment of $0.3 million in financing costs related to this offering.

Cash provided by financing activities of $0.2 million for the year ended December 31, 2016 was related to proceeds from the issuances of common stock from the exercise of stock options.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations as of December 31, 2017:

	Payments Due by Period				
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	Total
	(in thousands)				
Contractual obligations:					
Debt, principal(1)	$ –	$ 11,000	$ 4,000	$ –	$ 15,000
Debt, interest(2)	1,173	1,524	666	–	3,363
Operating lease obligations	3,540	7,426	3,195	–	14,161
Total contractual obligations	$ 4,713	$ 19,950	$ 7,861	$ –	$ 32,524

(1) Represents principal payments only. We will pay interest on outstanding indebtedness based on the rates and terms summarized in Note 7 to our audited financial statements included elsewhere in this prospectus.

(2) Represents interest expense expected to be incurred on our debt based on obligations outstanding and rates effective at December 31, 2017, including a final one-time payment of $0.6 million.

In addition, we enter into agreements in the normal course of business with contract research organizations for clinical trials and with vendors for preclinical studies and other services and products for operating purposes, which are generally cancelable upon written notice. These payments are not included in this table of contractual obligations.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements, as defined under SEC rules. While we have an investment classified as variable interest entity, its purpose is not to provide off-balance sheet financing.

Critical Accounting Polices and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with United States generally accepted accounting principles. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in the notes to our financial statements included elsewhere in this prospectus, we believe that the following critical accounting policies are most important to understanding and evaluating our reported financial results.

Revenue Recognition

We generate revenue from collaboration and license agreements for the development and commercialization of our product candidates. Under our collaboration agreements, we may receive non-refundable upfront payments, funding for research and development services, milestones, other contingent payments and royalties. In assessing the appropriate revenue recognition related to a collaboration agreement, we first determine whether an arrangement includes multiple elements, such as the delivery of intellectual property rights and research and development services.

Typically, access to the intellectual property rights under our collaboration agreements do not have stand-alone value from the other elements within the arrangement. As such, upfront payments are recorded as deferred revenue in the balance sheet and are recognized as collaboration revenue over the estimated period of performance that is consistent with the terms of the research and development obligations contained in the collaboration

Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured. For multiple-element arrangements, each deliverable within a multiple-deliverable revenue arrangement is accounted for as a separate unit of accounting if both of the following criteria are met: (i) the delivered item or items has value to the customer on a stand-alone basis and (ii) for an arrangement that includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in management's control.

We recognize revenue from milestone payments when: (i) the milestone event is substantive and its achievability has substantive uncertainty at the inception of the agreement and (ii) we have completed our performance obligations related to the achievement of the milestone. Milestone payments are considered substantive if all of the following conditions are met: the milestone payment (a) is commensurate with either our performance subsequent to the inception of the arrangement to achieve the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from our performance subsequent to the inception of the arrangement to achieve the milestone, (b) relates solely to past performance and (c) is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

Determining whether and when these revenue recognition criteria have been satisfied often involves assumptions and judgments that can have a significant impact on the timing and amount of

reported revenue. Changes in assumptions or judgments or changes to the elements in an arrangement could cause a material increase or decrease in the amount of revenue that is reported in a particular period.

Under certain collaborative arrangements, we are entitled to payments for certain research and development activities, including providing product and other related materials. Our policy is to account for such payments by our collaboration partners as collaboration revenue.

Research and Development

We record accrued expenses for estimated costs of our research and development activities conducted by third party service providers, which include outsourced research and development expenses, professional services and contract manufacturing activities. We record the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced, and include these costs in current liabilities in the balance sheets and within research and development expense in the statements of operations.

Nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized and recognized as an expense as the goods are delivered or the related services are performed.

For outsourced research and development expenses, such as professional fees payable to third parties for preclinical studies, clinical trials and research services and other consulting costs, we estimate the expenses based on the services performed, pursuant to contracts with research institutions that conduct and manage preclinical studies, clinical trials and research services on our behalf. We estimate these expenses based on discussions with internal management personnel and external service providers as to the progress or stage of completion of services and the contracted fees to be paid for such services. If the actual timing of the performance of services or the level of effort varies from the original estimates, we will adjust the accrual accordingly. Payments made to third parties under these arrangements in advance of the performance of the related services by the third parties are recorded as prepaid expenses until the services are rendered.

Stock-Based Compensation

We recognize compensation costs related to stock options granted to employees based on the estimated fair value of the awards on the date of grant, net of estimated forfeitures. We estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. The grant date fair value of the stock-based awards is generally recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective awards.

The Black-Scholes option-pricing model requires the use of highly subjective assumptions to determine the fair value of stock-based awards, including the expected term and the price volatility of the underlying stock. These assumptions include:

- *Expected term*—The expected term represents the period that the stock-based awards are expected to be outstanding. We used the “simplified” method to determine the expected life of options granted, which calculates the expected term as the average of the weighted-average vesting term and the contractual term of the option.
- *Expected volatility*—Since we are not yet a public company and do not have any trading history for our common stock, the expected volatility was estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a period equal to the expected term of the stock option grants. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.

- *Risk-free interest rate*—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero coupon U.S. Treasury notes with maturities approximately equal to the expected term of the options.
- *Expected dividend*—We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

In addition to the assumptions used in the Black-Scholes option-pricing model, we must also estimate a forfeiture rate to calculate the stock-based compensation for our awards. We will continue to use judgment in evaluating the expected volatility, expected terms and forfeiture rates utilized for our stock-based compensation calculations on a prospective basis.

Historically, for all periods prior to this initial public offering, the fair value of the shares of common stock underlying our share-based awards were estimated on each grant date by our board of directors. In order to determine the fair value of our common stock underlying option grants, our board of directors considered, among other things, timely valuations of our common stock prepared by an unrelated third-party valuation firm in accordance with the guidance provide by the American Institute of Certified Public Accountants Practice Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* . For each of the valuation dates during the years ended December 31, 2016 and 2017, we applied the Guideline Publicly Traded Company Analysis (Life Science Expected Compound Method) for the valuation of our equity. We were at an early stage of development and future liquidity events were difficult to forecast. We therefore used the option-pricing method, or OPM, to determine the estimated fair value of our common stock. In an OPM framework, shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The estimated fair values of the preferred and common stock are inferred by analyzing these options. For the valuation dates during the six months ended June 30, 2018, the equity value was allocated using the OPM and the Probability Weighted Expected Return Method, or PWERM, or the hybrid method. The hybrid method applied the PWERM utilizing the probability of going public and the OPM was utilized in the remaining private scenario. The hybrid method was used commencing May 31, 2018 because of a near-term potential IPO scenario that also factored in the inherent uncertainty associated with being able to complete an IPO.

Given the absence of a public trading market for our common stock, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including important developments in our operations, our stage of development, valuations performed by an independent third party valuation firm, sales of our redeemable convertible preferred stock, actual operating results and financial performance, the conditions in the biotechnology industry and the economy in general, the stock price performance and volatility of comparable public companies, the lack of liquidity of our common stock, and the likelihood of achieving a liquidity event, such as an initial public offering or sale.

After the completion of this offering, our board of directors will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of grant.

The intrinsic value of all outstanding options as of June 30, 2018 was $3.8 million based on an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover of this prospectus.

Redeemable Convertible Preferred Stock Warrants

We have issued freestanding warrants to purchase shares of redeemable convertible preferred stock. We account for these warrants as a liability in our financial statements and they are recorded at their estimated fair value, because the warrants may conditionally obligate us to transfer assets at some point in the future due to redemption provisions that are outside our control.

The fair value of the warrants at the issuance date, December 31, 2016 and 2017 and June 30, 2018 was determined using the Option Pricing Method. The warrants are re-measured at each financial reporting period with any changes in fair value being recognized in the other income (expense), net in the statement of operations. We will continue to adjust the liability for changes in fair value until the earlier of the expiration of the warrants, exercise of the warrants, or conversion of the redeemable convertible preferred stock warrants into common stock warrants upon the completion of a liquidation event, including the completion of an initial public offering.

Income Taxes

As of December 31, 2017, we had federal net operating loss, or NOL, carryforwards of $91.6 million and federal general business credits from research and development expenses totaling $7.4 million, as well as state NOL carryforwards of $65.2 million and state research and development credits of $7.8 million. If not utilized, the federal NOL carryforwards will expire at various dates beginning in 2032, and the federal credits will expire at various dates beginning in 2023. The state NOL carryforwards will expire at various dates beginning in 2030, if not utilized. The state research and development tax credits can be carried forward indefinitely.

Utilization of the net operating loss carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the Tax Reform Act of 1986, or the Tax Reform Act, as amended, and similar state provisions. The annual limitation may result in the expiration of NOLs and credits before utilization. We have performed a Section 382 study for the period of June 16, 2003 through December 31, 2016 and concluded that it is more likely than not that we experienced an ownership change on April 9, 2007. This change does not limit our ability to use our existing NOLs within the carryforward period provided by the Internal Revenue Code, subject to availability of taxable income. We may have experienced a further ownership change in connection with the Series E redeemable convertible preferred stock financing, as a result of the price at which the shares were issued and the number of shares that were issued. Moreover, we may experience ownership changes in the future as a result of this offering and the concurrent private placement or subsequent shifts in our stock ownership, some of which are outside our control. If there is a subsequent event or further change in ownership, these losses may be subject to limitations, resulting in their expiration before they can be utilized.

We assess all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position's sustainability and is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and we will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of a tax benefit might change as new information becomes available.

Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities. The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality.

We had cash and cash equivalents $22.0 million and $25.4 million as of December 31, 2017 and June 30, 2018, respectively, which consisted of deposits, money market funds, commercial paper,

corporate debt securities and U.S. government agency securities. Such interest earning instruments carry a degree of interest rate risk; however, historical fluctuations in interest income have not been significant.

We do not enter into investments for trading or speculative purposes and have not used any derivative financial instruments to manage our interest rate risk exposure. We have not been exposed nor do we anticipate being exposed to material risks due to changes in interest rates. A hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our financial statements.

As of December 31, 2017 and June 30, 2018, we had $14.6 million and $14.8 million, respectively, in debt outstanding, net of debt discount. Our debt with Oxford and SVB bears interest at a floating rate that equals the greater of 7.39% or the sum of the 30-day U.S. Dollar LIBOR plus 6.40% and has a maturity date of August 1, 2021. Such interest-bearing debt carries a limited degree of interest rate risk. If overall interest rates had increased or decreased by 100 basis points during the periods presented our interest expense would not have been materially affected.

JOBS Act Accounting Election

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies.

We have elected to use this extended transition period for complying with new or revised accounting standards that have different effective dates for public and private companies until the earlier of the date we (i) are no longer an emerging growth company or (ii) affirmatively and irrevocably opt out of the extended transition period provided in the JOBS Act. As a result, our financial statements may not be comparable to companies that comply with new or revised accounting pronouncements as of public company effective dates.

We will remain an emerging growth company until the earliest of (1) the last day of our first fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenues of at least $1.07 billion, or (ii) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th and (2) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period.

Recent Accounting Pronouncements

See Note 2 to our financial statements included elsewhere in this prospectus for more information.

BUSINESS

Overview

We are a clinical stage drug discovery, development and manufacturing company focused on leveraging our proprietary integrated cell-free protein synthesis platform, XpressCF, to create a broad variety of optimally designed, next-generation protein therapeutics for cancer and autoimmune disorders. We aim to design therapeutics using the most potent modalities, including cytokine-based immuno-oncology, or I/O therapeutics, antibody-drug conjugates, or ADCs, and bispecific antibodies that are directed primarily against clinically validated targets where the current standard of care is suboptimal. We believe our platform allows us to accelerate the discovery and development of potential first-in-class and best-in-class molecules by enabling the rapid and systematic evaluation of protein structure-activity relationships to create optimized homogeneous product candidates. Our mission is to transform the lives of patients by using our XpressCF Platform to create medicines with improved therapeutic profiles for areas of unmet need.

Our two most advanced product candidates are wholly owned: STRO-001, an ADC directed against CD74, for patients with multiple myeloma and non-Hodgkin lymphoma, or NHL, and STRO-002, an ADC directed against folate receptor-alpha, or FolRa, for patients with ovarian and endometrial cancers. STRO-001 is currently enrolling patients in a Phase 1 trial, with initial safety data expected in mid-2019. We plan to submit an investigational new drug, or IND, application for STRO-002 to the U.S. Food and Drug Administration, or FDA, in the fourth quarter of 2018. We have also entered into multi-target, product-focused collaborations with leaders in the field of oncology, including a cytokine derivatives collaboration with Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, or Merck, a B Cell Maturation Antigen, or BCMA, and an immuno-oncology directed alliance with Celgene Corporation, or Celgene, and an oncology-focused collaboration with Merck KGaA, Darmstadt, Germany (operating in the United States and Canada under the name “EMD Serono”).

Our XpressCF Platform is the first and only current Good Manufacturing Practices, or cGMP, compliant scalable cell-free protein synthesis technology that has resulted in products in clinical development. We believe key advantages of our cell-free protein synthesis platform over conventional biologic drug discovery and development include:

- ability to rapidly produce a wide variety of protein structures in-house;
- ability to incorporate multiple, different non-natural amino acids in a single protein;
- faster cycle time;
- efficient drug discovery and early pharmacology and safety assessment; and
- rapid and predictable scalability.

We plan to leverage these capabilities to accelerate the discovery and development of potential first-in-class and best-in-class molecules.

The benefits of our XpressCF Platform have resulted in collaborations with leaders in the field of oncology, including Merck, Celgene and EMD Serono. As a result of discovery efforts enabled through our XpressCF Platform, Merck has the right to develop cytokine derivatives for cancer and autoimmune disorders. Additionally, Celgene has the right to develop up to four anti-cancer bispecific antibodies and ADCs. The lead candidate in this collaboration is a novel ADC therapeutic directed against BCMA for which an IND submission is expected in early 2019. Under the collaboration with EMD Serono, we are using our XpressCF Platform to discover and develop mono, bispecific or multispecific ADC product candidates against up to six cancer targets. The most advanced candidate in this collaboration

is a bispecific ADC that is currently undergoing preclinical studies. To date, we have received in aggregate approximately $330.0 million in payments from all of our collaborations, which includes $43.7 million in investments in our stock. We intend to selectively enter into additional collaborations with partners who are seeking efficient and effective drug discovery, preclinical development and manufacturing capabilities for the creation of novel therapeutics.

Our first internally developed product candidate is STRO-001, which we believe has the potential to be a first-in-class and best-in-class ADC directed against CD74, an antigen that is highly expressed in many B cell malignancies. In multiple preclinical models, STRO-001 has demonstrated potent anti-tumor activity. In addition, the properties of STRO-001 suggest a low likelihood of off-target toxicity and potential for an improved therapeutic index. STRO-001 is currently enrolling patients in a Phase 1 trial for multiple myeloma and NHL and we expect initial safety data in mid-2019.

We are also internally developing STRO-002, an ADC directed against FolRa, initially targeted for the treatment of ovarian and endometrial cancers. Our experiments show that FolRa expression can be detected in 90% or more of ovarian and endometrial cancers. In preclinical models, STRO-002 has demonstrated the potential for enhanced and selective activity against cells expressing FolR a, superior inhibition of tumor growth and greater linker stability, in comparison to experiments we conducted with a benchmark FolRa-targeting molecule. We expect to submit an IND for STRO-002 in the fourth quarter of 2018.

Although we believe our product candidates have the potential to be first-in-class and/or best-in-class and to provide potent anti-tumor activity with reduced off-target toxicity, we will need to complete additional studies to determine the safety and efficacy of our product candidates. The results of these future studies may be different than the results of our earlier studies. We have not received regulatory approval for any of our product candidates, and in order to obtain regulatory approval and commercialize our product candidates, the FDA or foreign regulatory agencies will need to determine that our product candidates are safe and effective. We may not obtain regulatory approval on the timeline we currently expect, or at all, and competing therapies and products may ultimately reach the market faster or have more favorable safety and efficacy profiles than our products candidates.

Beyond these wholly owned programs and collaborations, we are developing a broader pipeline of next-generation protein therapeutics using our XpressCF Platform. Our protein engineering and chemistry efforts are focused on maximizing therapeutic indices, and our technology allows us to rapidly test our therapeutic hypothesis in significantly more product candidates than conventional protein synthesis allows in order to identify the best molecule to advance to the clinic. Our drug discovery teams are exploring novel immuno-oncology therapies, including cytokine-based therapies. We are also actively pursuing the discovery and development of other novel ADC and bispecific antibodies and currently have four ADC and two bispecific T cell-engager discovery programs.

Our Strategy

Our goal is to use our proprietary XpressCF Platform to create cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies primarily against clinically validated targets. Key elements of our strategy are to:

- **Advance STRO-001 and STRO-002 through clinical development.** We are currently evaluating STRO-001 in a Phase 1 trial for patients with advanced and/or refractory multiple myeloma and NHL. Based on compelling preclinical data, we believe STRO-001 has the potential to be a first-in-class and best-in-class ADC directed against CD74, which is highly expressed in many B cell malignancies. We have initiated the Phase 1 trial and expect initial safety data in mid-2019. We are currently conducting IND-enabling studies for STRO-002 for the treatment of patients with ovarian and endometrial cancers that express the clinically

validated target, FolRa. Given STRO-002's homogeneous design, we believe it could be a best-in-class FolRa-targeted ADC and provide greater activity, stability and safety as compared to other investigational agents in development. We plan to submit an IND application for STRO-002 to the FDA in the fourth quarter of 2018.

- **Develop a diverse pipeline of novel product candidates with optimal therapeutic profiles.** We intend to build a broad pipeline of optimally designed, next-generation protein therapeutics for cancer and autoimmune disorders using our XpressCF Platform. Our cell-free-based protein synthesis system enables the rapid and systematic evaluation of protein structure-activity relationships, which we believe will accelerate the discovery and development of molecules. We aim to take advantage of the most potent modalities, including cytokines, ADCs and bispecifics, to create drugs that are directed primarily against clinically validated targets where the current standard of care is suboptimal.
- **Strategically pursue additional collaborations to broaden the reach of our XpressCF Platform.** To maximize the value of our XpressCF Platform technology, we have entered into multi-target, product-focused collaborations with leaders in the field of oncology, including a cytokine derivatives collaboration with Merck, a BCMA and immuno-oncology directed alliance with Celgene and an oncology-focused ADC collaboration with EMD Serono. We intend to selectively enter into additional collaborations with partners who are seeking efficient and effective drug discovery and manufacturing capabilities for the development of novel therapeutics. As with our current collaborations, we intend to retain certain development and commercial rights to maximize the future potential value of product candidates discovered and developed using our XpressCF Platform.
- **Maintain worldwide rights to our core product candidates.** We own the worldwide commercial rights to our lead product candidates, STRO-001 and STRO-002. We have assembled a management team with extensive experience in the biopharmaceutical industry, including drug discovery and development through commercialization, and our plan is to independently pursue the development and commercialization of our product candidates. As we continue to advance our products, we may opportunistically pursue strategic partnerships that maximize the value of our pipeline.
- **Selectively expand the scope of our XpressCF Platform into other therapeutic areas.** Due to the versatility of our platform, we can explore additional therapeutic areas outside of oncology, such as autoimmune and metabolic diseases. We intend to make further investment in the development of our XpressCF Platform to expand our pipeline of product candidates.

Cancer Remains a Major Unmet Medical Need

Cancer is the second leading cause of mortality in the United States, accounting for nearly one in every four deaths. Approximately 40% of Americans will develop cancer and, according to the American Cancer Society, there will be 1.7 million new cases of cancer and 601,000 deaths due to cancer in the United States in 2018.

Traditional Cancer Therapeutics

Cancer treatment has traditionally included chemotherapy, radiation, surgery or a combination of these approaches. Chemotherapy agents and other small molecule targeted therapies can be effective in certain types of cancer, but they can also cause toxicities that may lead to life-threatening consequences, lower quality of life or untimely termination of treatment. Furthermore, these agents offer limited efficacy in many types of cancer.

Over the last twenty years, new paradigms of cancer research and treatment have emerged to address the limitations of existing treatments. Some of the most promising new approaches involve biologic therapies, including monoclonal antibodies. Monoclonal antibodies are proteins that bind to

antigen targets on tumor cells and inhibit tumor growth, or block processes that provide nourishment for the tumor. As a drug class, monoclonal antibodies have transformed the treatment of oncology and represent some of the top selling therapies on the market. For example, Rituxan, Herceptin and Avastin dominated the market with over $20 billion in combined 2017 annual sales.

Despite the success of conventional monoclonal antibodies, they still have limitations. For example, the response seen with monoclonal antibodies can be variable, with some patients responding, while others do not. In addition, the response is often not durable and many patients relapse or become refractory to treatment. Also, safety and tolerability concerns often limit the use of higher, potentially more efficacious doses. We believe our XpressCF Platform will provide enhanced therapeutic approaches for treating cancer to address these unmet needs. A new generation of biologics is emerging, including immuno-oncology agents, ADCs and bispecific antibodies. The expectation is that multiple therapeutic modalities will be used in novel combinations to treat patients and provide the most potent anti-cancer effect.

Immuno-oncology

The immune system is capable of recognizing and eliminating tumor cells. However, some cancer cells over express proteins, called immune checkpoints, which suppress the immune system, and enable the tumor cells to evade destruction. Immuno-oncology has emerged as a promising new therapeutic approach that aims to enhance anti-tumor immune responses by using monoclonal antibodies to overcome these immune checkpoint blockades.

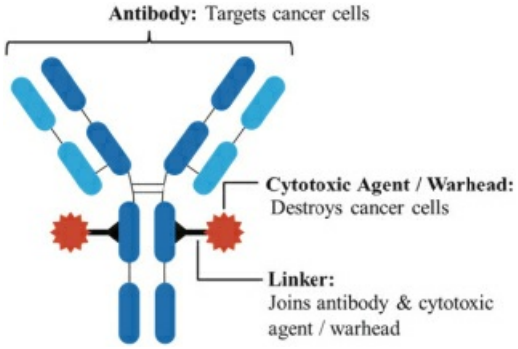
Monoclonal antibody immune checkpoint inhibitors, such as Opdivo, Keytruda and Yervoy, have been approved for the treatment of a number of cancer indications such as, melanoma, non-small cell lung cancer, or NSCLC, renal cancer and bladder cancer. During 2017 the combined sales of these three checkpoint inhibitors were approximately $10 billion and by 2022, forecasted sales are projected to exceed $20 billion.

Limitations to Current Immuno-oncology Approaches

The effectiveness of any cancer immunotherapy is dependent on the status of an individual patient’s immune system. While many single-agent immunotherapies have resulted in remarkable clinical results, only a minority of patients have realized durable benefits from these treatments. An immunotherapy cannot succeed if a patient’s immune cells are too impaired to benefit from a particular checkpoint inhibitor or cytokine-based therapeutic. As a result, combination therapies have been explored clinically and are designed to provide an additional boost to revive a patient’s ability to mount an immune response against their tumor. However, combination therapies will likely have to provide a significant risk-benefit advantage in order to justify the cumulative costs of combining two separate immunotherapies. New single agent approaches to achieving combinatorial stimulation of a patient’s immune system may therefore create the preferred option for many patients and physicians.

Antibody-Drug Conjugates

After two decades of industry efforts, several new modalities of highly potent monoclonal antibody-based therapies have emerged, including ADCs. The key components of ADCs include an antibody, a stable linker and a cytotoxic agent (warhead). The antibody is used to target and deliver the cytotoxic agent to tumor cells. ADCs can be mono, bispecific or multi-specific. The intended result of this powerful and targeted approach is greater tumor cell death and less systemic tolerability issues as compared to traditional chemotherapy. The following diagram shows the component parts of an ADC.



Currently, there are more than 100 ADCs being explored in clinical development. Kadcyla and Adcetris are ADCs that have been approved for the treatment of specific subsets of breast cancer and lymphoma, respectively. In the second half of 2017, Besponsa and Mylotarg were approved for the treatment of specific subsets of leukemia. All four of these newly approved therapies demonstrate that ADCs have an emerging role in the armamentarium of cancer therapeutics.

Limitations to Current ADC Approaches

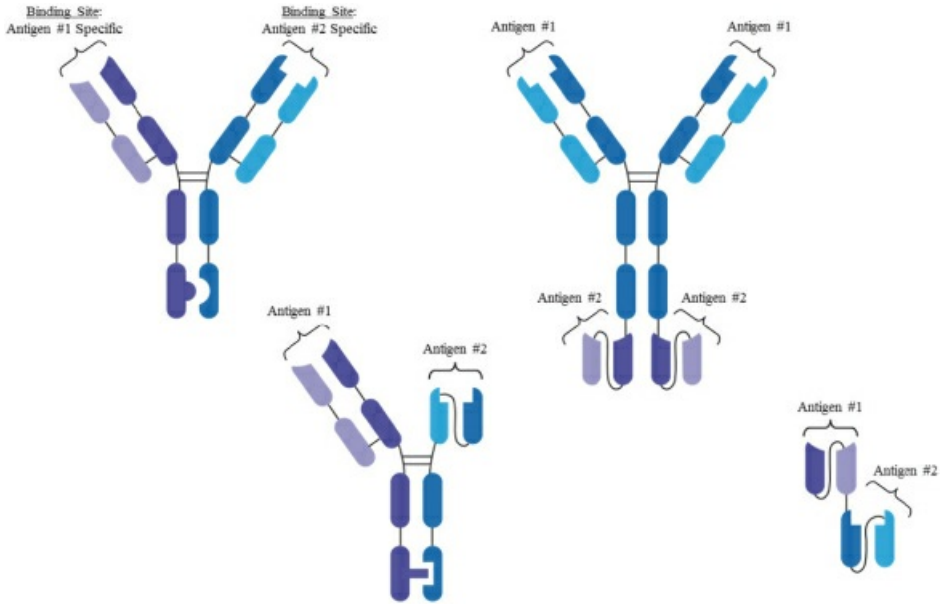
Despite the approvals of these ADCs, there have been challenges in achieving the full clinical potential of this modality. We believe these challenges are directly related to the following:

- *Heterogeneity as a Result of Imprecise and Variable Conjugation.* The approved ADCs and many that are in development use imprecise technologies that opportunistically attach the cytotoxic payload to naturally occurring amino acids within the antibody and result in a heterogeneous mixture. In these mixtures, the number and site location of the linker-warhead can vary significantly from antibody to antibody within the single ADC product. These many different forms in the final product are likely to perform differently, with some forms carrying insufficient cytotoxin to kill the tumor, and some forms carrying too high a load resulting in unintended toxicities. The overall performance of the heterogeneous ADC is therefore the average activity of the different species within the ADC mixture, which may limit both efficacy and tolerability. For these reasons, we believe this current class of ADCs, which are heterogeneous mixtures, are suboptimal for effective cancer treatment. The figure below compares homogeneous and heterogeneous ADCs.

- *Suboptimal Linker-Warhead Positioning.* Conventional ADC technologies use conjugation chemistry to attach linker-warheads to naturally occurring amino acids within an antibody; therefore, the position is dictated by the pre-existing amino acid sequence. Published research studies have demonstrated that linker-warhead positioning along an antibody can have significant effect on the ability of an ADC to kill tumor cells, with some positions resulting in suboptimal killing. This position effect also contributes to the challenge of a heterogeneous ADC mixture. We believe that superior ADCs can be developed using technologies that allow linker-warhead positioning to be fine-tuned to empirically determined sites for maximal therapeutic benefit.
- *Instability Due to Linker Design*. One of the major challenges in ADC technology has been to develop linking chemistries that ensure that warheads are only released from the antibody within a tumor cell, and not released within the blood or healthy tissue as the ADC is delivered systemically and travels through the body. We believe that safer ADCs can be developed by utilizing non-natural amino acids that enable state-of-the-art chemistries to ensure that the warhead is not prematurely released.

Bispecific Antibodies

Bispecific antibodies are engineered proteins that can simultaneously bind to two different types of antigens. Targeting two individual antigens simultaneously is expected to drive a larger clinical impact than conventional monoclonal antibodies. As a class, bispecific antibodies are projected to have potential sales on a worldwide basis of up to $4.4 billion by 2023 and over 60 molecules are currently in clinical development. Bispecific antibodies can be engineered in a variety of different formats as shown below.



Bispecific antibodies come in a wide variety of structural formats that can be used in multiple therapeutic modalities, including dual blocking bispecific antibodies, T cell-engaging bispecific antibodies and dual antigen targeting bispecific antibodies. Given the potential synergistic nature of these approaches, they have the potential to provide a similar, if not improved, therapeutic benefit as compared to a traditional combination approach. In addition, they may also demonstrate an improved safety and tolerability profile. These characteristics could allow for a wider therapeutic index as compared to the comparable combination therapy approach. Additionally, combining two mechanisms in a single bispecific antibody could have advantages in manufacturing, clinical development and patient convenience.

Limitations to Current Bispecific Antibody Approaches

Bispecific antibodies are highly engineered proteins with structural features not found in nature. The generation of these molecules therefore presents significant design and development challenges especially when using conventional cell-based technologies. These challenges include:

- *Optimization Challenges.* Bispecific antibodies simultaneously engage two different targets and therefore have precise requirements for the binding properties and spatial orientation of each domain in order to have pharmacologic activity. Combinatorial pairing of antibody binding arms to identify an optimized bispecific antibody requires many distinct cell lines that must be

engineered during the discovery process, a cumbersome process when using conventional cell-based technologies.

- *Challenges to T cell-Engagers.* Discovery of bispecific T cell-engagers is further limited by the challenge of designing bispecific pairs that can safely activate T cells specifically in the tumor environment without activating peripheral T cells, which would result in severe toxicities.
- *Difficulties in Protein Expression and Manufacturing.* Because bispecific antibodies are highly engineered proteins, conventional cell-based systems have significant difficulties in protein expression, particularly at a larger scale.

We believe that new protein engineering technologies will enable significantly broader design opportunities to discover new bispecific antibodies optimized for therapeutic activity, safety and manufacturability.

Cytokine-Based Immuno-oncology Therapeutics

Cytokines are small biologically active proteins that play an essential role in immune cell function. Cytokines are important for cell-to-cell communication and they are responsible for controlling immune cell growth and differentiation. Recombinant human cytokines were among the first biotechnology products engineered for therapeutic use, and, in the field of oncology, cytokines that stimulate the immune system to attack cancer cells have been viewed as a potential new approach.

Certain cytokines play a central role in T cell function, contributing to the careful balance between helpful and harmful immune responses. These can be powerful activators of the immune system but can also suppress immune responses through certain specialized T cells that have suppressive functions. A previously approved cytokine therapeutic Proleukin had shown therapeutic benefit in a small number of cancer patients but its therapeutic use was limited due to toxicity. Scientists at other companies have focused research on finding ways to modify cytokines so as to reduce toxicity while maintaining therapeutic benefit. The observed efficacy of a modified cytokine in combination with an immune checkpoint inhibitor indicates the potential of this new approach. In light of these data and our prior research into cytokines, we commenced a cytokine-based research program using our XpressCF+ Platform technology. We believe that recent advances in immuno-oncology combined with new protein engineering technologies create opportunities to identify novel cytokine-based therapeutics with superior therapeutic indexes.

Our Proprietary XpressCF Platform

While cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies hold significant promise, drug developers working with these complex biologics face significant design and development challenges. Optimizing these complex biological structures is a challenging, trial and error process that requires the refinement of several properties in tandem. This iterative process is cumbersome and fraught with significant limitations. As a result, the drug candidate nominated for development is often plagued by inefficient design properties, which then translates to a suboptimal therapeutic index when investigated in the clinic.

Our XpressCF Platform seeks to address these significant shortcomings. We believe our cell-free-based protein synthesis technology allows for efficient and proper design exploration to be conducted prior to nominating a lead drug candidate. In addition, we believe we can optimally design these types of complex biologics in a manner that is ideal for subsequent production at relevant scale and manufacture. We are the only company with products in clinical development that has the capability to produce cell-free-based protein synthesis at scale. We believe we have a significant advantage over other development approaches in this space.

Limitations of Current Cell-Based Synthesis Approaches

All existing therapeutic proteins rely on cell-based design, production and manufacturing technologies. The conventional biotechnology approach for the production of these complex biologics relies primarily on CHO cell lines. This first requires low yield transient production from cells that enable characterization of a new protein over several months. This is then followed by development of stable cell lines over several months to a year to enable larger scale preclinical, clinical and commercial production. The characterization process has to be reproduced for every minor variant of the therapeutic protein, which may or may not result in improved properties. Each change requires development of new cell-based methods to generate protein of sufficient quality and quantity to evaluate. Therefore, it is extremely laborious and resource intensive to elucidate principles of structure-activity relationship, and drug discovery is limited by the number of cell lines that can be practically managed in parallel. In addition, they have limited ability to introduce non-natural amino acids into proteins. We believe these limitations hinder the efficiency of drug discovery and often result in suboptimal protein selection.

Overview of Our XpressCF Platform

Our XpressCF Platform is fundamentally different from the conventional cell-based protein synthesis approach in that we separate the production of the cell mass from the production of the protein.

We first generate a cellular mass from our propriety cell line from which we harvest the inner cellular machinery for making proteins. The cellular mass is generated from our highly engineered variant of Escherichia coli, or E.coli bacteria, and has been optimized to make extract that produces complex mammalian proteins. These cells are grown over the course of several days, harvested, broken apart, clarified and stored as a cell mass for future production of our protein therapeutics. We refer to this proprietary cell mass as extract, or XtractCF. The extract includes necessary components for energy production, transcription and translation and can be used to support cell-free protein synthesis. This extract can then be used agnostically to manufacture a wide variety of therapeutic proteins and protein fragments without the need to generate further cell lines.

As a result, protein synthesis then becomes a predictable and reproducible biochemical reaction, independent of the constraints of a cell. A specific DNA sequence is added to the extract, which results in the coding and expression of the desired protein in less than 24 hours. Using this process, we express hundreds or thousands of DNA sequences simultaneously within the same cell-free extract system and therefore can make and purify hundreds or thousands of unique proteins at the same time. This allows us to perform rapid expression, testing and characterization of many variants early in discovery to elucidate structure-activity relationships. Structure-activity relationship refers to how changes to the structure of a protein can lead to improvements in a molecule's properties, such as binding, internalization, functional activity and stability, which are properties that are key to the therapeutic protein's efficacy and tolerability in the patient. We are thereby able to optimize many properties with high specificity including: binding efficiency to each antigen target, spatial orientation, linker design, target killing efficiency, immunological activity, protein expression and folding efficiency and stability.

Advantages of Our XpressCF Platform

We believe our drug discovery platform provides significant advantages over conventional cell-based protein synthesis approaches and has the ability to produce a large number of variants during the development stage, while preserving the ability to design and test large families of molecules for optimized efficacy and safety features. As a result, we believe that our drug discovery platform can accelerate time to IND by nine to fifteen months compared to conventional technologies.

We believe the advantages of our cell-free-based protein synthesis technology platform include:

- *Ability to Rapidly Produce and Evaluate a Wide Variety of Protein Structures In-house.* By decoupling the production of the cell-free extract from the production of the protein, we are able to stockpile large quantities of cell-free extract from which we are able to manufacture a wide variety of proteins without the need to generate individual cell lines, including cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies.
- *Ability to Incorporate Non-Natural Amino Acids.* Our technology allows for efficient incorporation of a non-natural amino acid in any location in an antibody or protein with high precision and fidelity, which we believe allows for the design of optimized protein conjugates.
- *Faster Cycle Time.* Our ability to produce thousands of protein variants in parallel overnight allows us to rapidly express, test and characterize many variants early in discovery to elucidate structure-activity relationships and identify opportunities for superior therapeutic profiles, as well as new intellectual property. We are therefore able to efficiently optimize many properties with high specificity in parallel.
- *Efficient Drug Discovery and Early Pharmacology and Safety Assessment.* Our cell-free technology creates the opportunity for accelerated pharmacology and safety assessments during the design and discovery phase of product development. This approach allows us to generate optimized proteins early in our discovery process, which can be transitioned seamlessly to clinical scale production using the same cell-free process.
- *Rapid and Predictable Scalability*. Our cell-free extract does not need to be modified in any manner as we scale from research to preclinical to clinical to commercial production. This enables us to move more rapidly to the clinic by eliminating master cell banking activities and significantly de-risks scale-up to manufacturing.

Our XpressCF Solution for cytokine, ADCs and bispecific antibodies-based drug therapeutics

As a result, we believe our technology enables new approaches to cytokine, ADCs and bispecific antibody-based drug discovery, development and manufacturing. Key attributes are:

- *Homogeneous Design.* Our XpressCF Platform enables precise and specific placement of non-natural amino acids in defined numbers and positions within our engineered proteins. These non-natural amino acids then serve as highly stable attachment sites, also known as conjugation sites, for chemical functional groups. For example, we attach linker-warheads to non-natural amino acids within our antibodies to create single-species, tumor-killing ADCs. Similarly, we attach polyethylene glycol polymers onto non-natural amino acids within our cytokine-based therapeutics to create single-species immunotherapies designed for extended pharmacokinetics and safety.
- *Experimentally Defined Structure-Activity Relationships*. Our cell-free technology enables rational design of protein therapeutics through a rapid, reiterative process that experimentally defines structure-activity relationship for cytokine-based therapeutics, ADCs and bispecific antibodies. This approach allows us to explore a wide variety of structural features and formats in parallel as we optimize therapeutic candidates. For example, the precise location of chemical conjugation sites directly affects the activity of both ADCs and cytokine-based therapeutics. Our proprietary technology is key to our ability to define the best number and positions of non-natural amino acids for conjugation based on: conjugation efficiency; functional activity/pharmacological properties; and pharmacokinetics and safety. This design flexibility is also an important aspect of our discovery approach to other protein therapeutics. For example, we are able to make and directly compare a variety of pairings and structural formats for our immuno-oncology bispecific antibody and bispecific T cell-engager programs. This allows us to identify antibody pairs and formats with the best binding properties, spatial orientations and structural stability to create the optimal balance of therapeutic activity and safety.

- *Rapid and Efficient Transition from Discovery to the Clinic.* Protein therapeutics can encounter obstacles, or even fail, during the transition from research-grade cell lines to cGMP cell lines appropriate for clinical development and commercialization. Our XpressCF Platform can rapidly produce different protein types from a single proprietary extract, which can be scaled for discovery, development and ultimately, we believe, commercialization of cytokine-based immuno-oncology therapeutics, ADCs and bispecific antibodies and bispecific T cell-engagers.

Accordingly, we use our XpressCF Platform to discover and develop cancer therapeutics by empirically determining the optimum structure-activity relationships for cytokine-based immuno-oncology therapeutics, ADCs, bispecific antibodies, and transitioning those products to cGMP compliant manufacturing. The following chart illustrates the applicability of these attributes across the range of modalities we are developing.

XpressCF Attributes for Various Therapeutic Modalities

XpressCF Attribute	ADCs	Bispecific I/O, Bispecific ADCs and Bispecific T cell-engagers	Cytokine-based therapeutics
Homogeneous Design Stable, site-specific attachment of chemical functionality	✓	✓ (if needed)	✓
Experimentally Defined Structure-Activity Relationships Rapid, direct comparison of a wide variety of protein variants	✓	✓	✓
Rapid and Efficient Transition from Discovery to the Clinic Single-source scalability from discovery to clinical / commercial	✓	✓	✓

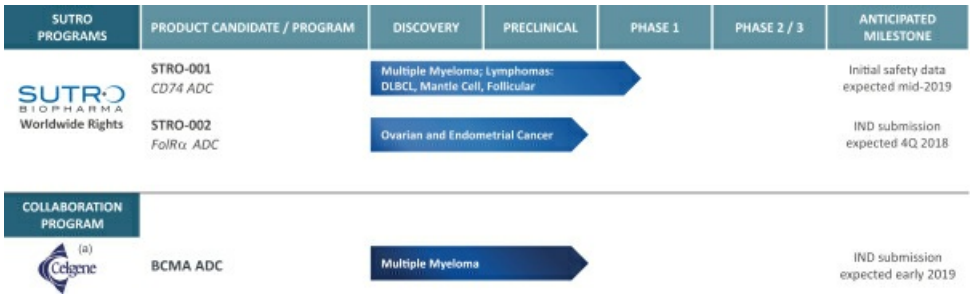
Our Collaborations Demonstrate our Capabilities

Our XpressCF Platform has garnered the attention of leading pharmaceutical and biopharmaceutical companies and resulted in collaborations to discover and develop novel therapeutics. We have leveraged these strategic partnerships to extend our own capabilities and broaden the scope of our XpressCF Platform. To date, all of our collaborations have provided us with approximately $330.0 million in payments, which includes $43.7 million in investments in our stock. Our collaborations include:

- ***Merck Programs.*** We have granted Merck the right to jointly develop up to three research programs directed to cytokine derivatives for cancer and autoimmune disorders, including rights to certain prior cytokine-based research efforts.
- ***Celgene Programs.*** We have granted Celgene the right to jointly develop up to four anti-cancer bispecific antibodies and/or ADCs directed primarily to immuno-oncology targets. The lead candidate generated for this collaboration is a novel ADC therapeutic directed against the target BCMA for which an IND submission is expected in early 2019.
- ***EMD Serono Programs.*** We have granted EMD Serono the right to designate up to six cancer targets against which we will discover, develop and optimize up to three mono, bispecific or multi-specific ADC product candidates per target. EMD Serono has selected all six possible target antigens under the strategic research and development partnership. The most advanced candidate in this collaboration is a bispecific ADC, which is currently in preclinical development.

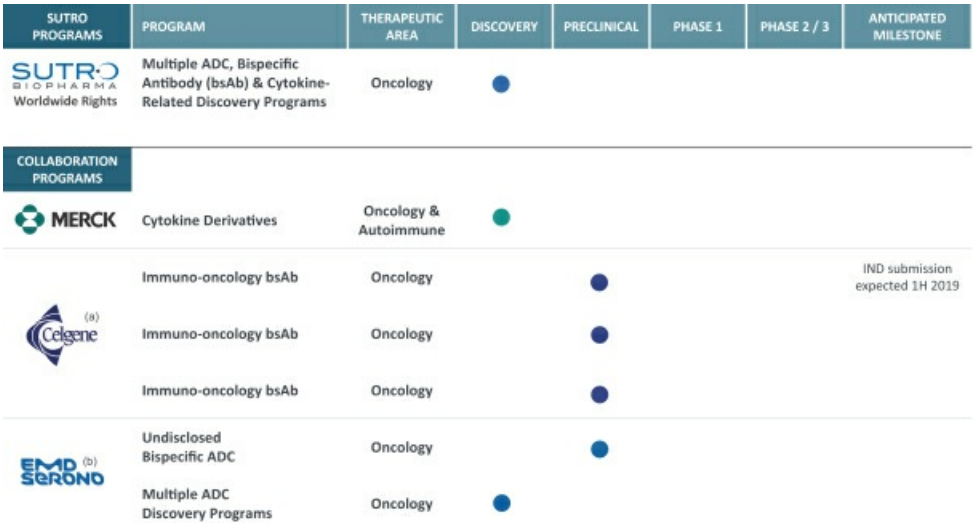
Our Pipeline of Product Candidates

Our current product candidates, all based on our proprietary XpressCF Platform, are summarized in the chart below:



(a) There are a total of four programs to which Celgene currently has ex-U.S. rights and we currently have U.S. rights. Celgene will automatically obtain worldwide rights to the first product candidate to achieve IND clearance in the United States.

Our Discovery and Preclinical Programs



(a) There are a total of four programs to which Celgene currently has ex-U.S. rights and we currently have U.S. rights. Celgene can obtain worldwide rights to the second product candidate to have an active IND in the United States by making certain payments to us. For the programs that would potentially be the third and fourth to enter clinical development, we own U.S. rights and Celgene owns ex-U.S. rights.

(b) EMD Serono is the U.S. healthcare business of Merck KGaA, Darmstadt, Germany.

Our Product Candidates

STRO-001, an ADC Directed Against the Cancer Target CD74

Overview

We are developing STRO-001, an optimally designed ADC directed against the cancer target CD74 for multiple myeloma and NHL. STRO-001 was designed and optimized for maximal therapeutic index by placing linker-warheads at specific locations within the antibody using our proprietary XpressCF Platform. STRO-001 is currently enrolling patients in a Phase 1 trial and we expect initial safety data in mid-2019.

CD74 Overview and Current Limitations

CD74 is a transmembrane glycoprotein, or a protein with an attached sugar that spans the inside and outside of a cell. While normal tissues appear to have minimal CD74 expression levels, CD74 is an important B cell target for multiple myelomas and lymphomas. CD74 is expressed in approximately 90% of B cell cancers, including multiple myeloma and lymphoma. Additionally, in a study conducted with a collaborator, we found that CD74 was highly expressed in 75% to 98% of tissues samples derived from individual patients with a variety of B cell malignancies, as illustrated in the table below.

	Comprehensive Immunohistochemistry Study	
Tumor Subtype	**Tissue Samples CD74 Positive / Total**	**% Positive**
Follicular lymphoma	148 / 151	98%
Multiple myeloma	101 / 134	75%
Diffuse large B cell lymphoma	135 / 140	96%
Mantle cell lymphoma	19 / 21	90%

Currently, there are no approved therapeutics that specifically target CD74 for treatment of B cell malignancies. We believe earlier ADCs being developed against the target CD74 were ineffective either because they failed to achieve sufficient killing of malignant B cells or they were unable to achieve a sufficient therapeutic benefit before toxicities limited further dose escalations.

B Cell Malignancies Overview and Current Limitations

B cell malignancy tumor subtypes include multiple myeloma and NHL, which includes mantle cell lymphoma, diffuse large B cell lymphoma, or DLBCL, and follicular lymphoma. In the United States alone, there are approximately 100,000 new B cell malignancies cases annually, with a prevalence of more than 600,000 cases. Although several therapeutics have recently been approved for the treatment of specific B cell malignancies, including immunotherapies and targeted kinase inhibitors, unmet need persists. These therapeutics are typically used in combination with other agents to provide the most potent anti-cancer effect. While these new therapies have demonstrated improvements in survival, the majority of these patients ultimately relapse during treatment and some experience a resistance to therapy.

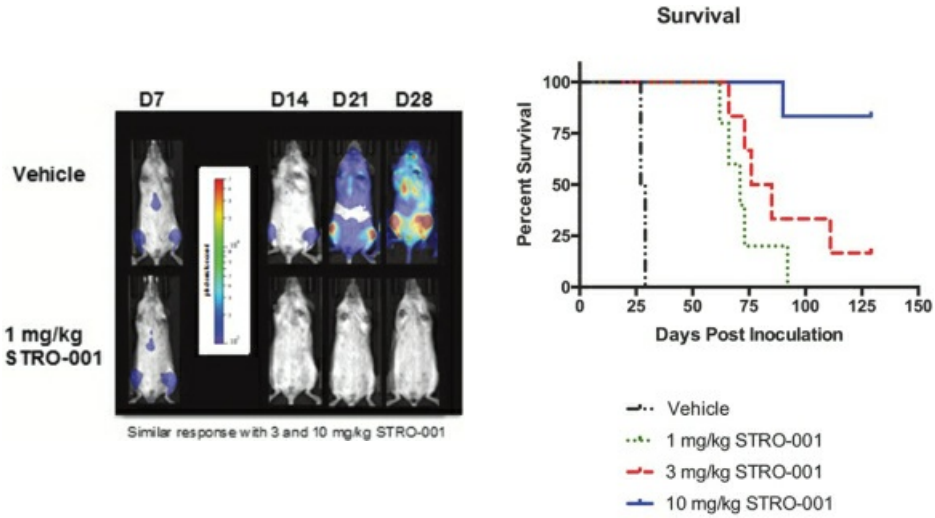
Our Solution, STRO-001

Our first internally developed product candidate is STRO-001, which we believe has the potential to be a first-in-class and best-in-class ADC directed against the cancer target CD74, an antigen that is highly expressed in many B cell malignancies and is an attractive target for an ADC therapeutic, given its rapid internalization by the cell. STRO-001 is an ADC targeting the CD74 protein antigen that was developed using our proprietary XpressCF Platform. STRO-001 is composed of an antibody stably conjugated to a highly potent cytotoxic drug, a maytansinoid derivative, at two specific sites on the antibody using a non-cleavable linker. STRO-001 degrades inside of tumor cells to release very potent intracellular catabolites whose hydrophilic nature results in poor permeability into surrounding cells. We believe this decreases the potential of off-target effect in normal tissues. From a safety perspective, we designed STRO-001 to have an optimal potency to toxicity ratio. We rationally selected a homogeneous ADC with a drug-antibody ratio, or DAR, of two. Heterogeneous ADCs typically have DARs that range from zero to eight, with lower DARs generally being associated with less potency and higher DARs generally being associated with a negative impact on pharmacokinetics and toxicity. We chose a DAR of two after demonstrating that DARs of four or six did not increase the efficacy of STRO-001.

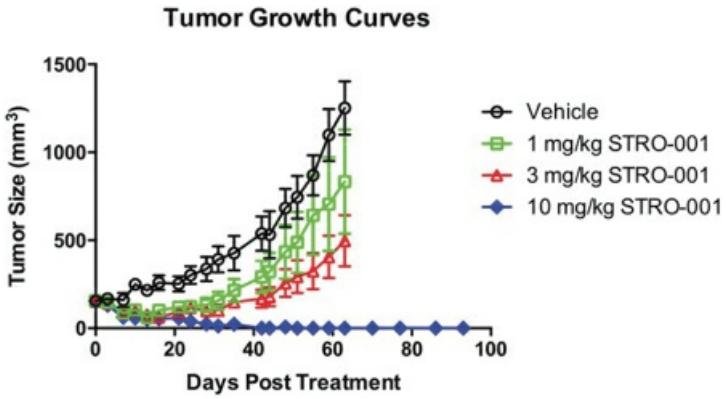
Preclinical Data

While additional clinical testing will be needed to determine the safety and efficacy of STRO-001 and to obtain regulatory approval, if ever achieved, STRO-001 has demonstrated potent *in vitro* cell

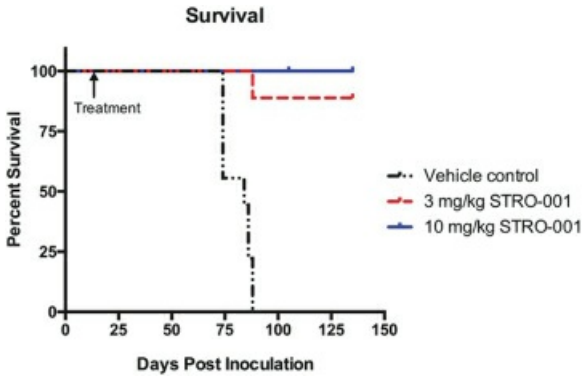
killing activity across multiple B cell tumor lines. Based on these observations, we have used murine tumor models to determine whether STRO-001 also demonstrates cell killing *in vivo*. In these models, human tumor cell lines are implanted and allowed to grow in mice to subsequently test the activity of anti-cancer agents. Although these murine models do not address safety, they are commonly used to provide experimental proof-of-concept for anti-cancer activity against different tumor types. For example, in tumor bearing mice, single intravenous doses of 1, 3, and 10 mg/kg STRO-001 significantly extended survival in the MM1S-luc bioluminescent disseminated human multiple myeloma xenograft model as shown below on the right. The figure on the left shows bioluminescence imaging of tumor cells during the first month after dosing. This image shows that while the bioluminescent tumor cells disseminated throughout the body in the vehicle treated mice, the tumor cells were cleared from the STRO-001 treated mice. Furthermore, at the high dose, when their bone marrow was assessed at day 129, of the surviving five out of six animals, all appeared to be tumor-free.



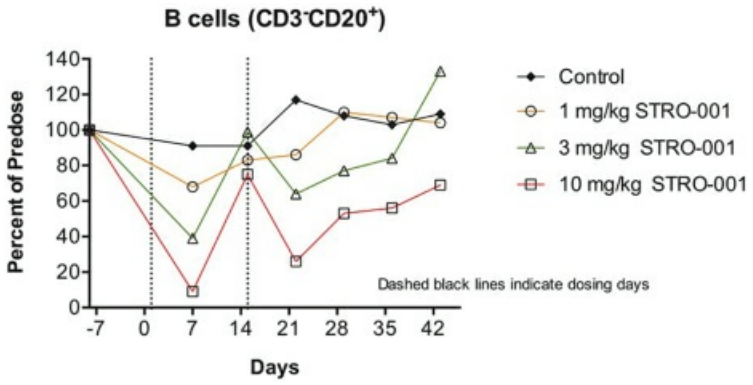
STRO-001 demonstrated similar potent efficacy in a murine xenograft model of human DLBCL, the most common form of NHL. In the study shown below, seven out of seven mice exhibited complete tumor regression with no tumor regrowth 90 days after treatment with a single 10 mg/kg dose of STRO-001. Moderate anti-tumor activity was observed with lower doses of 1 or 3 mg/kg, demonstrating a clear dose-response relationship.



We also examined the potential for STRO-001 to treat human mantle cell lymphoma in a preclinical murine xenograft model. In the study shown below, mice bearing mantle cell tumors had a mean survival of 81 days. In contrast, 90% to 100% of mice treated with a single dose of 3 or 10 mg/kg STRO-001 survived to the end of the study at day 135. Taken together, these studies demonstrate that STRO-001 has potent anti-tumor activity in three different murine models of human B cell malignancy.



We also investigated the safety of STRO-001 in a toxicology study in non-human primates at several dose levels administered on day 1 and day 15. Hematological toxicity was observed consistent with the known effects of the STRO-001 cytotoxic tubulin inhibitor component. No other drug-related toxicities were observed. Importantly, however, we observed clear evidence of STRO-001 pharmacodynamic activity as demonstrated by dose-dependent B cell ablation and recovery as shown below.



Clinical Development Plan

The Phase 1 trial for STRO-001 is an open-label study that will evaluate STRO-001 as a monotherapy for patients with multiple myeloma and NHL. The trial will be conducted in two parts: dose escalation and dose expansion. The primary objectives of the trial are to determine the safety and tolerability profile of STRO-001, determine the recommended Phase 2 dose and interval and evaluate preliminary anti-tumor activity. The secondary objectives are to characterize the human pharmacokinetics of STRO-001 and additional safety, tolerability and efficacy measures.

Our Phase 1 trial of STRO-001 is enrolling adult patients with advanced and/or refractory multiple myeloma and NHL (including DLBCL, mantle cell lymphoma and follicular lymphoma) who are refractory to, or intolerant of, all established therapy known to provide clinical benefit for their condition. Multiple myeloma and NHL patients will be enrolled in two separate dose escalation cohorts, starting initially with an accelerated dose titration design. We estimate that there will be approximately 30 patients in each cohort and treatment is scheduled for days one and fifteen in a 28-day cycle.

After the recommended Phase 2 dose level is determined, patients could be enrolled into four dose expansion cohorts (myeloma, DLBCL, mantle cell lymphoma and follicular lymphoma) if anti-tumor activity is observed during the dose escalation phase. We expect to enroll up to 40 patients in each of the four dose expansion cohorts.

We submitted our IND for STRO-001 in December 2017 and the first patient was dosed in April 2018. We expect initial safety data from our ongoing Phase 1 trial in mid-2019.

STRO-002, an ADC Directed Against the Target Folate Receptor-Alpha (FolR a)

Overview

We are developing STRO-002, an optimally designed ADC directed against the cancer target FolR a, initially targeted for ovarian and endometrial cancers. STRO-002 was designed and optimized for an improved therapeutic index by placing a precise number of linker-warheads at four specific

locations within the antibody using our proprietary XpressCF Platform. We expect to submit the IND for STRO-002 in the fourth quarter of 2018.

FolRa Overview

FolRa is a cell-surface glycoprotein, which is believed to be important for supporting DNA synthesis in rapidly dividing cancer cells. FolRa exhibits limited expression and distribution in normal tissues.

High levels of FolRa have been found in multiple cancer types, including epithelial ovarian cancer, endometrial adenocarcinoma, triple negative breast cancer and non-small cell lung cancer. Expression appears to correlate with disease progression in ovarian cancer and continues to be expressed following chemotherapy treatment.

In order to better understand FolRa expression, we tested 187 samples in a tissue microarray from ovarian and endometrial cancer patients. The table below shows that more than 90% of ovarian and endometrial cancer tissue samples express FolRa. Furthermore, medium to high levels of expression were observed for 80% of ovarian cancer samples and 78% of endometrial cancer samples.

	FolRa Expression			
Tumor Type	**Negative**	**Low**	**Medium**	**High**
Ovarian Cancer (90 tissue samples)	10%	10%	16%	64%
Endometrial Cancer (97 tissue samples)	7%	15%	24%	54%

Ovarian Cancer Overview

Ovarian cancer is the most common cause of cancer death from gynecologic tumors in the United States, and the fifth most common cause of cancer death in women. In the United States alone, there are about 23,000 new cases of ovarian cancer annually, and more than 14,000 women die of this disease each year. Given that early stages of the disease cause minimal, nonspecific symptoms or is asymptomatic, 60% of patients with ovarian cancer are diagnosed in an advanced stage, for which the prognosis is poor. Standard pre- or post-operative chemotherapy for ovarian cancer is combination therapy with a platinum compound and a taxane, for example, carboplatin and paclitaxel, which achieves a complete response in between 70% to 80% of patients. Patients refractory or resistant to platinum-based treatments are then treated with a host of additional palliative chemotherapeutic agents, each showing only marginal benefit. This represents a significant unmet need and multiple therapies are being tested in the clinic for treatment of these patients, including PARP inhibitors and PD-1 checkpoint protein inhibitors.

Endometrial Cancer Overview

There is also a significant unmet need in the treatment of recurrent or metastatic endometrial cancer. In the United States alone, there are about 60,000 new cases of endometrial cancer annually, and approximately 10,500 patients die of this disease each year. First-line treatment for stage III/IV disease is commonly paclitaxel/carboplatin, with no standard of care or FDA-approved treatment options for recurrent disease. With the lack of available therapies for these patients, long-term survival prospects are poor and novel treatments offering even a modest improvement in progression-free survival or overall survival may be considered for expedited regulatory approval.

Limitations to Current FolRa-Targeted Therapeutics

There have been a number of folate- or FolR a-targeted therapies in development including naked antibodies, small molecule drug conjugates, ADCs and T cell retargeting molecules. The most clinically active agent targeting FolRa to date has been Immunogen's mirvetuximab soravtansine (IMGN853), an ADC composed of a FolRa-binding antibody linked to the tubulin-disrupting maytansinoid, DM4, via a cleavable linker.

Immunogen's IMGN853 monotherapy showed clinical activity in a Phase 1 trial of patients with platinum-resistant ovarian cancer, with dose-limiting toxicities including blurred vision, diarrhea, headache, nausea, vomiting and fatigue.

Our Solution, STRO-002

STRO-002 is directed against the cancer target FolRa, which is highly expressed in multiple cancer types, including ovarian cancer and endometrial cancer. This property, together with the highly restricted expression of FolRa on normal tissues, make FolRa a promising ADC approach.

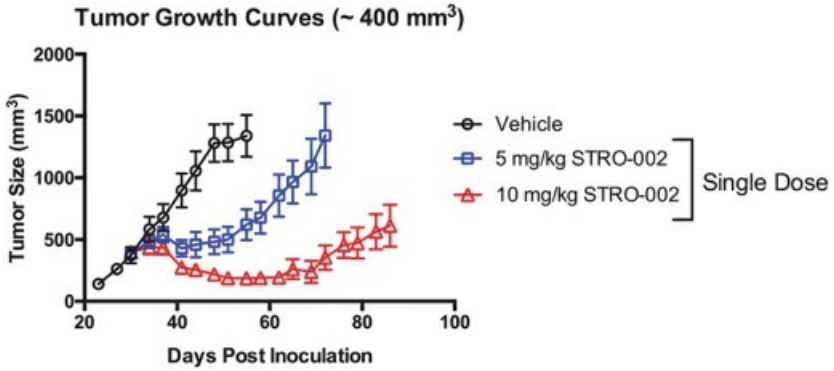
STRO-002 employs a cleavable linker that releases a cytotoxic drug inside of tumor cells, while being stable and resistant to cleavage in general circulation. The cytotoxic drug used is our proprietary hemiasterlin moiety. From a safety perspective, we designed STRO-002 to have the optimal potency to safety ratio. We rationally selected a homogenous ADC with an optimized DAR of four.

Based on preclinical findings, we believe our efficient homogeneous design of STRO-002 could provide anti-tumor activity, stability and safety with the potential to minimize off-target damage and improve clinical impact by reducing dose-limiting toxicities. We believe an improved therapeutic index could differentiate STRO-002 from conventional technology for the treatment of ovarian cancer and endometrial cancer. To test this, we have created a benchmark FolRa-targeting surrogate molecule based on conventional technology that has a heterogeneous ADC, with a similar DAR utilizing a DM4 linker-warhead. We have tested this benchmark molecule against STRO-002 in multiple preclinical models. However, additional preclinical and clinical testing will be needed to determine the safety and efficacy of STRO-002 and to obtain regulatory approval, if ever. STRO-002 may not ultimately provide a greater therapeutic benefit than the current standard of care.

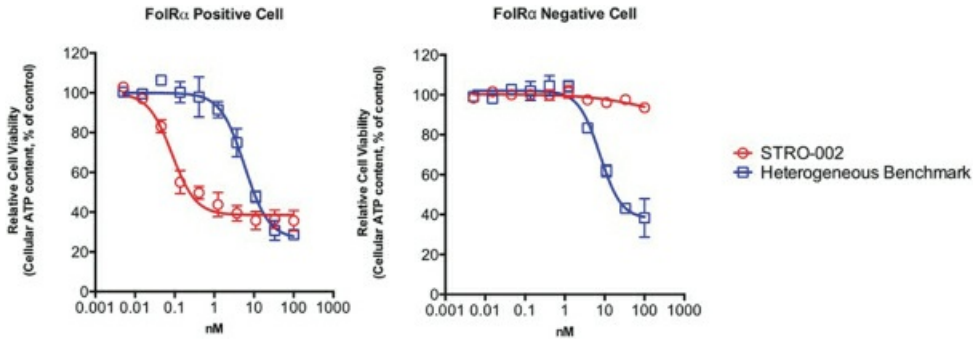
Preclinical Data

STRO-002, in comparison with the benchmark molecule that we created, has demonstrated: enhanced *in vitro* activity on cells expressing FolRa and improved specificity on cells that do not express FolRa; superior inhibition of tumor growth; and greater *in vitro* and *in vivo* linker stability.

STRO-002 has demonstrated potent *in vitro* cell killing activity across multiple ovarian cancer tumor cell lines. Based on these observations, we have used murine tumor models to determine whether STRO-002 also demonstrates cell killing *in vivo*. In these models, human tumor cells are implanted and allowed to grow in mice to subsequently test the activity of anti-cancer agents. Although these murine models do not address safety, they are commonly used to provide experimental proof-of-concept for anti-cancer activity against different tumor types. As shown in the data below, dose-dependent anti-tumor activity was observed in mice implanted with OVCAR3 human ovarian cancer tumor cells. Importantly, this anti-tumor effect was observed in mice bearing large established tumors, with evidence of tumor regression following a single dose of 10 mg/kg STRO-002.



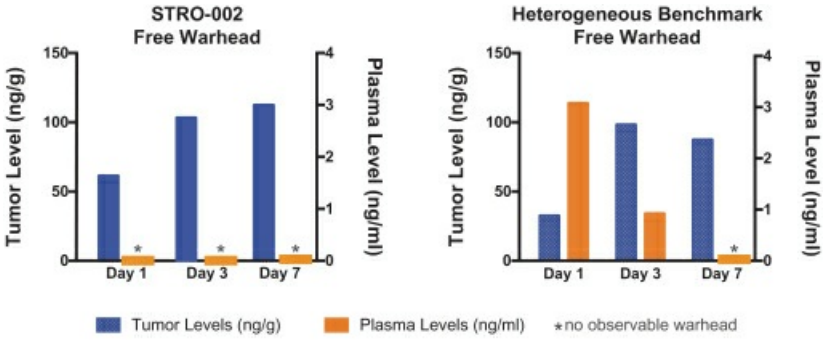
In an effort to better understand the relative activity of our homogeneous STRO-002 molecule we have performed experiments comparing STRO-002 to a benchmark molecule that we created. STRO-002 and the benchmark molecule have comparable DAR and affinity for FolRa expressing cells; however, the benchmark is made using conventional ADC technology and is therefore a heterogeneous mixture. The data below demonstrates STRO-002 has more potent *in vitro* cell killing activity compared to the benchmark molecule when tested on cells expressing FolRa. In contrast, STRO-002 has minimal if any activity on cells that do not express FolR a, while the benchmark molecule kills cells even in the absence of FolRa. We believe that the data demonstrate that the homogeneous nature of STRO-002 drives more efficient tumor cell killing with better tolerability for normal tissues.



We used a human ovarian cancer xenograft model to understand the *in vivo* stability of STRO-002 compared to our benchmark molecule. In this model we tested for free warhead, released from the

ADC, in the blood or tumor tissue one, three or seven days after dosing. The data below on the left show that the released, free warhead from STRO-002 is observed in the tumor starting one day after dosing, without evidence of free warhead circulating in the blood at any time point. In contrast, the data on the right shows that free warhead derived from the benchmark molecule can be observed circulating in the blood one day after dosing, which could contribute to unintended toxicities. In other preclinical studies, the hemiasterlin free warhead is cleared rapidly from this circulation. Taken together, we believe that these data demonstrate the stability of STRO-002 *in vivo*, which we believe will contribute to a superior therapeutic index compared to ADCs made using convention technology.

Murine Tumor Model – Free Warhead in Tumor vs. Blood After Dosing



We examined the safety of STRO-002 in an exploratory toxicology study in non-human primates. Hematological toxicity was observed consistent with the known effects of the STRO-002 cytotoxic tubulin inhibitor component. No other drug-related toxicities were observed and importantly, there were no observed ocular effects in the non-human primate study.

Clinical Development Plan

We expect our Phase 1 trial for STRO-002 to be an open-label study that will evaluate STRO-002 as a monotherapy for patients with ovarian and endometrial cancers. The trial will be conducted in two-parts, dose escalation and dose expansion. The primary objectives of the STRO-002 clinical trial will be to determine the safety and tolerability profile, to define the recommended Phase 2 dose level and interval and to evaluate preliminary anti-tumor activity. Our secondary objectives will be to characterize the human pharmacokinetics and additional safety, tolerability and efficacy measures.

We intend to seek to enroll adult patients with advanced and/or refractory ovarian cancer or endometrial cancer, for whom no suitable treatment exists. These patients are considered to have incurable disease and need repeated courses of life-prolonging and palliative treatment. We believe that ovarian cancer patients will be enrolled in a dose escalation cohort, with treatment frequency and duration yet to be determined. If anti-tumor activity is observed during the dose escalation phase, we would then plan to enroll patients into two dose expansion cohorts (ovarian cancer and endometrial cancer).

We anticipate submitting an IND for STRO-002 in the fourth quarter of 2018.

Additional Discovery Efforts

Our technology allows us to rapidly incorporate non-natural amino acids in varying numbers and positions, to identify the best cytokine modification for pharmacological activity, pharmacokinetics and

safety. Furthermore, our technology enables rapid preclinical development and transition to cGMP manufacturing, ensuring speed to clinic in a promising field. Our drug discovery teams are exploring novel immuno-oncology therapies, including cytokine-based therapies.

We are also actively researching to identify new ADCs to add to our pipeline. We have four ADC discovery programs ongoing using our XpressCF Platform. Our protein engineering and chemistry efforts are focused on maximizing therapeutic indices, and our technology allows us to rapidly test our therapeutic hypothesis in significantly more product candidates than conventional protein synthesis allows in order to identify the best molecule to advance to the clinic.

Our bispecific antibody drug discovery programs are focused on T cell-engagers. We have two active programs, and we are using our technology to find the optimum protein structure and T cell-engaging properties to maximize safety and efficacy for this promising class of cancer therapeutics.

Collaboration and License Agreements

Merck Collaboration

In July 2018, we entered into the 2018 Merck Agreement with Merck to jointly develop up to three research programs focusing on cytokine derivatives for cancer and autoimmune disorders.

Upon signing the 2018 Merck Agreement, Merck agreed to pay us an upfront payment of $60.0 million for the research and development of two target programs, and Merck purchased $20.0 million in Series E redeemable convertible preferred stock from us. Under the 2018 Merck Agreement, we are eligible to receive financial support for our research and development efforts based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate. Additionally, we are eligible to receive another milestone payment if a third target program is selected, and Merck has agreed to purchase up to $10.0 million of our common stock concurrently with the closing of this offering.

Under the terms of the 2018 Merck Agreement, we are eligible to receive aggregate milestone payments of up to $1.6 billion, assuming the development and sale of all therapeutic candidates and all possible indications identified under the collaboration. If one or more products from each of the target programs are developed for non-oncology or a single indication, we will be eligible for reduced aggregate milestone payments. In addition, we are eligible to receive tiered royalties ranging from mid-single digit to low teen percentages on the worldwide sales of any commercial products that may result from the collaboration.

The 2018 Merck Agreement expires on a product-by-product and country-by-country basis upon the later of the expiration of the patents covering products licensed under the 2018 Merck Agreement or ten years after the first commercial sale of a product covered by the 2018 Merck Agreement. Upon expiration, Merck will have a fully paid-up, royalty-free, perpetual, and irrevocable non-exclusive license, with the right to grant sublicenses, under certain of our intellectual property rights.

Merck may terminate the 2018 Merck Agreement at any time with 60 days' prior written notice. Either we or Merck has the right to terminate the 2018 Merck Agreement based on the other party's uncured material breach or bankruptcy.

Celgene Collaboration

In September 2014, we entered into a Collaboration and License Agreement with Celgene, or the 2014 Celgene Agreement, to discover and develop bispecific antibodies and ADCs focused primarily on the field of immuno-oncology, using our proprietary integrated cell-free protein synthesis platform, XpressCF. Under the 2014 Celgene Agreement, we received upfront payments totaling $95.0 million in

September 2014, which included an $11.9 million equity investment, and additional payments totaling $60.0 million.

In August 2017, we entered an Amended and Restated Collaboration and License Agreement with Celgene, or the 2017 Celgene Agreement, to refocus our 2014 Celgene Agreement on four programs that are advancing throughout preclinical development, which are:

- *BCMA ADC*. The most advanced product candidate under collaboration is a BCMA ADC product candidate, which has been designated as a development candidate by Celgene for the treatment of multiple myeloma. We believe Celgene currently plans to submit an IND for this product candidate in early 2019. We currently own the development and commercial rights in the United States to this BCMA ADC product candidate; however, assuming it is the first development candidate from our 2017 Celgene Agreement to have an active IND in the United States, Celgene will then automatically own worldwide development and commercialization rights to such product.
- *Bispecific Antibodies*. The other three product candidates subject to our Celgene collaboration are bispecific antibodies, all of which have been designated as development candidates by Celgene. The second most advanced product candidate under the Celgene collaboration is an immuno-oncology bispecific antibody product candidate. We believe Celgene currently plans to submit an IND for this product candidate in the first half of 2019. We currently own the rights to develop and commercialize these product candidates in the United States; however, assuming the second development candidate from our 2017 Celgene Agreement achieves an active IND in the United States, and Celgene makes the required payments to us, then Celgene will automatically own worldwide development and commercialization rights to such second product.

Upon signing of the 2017 Celgene Agreement, we received an option fee payment of $12.5 million in August 2017 and are eligible to receive a second option fee payment of $12.5 million following the first IND clearance, if any, for one of the four programs, if Celgene desires to maintain its option to acquire the U.S. rights to develop and commercialize a second collaboration program to reach IND status. If Celgene exercises its option to acquire from us U.S. rights to a second collaboration program, it will make an option exercise fee payment to us, the amount of which depends on which program reaches IND status.

We have received and will be eligible to receive financial support for research and development services assigned to us by Celgene, based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate.

Under the terms of the 2017 Celgene Agreement, we are entitled to earn development and regulatory contingent payments for each of the four programs under the collaboration, and royalties on sales of any commercial products that may result from the 2017 Celgene Agreement. Additionally, we are eligible to receive a potential future payment for manufacturing activities of $10.0 million. For licensed products for which Celgene holds worldwide rights, we are eligible to receive aggregate milestone and option fee payments of up to $295.0 million for certain licensed products and up to $393.7 million for certain other licensed products under the collaboration, if approved in multiple indications, and, depending on the licensed product, tiered royalties ranging from single digit to low teen percentages on worldwide sales of any commercial products that may result from the 2017 Celgene Agreement. Additionally, for licensed products for which Celgene holds ex-U.S. rights, we will also be eligible to receive pre-commercial contingent payments and tiered royalties ranging from mid to high single digit percentages.

Celgene may terminate the 2017 Celgene Agreement at any time with 120 days' prior written notice. Either we or Celgene has the right to terminate the 2017 Celgene Agreement based on the

other party's uncured material breach, challenge of the validity and enforceability of intellectual property, or bankruptcy.

EMD Serono Collaboration

In September 2014, we entered into a License Agreement with EMD Serono, or the MDA Agreement, to develop ADCs for multiple cancer targets, which replaced the Collaboration Agreement we had entered into with EMD Serono in May 2014, or the Collaboration Agreement. The most advanced program in the collaboration is a bispecific ADC drug candidate for which we expect the initiation of IND-enabling studies in 2019.

Upon signing the Collaboration Agreement, we received $10.0 million in an upfront payment. In addition, upon signing the MDA Agreement, we received an additional $10.0 million in an upfront payment and receive financial support for our research and development services based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate. As of June 30, 2018, we had received approximately $7.0 million in funding support for research and development services. We anticipate entering into a manufacturing supply agreement with EMD Serono to provide them with product candidate materials for IND-enabling and clinical studies.

We are eligible to receive up to $52.5 million for each product developed under the MDA Agreement, primarily from pre-commercial contingent payments. In addition, we are eligible to receive tiered royalties ranging from low to mid single digit percentages, along with certain additional one-time royalties, on worldwide sales of any commercial products that may result from the MDA Agreement. The MDA Agreement term expires on a product-by-product and country-by-country basis upon the later of the expiration of the patents covering products licensed under the MDA Agreement or ten years after the first commercial sale of a product covered under the MDA Agreement. Upon expiration, EMD Serono will have a fully paid-up, royalty-free, perpetual, and irrevocable non-exclusive license, with the right to grant sublicenses, under certain of our intellectual property rights.

EMD Serono may terminate the MDA Agreement at any time with 90 days' prior written notice or upon our inability to provide EMD Serono access to a specified number of cancer drug targets. Either we or EMD Serono has the right to terminate the MDA Agreement based on the other party's uncured material breach or bankruptcy.

Stanford License

In October 2007, we entered into an Amended and Restated Exclusive Agreement, or the Stanford License, with the Board of Trustees of the Leland Stanford Junior University, or Stanford, that grants us an exclusive license, with the right to sublicense, under the patent rights owned by Stanford covering certain technology rights related to our XpressCF expression system.

Upon initiation of the agreement, we made a payment to Stanford of approximately $83,000, of which a portion was creditable against certain prior patent costs incurred by Stanford, reimbursement of certain out-of-pocket costs incurred by Stanford in patent filing, prosecution and maintenance of approximately $184,000, and issued shares of our common stock to Stanford. We are required to make milestone payments to Stanford of up to approximately $930,000 on the accomplishment of certain development and regulatory milestones, of which $180,000 has been paid through June 30, 2018, with a $750,000 payment due upon first commercial sale of the first licensed product consisting of a molecule or compound covered by the licensed patent rights, or the 14th anniversary of the Stanford License in October 2021. Additionally, we owe Stanford annual license maintenance fees of $75,000, which may be creditable against earned royalties in such year, and are required to reimburse Stanford for ongoing patent-related costs. We are also required to pay to Stanford low single digit royalties on net sales and to share any sublicensing income received related to the licensed technology. We may terminate the agreement at any time upon 30 days' written notice.

SutroVax Investment

In 2013, we and Johnson & Johnson Innovation, through the Johnson & Johnson Development Corporation, provided initial co-funding for a new company called SutroVax, Inc., or SutroVax, with which we have a license agreement. Under the agreement, SutroVax has the right to use the XpressCF Platform to discover and develop vaccine candidates for the treatment or prophylaxis of infectious diseases. The lead program for SutroVax is a broad-spectrum pneumococcal conjugate vaccine. SutroVax is responsible for performing all research and development activities, and we provide technical support and supply XtractCF and other materials to SutroVax.

We retain an ownership interest in SutroVax and are eligible for single digit royalties on net sales of any vaccine candidates. Also, we retain the right to discover and develop vaccines for the treatment or prophylaxis of any disease that is not caused by an infectious pathogen, including cancer.

Manufacturing

We have significant expertise in the production of therapeutic biologics. Our proprietary XpressCF Platform is a cell-free protein synthesis technology that enables rapid and systematic process development, streamlined scale-up and cGMP manufacturing.

Extract and Reagents

We manufacture our cell-free extract, and expect to manufacture related reagents, in our cGMP manufacturing facility in San Carlos, California for our clinical trials and supply commitments. If we are successful in developing an effective strategic relationship with a contract manufacturing organization, or CMO, we would consider supplementing our manufacturing capacity by outsourcing the production of cell-free extract and related reagents to such CMO to cover our needs during product launch and for long-term commercial supply.

Drug Substance and Drug Product

Our process development and manufacturing strategies are tailored to rapidly advance our product candidates and we use a supply chain of established CMOs to ensure successful execution. The production of antibodies will be done by either us or CMOs, depending on our internal cGMP production capacity. The production of all other necessary elements for the manufacture of our ADC product candidates, and the final manufacture of the ADC drug product, will be handled entirely by CMOs. Our XpressCF Platform has been successfully used for manufacturing several antibodies and requires minimal process optimization to support early clinical phase manufacturing. We utilize industry established production steps for the purification of our antibodies. The CMOs we have selected have strong track records in cGMP manufacturing with expertise in clinical or commercial drug manufacturing for the cytotoxic agent, conjugation and fill-finish of therapeutic biologics. All activities from cell-free extract production to formulated drug product are performed to maintain aggressive timelines and minimize delays.

Competition

The biotechnology and biopharmaceutical industries, and the immuno-oncology subsector, are characterized by rapid evolution of technologies, fierce competition and strong defense of intellectual property. Any product candidates that we successfully develop and commercialize will have to compete with existing therapies and new therapies that may become available in the future. While we believe that our proprietary XpressCF Platform and scientific expertise in the field of biologics and immuno-oncology provide us with competitive advantages, a wide variety of institutions, including large biopharmaceutical companies, specialty biotechnology companies, academic research departments and public and private research institutions, are actively developing potentially competitive products and technologies. We face substantial competition from biotechnology and biopharmaceutical

companies developing products in immuno-oncology. Our competitors include larger and better funded biopharmaceutical, biotechnological and therapeutics companies, including companies focused on cancer immunotherapies, such as AstraZeneca PLC, Bristol-Myers Squibb Company, or BMS, GlaxoSmithKline PLC, Merck & Co., Inc., Novartis AG, Pfizer Inc., or Pfizer, Roche Holding Ltd, Sanofi S.A and companies focused on ADCs, such as Pfizer, ImmunoGen, Inc., Seattle Genetics, Inc. and Genentech, Inc., or Genentech, as well as numerous small companies. Moreover, we also compete with current and future therapeutics developed at universities and other research institutions.

If our lead product candidates are approved, they will compete with a range of therapeutic treatments that are either in development or currently marketed. Currently marketed oncology drugs and therapeutics range from ADCs, such as Genentech's Kadcyla, to immune checkpoint inhibitors, such as BMS's Opdivo, to T cell-engager immunotherapies, such as Amgen, Inc.'s Blincyto. In addition, numerous compounds are in clinical development for cancer treatment. With respect to B cell based malignancies, such as multiple myeloma, the most common treatments are chemotherapeutic compounds, radiation therapy, stem cell transplantation and immunomodulating agents. The clinical development pipeline for cancer includes small molecules, antibodies, vaccines, cell therapies and immunotherapies from a variety of companies and institutions.

Many of our competitors, either alone or with strategic partners, have substantially greater financial, technical and human resources than we do. Accordingly, our competitors may be more successful than us in obtaining approval for treatments and achieving widespread market acceptance, rendering our treatments obsolete or non-competitive. Accelerated merger and acquisition activity in the biotechnology and biopharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. These companies also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials and acquiring technologies complementary to, or necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Our commercial opportunity could be substantially limited in the event that our competitors develop and commercialize products that are more effective, safer, less toxic, more convenient or less expensive than our comparable products. In geographies that are critical to our commercial success, competitors may also obtain regulatory approvals before us, resulting in our competitors building a strong market position in advance of the entry of our products. We believe the factors determining the success of our programs will be the efficacy, safety and convenience of our product candidates.

Reimbursement

The regulations that govern pricing and reimbursement for new drugs and therapeutic biologics vary widely from country to country. Some countries require approval of the sale price of a drug or therapeutic biologic before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription biopharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, a drug company can obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay commercial launch of that product.

A drug company's ability to commercialize any products successfully will also depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government authorities, private health insurers and other organizations. Even if one or more products are successfully brought to the market, these products may not be considered cost-effective, and the amount reimbursed for such products may be insufficient to allow them to be sold on a competitive basis. Increasingly, third-party payors who reimburse patients or healthcare providers, such as government and private insurance plans, are requiring that drug companies provide them with

predetermined discounts from list prices, and are seeking to reduce the prices charged or the amounts reimbursed for biopharmaceutical products.

Significant delays can occur in obtaining reimbursement for newly-approved drugs or therapeutic biologics, and coverage may be more limited than the purposes for which the drug or therapeutic biologic is approved by the FDA or similar foreign regulatory authorities. Moreover, eligibility for reimbursement does not imply that any drug or therapeutic biologic will be reimbursed in all cases or at a rate that covers a drug company's costs, including research, development, manufacture, sale and distribution.

Interim reimbursement levels for new drugs or therapeutic biologics, if applicable, may also be insufficient to cover a drug company's costs and may not be made permanent. Reimbursement rates may be based on payments allowed for lower cost drugs or therapeutic biologics that are already reimbursed, may be incorporated into existing payments for other services and may reflect budgetary constraints or imperfections in Medicare data. Net prices for drugs or therapeutic biologics may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs or therapeutic biologics from countries where they may be sold at lower prices than in the United States. Further, no uniform policy for coverage and reimbursement exists in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own methods and approval process apart from Medicare determinations. Therefore coverage and reimbursement can differ significantly from payor to payor.

Intellectual Property

We strive to protect and enhance the proprietary technology, inventions, and improvements that are commercially important to our business, including seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. Our policy is to seek to protect our proprietary position by, among other methods, pursuing and obtaining patent protection in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions, improvements, platforms and product candidates that are important to the development and implementation of our business. Our patent portfolio is intended to cover, but is not limited to, our technology platforms, our product candidates and components thereof, their methods of use and processes for their manufacture, our proprietary reagents and assays, and any other inventions that are commercially important to our business. We also rely on trade secret protection of our confidential information and know-how relating to our proprietary technology, platforms and product candidates, continuing innovation, and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in our XpressCF Platform and product candidates. We expect to rely on data exclusivity, market exclusivity, patent term adjustment and patent term extensions when available. Our commercial success may depend in part on our ability to obtain and maintain patent and other proprietary protection for our technology, inventions, and improvements; to preserve the confidentiality of our trade secrets; to maintain our licenses to use intellectual property owned or controlled by third parties; to defend and enforce our proprietary rights, including our patents; to defend against and challenge the assertion by third parties of their purported intellectual property rights; and to operate without the unauthorized infringement on the valid and enforceable patents and other proprietary rights of third parties.

We believe that we have a strong global intellectual property position and substantial know-how and trade secrets relating to our XpressCF platform technology, platform and product candidates. Our patent portfolio as of June 30, 2018 contained 12 U.S. issued patents and 13 patents issued in ex-U.S. jurisdictions including Europe, China, Japan, Australia and Singapore and 25 U.S. pending applications as well as 68 patent applications pending in ex-U.S. jurisdictions including Europe, China, Japan,

Australia and Singapore owned solely by us. These patents and patent applications include claims relating to:

- bacterial strains, and extracts prepared therefrom, comprising an engineered Release Factor 1 protein, which facilitates incorporation of non-natural amino acids into proteins;
- bacterial strains, and extracts prepared therefrom, comprising combinations of chaperone proteins, which facilitate expression of complex eukaryotic proteins in bacterial extracts;
- antibodies targeting receptors of interest, including CD74 and FolR a;
- ADCs targeting receptors of interest, including CD74 and FolR a;
- hemiasterlin, both as a cytotoxin and as a linker-warhead, which is used in our STRO-0002 product candidate; and
- para-azidomethylphenylalanine, or pAMF, and proteins comprising pAMF, our workhorse non-natural amino acid which is primarily used when we conjugate molecules to proteins produced with our XpressCF Platform.

Our issued patents, and any patents that may issue from our pending patent applications, in our solely owned patent portfolio are expected to expire between January 2030 and March 2039, absent any patent term adjustments or extensions.

In addition, we have exclusively licensed the following patent portfolio from Stanford: 15 U.S. issued patents and 44 patents issued in ex-U.S. jurisdictions including Europe, China, Canada, India, Australia, South Korea, Eurasia and Singapore. This patent portfolio includes claims relating to methods related to *in vitro* protein synthesis that we use in our XpressCF Platform when discovering, developing and manufacturing our product candidates.

Patents in our patent portfolio licensed from Stanford are expected to expire between March 2019 and January 2028, absent any patent term adjustments or extensions.

As for the XpressCF Platform, product candidates and processes we develop and commercialize, in the normal course of business, we intend to pursue, where appropriate, patent protection or trade secret protection relating to compositions, methods of manufacture, assay methods, methods of use, treatment of indications, dosing and formulations. We may also pursue patent protection with respect to product development processes and technology.

The following table describes the material patents and patent applications owned or licensed by us.

Patent Relevance	Ownership	Type of Patent Protection	Expiration or Anticipated Expiration (absent patent term extension or adjustment)	Pending Jurisdictions	Issued Jurisdictions
XpressCF Platform	Inlicensed from Stanford	Utility	2023	None	US, AU, CA, EP, JP
XpressCF Platform	Owned by Sutro	Utility	2033	US, CA, CN, EP, IL, IN, JP, KR,	US, AU, SG
XpressCF Platform	Owned by Sutro	Utility	2034	US, AU, CA, CN, EP, HK, IL, IN, JP, KR, SG	None
XpressCF Platform	Owned by Sutro	Utility	2034	US	EP
XpressCF Platform	Owned by Sutro	Utility	2035	None	US, EP
STRO-001 and STRO-002	Owned by Sutro	Utility	2033	US, AU, BR, CA, CN, EP, JP, IN, HK, KR	US, SG
STRO-001 and STRO-002	Owned by Sutro	Utility	2033	US, AU, BR, CA, CN, EP, HK, IL, IN, JP, KR	US, SG
STRO-001	Owned by Sutro	Utility	2035	US, EP	None
STRO-001	Owned by Sutro	Utility	2037	PCT	None
STRO-001	Owned by Sutro	Utility	2037	PCT	None
STRO-001	Owned by Sutro	Provisional	2038	US	None
STRO-002	Owned by Sutro	Utility	2037	PCT	None
STRO-002	Owned by Sutro	Provisional	2038	US	None
STRO-002	Owned by Sutro	Utility	2036	US, AU, BR, CA, CN, EP, IL, IN, JP, KR, SG	None

We continually assess and refine our intellectual property strategy as we develop new platform technologies and product candidates. To that end, we are prepared to file additional patent applications if our intellectual property strategy requires such filings, or where we seek to adapt to competition or seize business opportunities. Further, we are prepared to file patent applications, as we consider appropriate under the circumstances, relating to the new technologies that we develop. In addition to filing and prosecuting patent applications in the United States, we often file counterpart patent applications in the European Union and in additional countries where we believe such foreign filing is

likely to be beneficial, including but not limited to any or all of Australia, Brazil, Canada, China, Hong Kong, India, Israel, Japan, Mexico, New Zealand, Singapore and South Korea.

The term of individual patents depends upon the laws of the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the earliest date of filing of a non-provisional patent application. However, the term of United States patents may be extended for delays incurred due to compliance with the FDA requirements or by delays encountered during prosecution that are caused by the United States Patent and Trademark Office, or the USPTO. For example, the Hatch-Waxman Act permits a patent term extension for FDA-approved drugs of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, and only one patent applicable to an approved drug may be extended. Similar provisions are available in Europe and other jurisdictions to extend the term of a patent that covers an approved drug. In the future, if and when our biopharmaceutical product candidates receive FDA approval, we expect to apply for patent term extensions on patents covering those product candidates. We intend to seek patent term extensions to any of our issued patents in any jurisdiction where these are available; however there is no guarantee that the applicable authorities, including the USPTO and FDA, will agree with our assessment of whether such extensions should be granted, and even if granted, the length of such extensions. Our currently issued patents will likely expire on dates ranging from 2030 to 2034, unless we receive patent term extension or patent term adjustment, or both. If patents are issued on our pending patent applications, the resulting patents are projected to expire on dates ranging from 2033 to 2039, unless we receive patent term extension or patent term adjustment, or both. However, the actual protection afforded by a patent varies on a product-by-product basis, from country-to-country, and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country and the validity and enforceability of the patent.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. No consistent policy regarding the scope of claims allowable in patents in the field of immunotherapy has emerged in the United States. The patent situation outside of the United States is even more uncertain. Changes in the patent laws and rules, either by legislation, judicial decisions, or regulatory interpretation in the United States and other countries may diminish our ability to protect our inventions and enforce our intellectual property rights, and more generally could affect the value of our intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell, or importing any of our patented inventions, either directly or indirectly, will depend in part on our success in obtaining, defending, and enforcing patent claims that cover our technology, inventions, and improvements. With respect to both licensed and company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our platforms and product candidates and the methods used to manufacture those platforms and product candidates. Moreover, even our issued patents do not guarantee us the right to practice our technology in relation to the commercialization of our platform’s product candidates. However, the area of patent and other intellectual property rights in biotechnology is an evolving one with many risks and uncertainties, and third parties may have blocking patents that could be used to prevent us from commercializing our patented XpressCF technology, platforms and product candidates and practicing our proprietary technology. Our issued patents and those that may issue in the future may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related platforms or product candidates or limit the length of the term of patent protection that we may have for our XpressCF technology, platforms and product candidates. In addition, the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop

similar technologies. For these reasons, we may have competition for our XpressCF technology, platforms and product candidates. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any particular product candidate can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent. For this and more comprehensive risks related to our proprietary technology, inventions, improvements, platforms and product candidates, please see the section entitled "Risk Factors—Risks Related to Intellectual Property."

We intend to file applications for trademark registrations in connection with our product candidates in various jurisdictions, including the United States. We have filed for trademark protection of the Sutro Biopharma mark, the XpressCF mark and the XpressCF+ mark with the USPTO. XpressCF refers to our cell-free protein synthesis technology as a whole, and XpressCF+ refers specifically to cell-free protein synthesis incorporating one or more non-natural amino acids. The Sutro Biopharma mark was registered by the USPTO in 2014 and the XpressCF and XpressCF+ marks were registered by the USPTO in 2017.

We also rely on trade secret protection for our confidential and proprietary information. Although we take steps to protect our confidential and proprietary information as trade secrets, including through contractual means with our employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. Thus, we may not be able to meaningfully protect our trade secrets. It is our policy to require our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements provide that all confidential information concerning our business or financial affairs developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees, the agreements provide that all inventions conceived by the individual, and which are related to our current or planned business or research and development or made during normal working hours, on our premises or using our equipment or proprietary information, are our exclusive property. In many cases our confidentiality and other agreements with consultants, outside scientific collaborators, sponsored researchers and other advisors require them to assign or grant us licenses to inventions they invent as a result of the work or services they render under such agreements or grant us an option to negotiate a license to use such inventions.

We also seek to preserve the integrity and confidentiality of our proprietary technology and processes by maintaining physical security of our premises and physical and electronic security of our information technology systems. Although we have confidence in these individuals, organizations, and systems, agreements or security measures may be breached and we may not have adequate remedies for any breach. To the extent that our employees, contractors, consultants, collaborators, and advisors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Government Regulation

Government authorities in the United States, at the federal, state and local level, and in other countries and jurisdictions extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, post-approval monitoring and reporting, and import and export of pharmaceutical products. The processes for obtaining regulatory approvals in the United States and in foreign countries and jurisdictions, along with subsequent compliance with applicable

statutes and regulations and other regulatory authorities, require the expenditure of substantial time and financial resources.

FDA Approval Process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act, or the FDC Act, and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Biological products used for the prevention, treatment, or cure of a disease or condition of a human being are subject to regulation under the FDC Act, except the section of the FDC Act which governs the approval of new drug applications, or NDAs. Biological products are approved for marketing under provisions of the Public Health Service Act, or PHS Act, via a Biologics License Application, or BLA. However, the application process and requirements for approval of BLAs are very similar to those for NDAs, and biologics are associated with similar approval risks and costs as drugs. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as clinical hold, FDA refusal to approve pending BLAs, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Biological product development for a new product or certain changes to an approved product in the United States typically involves preclinical laboratory and animal tests, the submission to the FDA of an investigational new drug application, or IND, which must become effective before clinical testing may commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the biologic for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity, and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation, and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements, including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls, and a proposed clinical trial protocol. Long-term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted. A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has neither commented on nor questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin. Clinical trials involve the administration of the investigational biologic to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with federal regulations; (ii) in compliance with good clinical practice, or GCP, an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators, and monitors; as well as (iii) under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The trial protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board, or IRB, for approval. An IRB may also require the clinical trial at the site to be halted,

either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support BLAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial introduction of the biologic into healthy human subjects or patients, the product is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses, and, if possible, early evidence on effectiveness. In oncology clinical trials, efficacy endpoints are also often explored in Phase 1. Phase 2 usually involves trials in a limited patient population to determine the effectiveness of the drug or biologic for a particular indication, dosage tolerance, and optimum dosage, and to identify common adverse effects and safety risks. If a compound demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit the FDA to evaluate the overall benefit-risk relationship of the drug or biologic and to provide adequate information for the labeling of the product. In some instances, trial phases may be truncated or combined into one or more combined-phase or adaptive design trials. In most cases, the FDA requires two adequate and well-controlled Phase 3 clinical trials to demonstrate the efficacy of the biologic. A single Phase 3 trial with other confirmatory evidence may be sufficient in certain oncological conditions where the trial is a large multicenter trial demonstrating internal consistency and a statistically very persuasive finding of a clinically meaningful effect on mortality, irreversible morbidity or prevention of a disease with a potentially serious outcome and confirmation of the result in a second trial would be practically or ethically impossible.

The manufacturer of an investigational drug in a Phase 2 or 3 clinical trial for a serious or life-threatening disease is required to make available, such as by posting on its website, its policy on evaluating and responding to requests for expanded access.

After completion of the required clinical testing, a BLA is prepared and submitted to the FDA. FDA approval of the BLA is required before marketing of the product may begin in the United States. The BLA must include the results of all preclinical, clinical, and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting a BLA is substantial. The submission of most BLAs is additionally subject to a substantial application user fee, currently exceeding $2,421,000 for Fiscal Year 2018. The applicant under an approved BLA is also subject to an annual program fee, currently exceeding $304,000 per prescription drug product for Fiscal Year 2018. Beginning in Fiscal Year 2018, this annual program fee replaces the annual product and establishment fees. These fees are typically increased annually. The FDA has 60 days from its receipt of a BLA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of BLAs. Most such applications for standard review biologic products are reviewed within 10 months of the date the FDA files the BLA; most applications for priority review biologics are reviewed within six months of the date the FDA files the BLA. Priority review can be applied to a biologic that the FDA determines has the potential to treat a serious or life-threatening condition and, if approved, would be a significant improvement in safety or effectiveness compared to available therapies. The review process for both standard and priority review may be extended by the FDA for three additional months to consider certain late-submitted information, or information intended to clarify information already provided in the submission.

The FDA may also refer applications for novel biologic products, or biologic products that present difficult questions of safety or efficacy, to an advisory committee—typically a panel that includes clinicians and other experts—for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory

committee, but it generally follows such recommendations. Before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the biologic product is manufactured. The FDA will not approve the product unless compliance with current Good Manufacturing Practices, or cGMPs, is satisfactory and the BLA contains data that provide substantial evidence that the biologic is safe, pure, potent and effective in the indication studied.

After the FDA evaluates the BLA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing, or information, in order for the FDA to reconsider the application. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the BLA, the FDA will issue an approval letter. The FDA has committed to reviewing such resubmissions in two or six months depending on the type of information included. An approval letter authorizes commercial marketing of the biologic with specific prescribing information for specific indications. As a condition of BLA approval, the FDA may require a risk evaluation and mitigation strategy, or REMS, to help ensure that the benefits of the biologic outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS can materially affect the potential market and profitability of the product. Moreover, product approval may require substantial post-approval testing and surveillance to monitor the product's safety or efficacy.

Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new BLA or BLA supplement before the change can be implemented. A BLA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing BLA supplements as it does in reviewing BLAs.

Fast Track Designation and Accelerated Approval

The FDA is required to facilitate the development, and expedite the review, of biologics that are intended for the treatment of a serious or life-threatening disease or condition for which there is no effective treatment and which demonstrate the potential to address unmet medical needs for the condition. Under the fast track program, the sponsor of a new biologic candidate may request that the FDA designate the candidate for a specific indication as a fast track biologic concurrent with, or after, the filing of the IND for the candidate. The FDA must determine if the biologic candidate qualifies for fast track designation within 60 days of receipt of the sponsor's request. Under the fast track program and FDA's accelerated approval regulations, the FDA may approve a biologic for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments.

In clinical trials, a surrogate endpoint is a measurement of laboratory or clinical signs of a disease or condition that substitutes for a direct measurement of how a patient feels, functions, or survives. Surrogate endpoints can often be measured more easily or more rapidly than clinical endpoints. A biologic candidate approved on this basis is subject to rigorous post-marketing compliance requirements, including the completion of Phase 4 or post-approval clinical trials to confirm the effect on the clinical endpoint. Failure to conduct required post-approval trials, or confirm a clinical benefit

during post-marketing trials, will allow the FDA to withdraw the biologic from the market on an expedited basis. All promotional materials for biologic candidates approved under accelerated regulations are subject to prior review by the FDA.

In addition to other benefits such as the ability to use surrogate endpoints and engage in more frequent interactions with the FDA, the FDA may initiate review of sections of a fast track product's BLA before the application is complete. This rolling review is available if the applicant provides, and the FDA approves, a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, the FDA's time period goal for reviewing an application does not begin until the last section of the BLA is submitted. Additionally, the fast track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to biological products intended to treat a rare disease or condition—generally a disease or condition that affects fewer than 200,000 individuals in the United States, or if it affects more than 200,000 individuals in the United States, there is no reasonable expectation that the cost of developing and making a product available in the United States for such disease or condition will be recovered from sales of the product.

Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the biological product and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first BLA applicant to receive FDA approval for a product with particular principal molecular structural features to treat a particular disease with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the United States for that product for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market a biological product containing the same active moiety for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. A product is clinically superior if it is safer, more effective or makes a major contribution to patient care. Orphan drug exclusivity does not prevent the FDA from approving a different drug or biological product for the same disease or condition, or the same biological product for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA user fee.

Disclosure of Clinical Trial Information

Sponsors of clinical trials of FDA-regulated products, including biological products, are required to register and disclose certain clinical trial information. Information related to the product, patient population, phase of investigation, trial sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed in certain circumstances for up to two years after the date of completion of the trial. Competitors may use this publicly available information to gain knowledge regarding the progress of development programs.

Pediatric Information

Under the Pediatric Research Equity Act, or PREA, BLAs or supplements to BLAs must contain data to assess the safety and effectiveness of the biological product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the biological product is safe and effective. The FDA may grant full or partial waivers, or deferrals, for submission of data. Unless otherwise required by regulation, PREA does not apply to any biological product for an indication for which orphan designation has been granted, except

a product with a new active ingredient that is molecularly targeted cancer product intended for the treatment of an adult cancer and directed at a molecular target determined by FDA to be substantially relevant to the growth or progression of a pediatric cancer that is subject to an NDA or BLA submitted on or after August 18, 2020.

Additional Controls for Biologics

To help reduce the increased risk of the introduction of adventitious agents, the PHS Act emphasizes the importance of manufacturing controls for products whose attributes cannot be precisely defined. The PHS Act also provides authority to the FDA to immediately suspend licenses in situations where there exists a danger to public health, to prepare or procure products in the event of shortages and critical public health needs, and to authorize the creation and enforcement of regulations to prevent the introduction or spread of communicable diseases in the United States and between states.

After a BLA is approved, the product may also be subject to official lot release as a condition of approval. As part of the manufacturing process, the manufacturer is required to perform certain tests on each lot of the product before it is released for distribution. If the product is subject to official release by the FDA, the manufacturer submits samples of each lot of product to the FDA together with a release protocol showing a summary of the history of manufacture of the lot and the results of all of the manufacturer's tests performed on the lot. The FDA may also perform certain confirmatory tests on lots of some products, such as viral vaccines, before releasing the lots for distribution by the manufacturer. In addition, the FDA conducts laboratory research related to the regulatory standards on the safety, purity, potency, and effectiveness of biological products. As with drugs, after approval of biologics, manufacturers must address any safety issues that arise, are subject to recalls or a halt in manufacturing, and are subject to periodic inspection after approval.

Post-Approval Requirements

Once a BLA is approved, a product will be subject to certain post-approval requirements. For instance, the FDA closely regulates the post-approval marketing and promotion of biologics, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet. Biologics may be marketed only for the approved indications and in accordance with the provisions of the approved labeling.

Adverse event reporting and submission of periodic reports is required following FDA approval of a BLA. The FDA also may require post-marketing testing, known as Phase 4 testing, REMS, and surveillance to monitor the effects of an approved product, or the FDA may place conditions on an approval that could restrict the distribution or use of the product. In addition, quality control, biological product manufacture, packaging, and labeling procedures must continue to conform to cGMPs after approval. Biologic manufacturers and certain of their subcontractors are required to register their establishments with the FDA and certain state agencies. Registration with the FDA subjects entities to periodic unannounced inspections by the FDA, during which the agency inspects manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money, and effort in the areas of production and quality-control to maintain compliance with cGMPs. Regulatory authorities may withdraw product approvals or request product recalls if a company fails to comply with regulatory standards, if it encounters problems following initial marketing, or if previously unrecognized problems are subsequently discovered.

FDA Regulation of Companion Diagnostics

A biologic product may rely upon an *in vitro* companion diagnostics for use in selecting the patients that will respond to a therapy. If an *in vitro* diagnostic is essential to the safe and effective use of the

therapeutic product, then the FDA generally will require approval or clearance of the diagnostic at the same time that FDA approves the therapeutic product.

Pursuing FDA approval of an *in vitro* companion diagnostic would require a pre-market approval, or PMA, for that diagnostic. Based on a final FDA guidance document, and the FDA's past treatment of companion diagnostics, the FDA will likely require PMA approval of an *in vitro* companion diagnostics to identify patient populations suitable for a cancer therapy. The review of these *in vitro* companion diagnostics involves coordination of review by the FDA's Center for Biologics Evaluation and Research and by the FDA's Center for Devices and Radiological Health. Approval of a companion diagnostic is generally required at the time of new drug approval.

The PMA process, including the gathering of clinical and nonclinical data and the submission to and review by the FDA, can take several years or longer. The applicant must prepare and provide the FDA with reasonable assurance of the device's safety and effectiveness, including information about the device and its components regarding, among other things, device design, manufacturing and labeling. PMA applications are subject to an application fee, which exceeds $310,000 for most PMAs for Fiscal Year 2018. In addition, PMAs for devices must generally include the results from extensive preclinical and adequate and well-controlled clinical trials to establish the safety and effectiveness of the device for each indication for which FDA approval is sought. In particular, for a diagnostic, the applicant must demonstrate that the diagnostic produces reproducible results between multiple users at multiple laboratories. As part of the PMA review, the FDA will typically inspect the manufacturer's facilities for compliance with the Quality System Regulation, or QSR, which imposes elaborate testing, control, documentation and other quality assurance requirements.

PMA approval is not guaranteed, and the FDA may ultimately respond to a PMA submission with a not approvable determination based on deficiencies in the application and require additional clinical trial or other data that may be expensive and time consuming to generate and that can substantially delay or prevent approval. If the FDA concludes that the applicable criteria have been met, the FDA will issue a PMA for the approved indications, which can be more limited than those originally sought by the applicant. The PMA can include post-approval conditions that the FDA believes necessary to ensure the safety and effectiveness of the device, including, among other things, restrictions on labeling, promotion, sale and distribution.

After a device is placed on the market, it remains subject to significant regulatory requirements. Medical devices may be marketed only for the uses and indications for which they are cleared or approved. Device manufacturers must also register with FDA and list their devices. A medical device manufacturer's manufacturing processes are required to comply with the applicable portions of the QSR, which cover the methods and documentation of the design, testing, production, processes, controls, quality assurance, labeling, packaging and shipping of medical devices. Domestic facility records and manufacturing processes are subject to periodic inspections by the FDA.

Failure to comply with applicable regulatory requirements can result in enforcement action by the FDA, which may include any of the following sanctions: warning or untitled letters, fines, injunctions, civil or criminal penalties, recall or seizure of current or future products, operating restrictions, partial suspension or total shutdown of production, denial of submissions for new products, or withdrawal of PMA approvals.

Other Healthcare Laws

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal laws have been applied to restrict certain general business and marketing practices in the pharmaceutical industry in recent years. These laws include anti-kickback statutes, false claims statutes and other healthcare laws and regulations.

The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for, purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid, or other federally financed healthcare programs. The Patient Protection and Affordable Care Act as amended by the Health Care and Education Reconciliation Act, collectively, the ACA, amended the intent element of the federal statute so that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to commit a violation. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exceptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor.

Federal civil and criminal false claims laws, including the federal civil False Claims Act, prohibit any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. This includes claims made to programs where the federal government reimburses, such as Medicaid, as well as programs where the federal government is a direct purchaser, such as when it purchases off the Federal Supply Schedule. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly inflating drug prices they report to pricing services, which in turn were used by the government to set Medicare and Medicaid reimbursement rates, and for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, certain marketing practices, including off-label promotion, may also violate false claims laws. Additionally, the ACA amended the federal Anti-Kickback Statute such that a violation of that statute can serve as a basis for liability under the federal False Claims Act. The majority of states also have statutes or regulations similar to the federal Anti-Kickback Statute and False Claims Act, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

Other federal statutes pertaining to healthcare fraud and abuse include the civil monetary penalties statute, which prohibits, among other things, the offer or payment of remuneration to a Medicaid or Medicare beneficiary that the offerer or payor knows or should know is likely to influence the beneficiary to order a receive a reimbursable item or service from a particular supplier, and the additional federal criminal statutes created by the Health Insurance Portability and Accountability Act of 1996, or HIPAA, which prohibits, among other things, knowingly and willfully executing or attempting to execute a scheme to defraud any healthcare benefit program or obtain by means of false or fraudulent pretenses, representations or promises any money or property owned by or under the control of any healthcare benefit program in connection with the delivery of or payment for healthcare benefits, items or services.

In addition, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, imposes obligations on certain healthcare providers, health plans, and healthcare clearinghouses, known as covered entities, as well as their business associates that perform certain services involving the storage, use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security, and transmission of individually identifiable health information, and require notification to affected individuals and regulatory authorities of certain breaches of security of individually identifiable health information.

Further, pursuant to the ACA, the Centers for Medicare & Medicaid Services, or CMS, has issued a final rule that requires manufacturers of prescription drugs to collect and report information on certain

payments or transfers of value to physicians and teaching hospitals, as well as investment interests held by physicians and their immediate family members. The first reports were due in 2014 and must be submitted on an annual basis. The reported data is made available in searchable form on a public website on an annual basis.

In addition, several states now require prescription drug companies to report certain expenses relating to the marketing and promotion of drug products and to report gifts and payments to individual healthcare practitioners in these states. Other states prohibit various marketing-related activities, such as the provision of certain kinds of gifts or meals. Still other states require the posting of information relating to clinical studies and their outcomes. Some states require the reporting of certain pricing information, including information pertaining to and justifying price increases, or prohibit prescription drug price gouging. In addition, states such as California, Connecticut, Nevada, and Massachusetts require pharmaceutical companies to implement compliance programs and/or marketing codes. Several additional states are considering similar proposals. Certain states and local jurisdictions also require the registration of pharmaceutical sales representatives. Compliance with these laws is difficult and time consuming, and companies that do not comply with these state laws face civil penalties.

Efforts to ensure that business arrangements with third parties comply with applicable healthcare laws and regulations involve substantial costs. If a drug company's operations are found to be in violation of any such requirements, it may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, the curtailment or restructuring of its operations, loss of eligibility to obtain approvals from the FDA, exclusion from participation in government contracting, healthcare reimbursement or other government programs, including Medicare and Medicaid, integrity oversight and reporting obligations and reputational harm. Although effective compliance programs can mitigate the risk of investigation and prosecution for violations of these laws, these risks cannot be entirely eliminated. Any action for an alleged or suspected violation can cause a drug company to incur significant legal expenses and divert management's attention from the operation of the business, even if such action is successfully defended.

U.S. Healthcare Reform

In the United States there have been, and continue to be, proposals by the federal government, state governments, regulators and third-party payors to control or manage the increased costs of health care and, more generally, to reform the U.S. healthcare system. For example, in March 2010, the ACA was enacted, which substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things, (i) subjected therapeutic biologics to potential competition by lower-cost biosimilars by creating a licensure framework for follow-on biologic products, (ii) proscribed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs and therapeutic biologics that are inhaled, infused, instilled, implanted or injected, (iii) increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extended the rebate program to individuals enrolled in Medicaid managed care organizations, (iv) established annual fees and taxes on manufacturers of certain branded prescription drugs and therapeutic biologics, (v) established a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs and therapeutic biologics to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs and therapeutic biologics to be covered under Medicare Part D, (vi) expanded eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability, (vii) expanded the entities eligible for

discounts under the Public Health program (viii) created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research, and (ix) established a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

The current U.S. presidential administration and Congress have, and we expect they will continue to, seek to modify, repeal, or otherwise invalidate all, or certain provisions of, the ACA. Since January 2017, the current U.S. presidential administration has issued two executive orders and other directives designed to delay the implementation of certain provisions of the ACA or otherwise circumvent some of the requirements for health insurance mandated by the ACA. For example, on October 12, 2017, the current U.S. presidential administration issued an executive order that expands the use of association health plans and allows anyone to purchase short-term health plans that provide temporary, limited insurance. This executive order also calls for the halt of federal payments to health insurers for cost-sharing reductions previously available to lower-income Americans to afford coverage. There is still uncertainty with respect to the impact this executive order could have on coverage and reimbursement for healthcare items and services covered by plans that were authorized by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed comprehensive repeal legislation, two bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017, among other things, includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate”. Additionally, on January 22, 2018, the current U.S. presidential administration signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called “Cadillac” tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Further, the Bipartisan Budget Act of 2018, or the BBA, among other things, amends the ACA, effective January 1, 2019, to increase from 50 percent to 70 percent the point-of-sale discount that is owed by pharmaceutical manufacturers who participate in Medicare Part D and to close the coverage gap in most Medicare drug plans, commonly referred to as the “donut hole”. More recently, in July 2018, CMS published a final rule permitting further collections and payments to and from certain ACA qualified health plans and health insurance issuers under the ACA risk adjustment program in response to the outcome of federal district court litigation regarding the method CMS uses to determine this risk adjustment. There is still uncertainty with respect to the impact the current U.S. presidential administration and the Congress may have, if any, and any changes will likely take time to unfold, and could have an impact on coverage and reimbursement for healthcare items and services covered by plans that were authorized by the ACA. However, we cannot predict the ultimate content, timing or effect of any healthcare reform legislation or the impact of potential legislation on us.

In addition, other legislative changes have been proposed and adopted in the United States since the ACA was enacted to reduce healthcare expenditures. U.S. federal government agencies also currently face potentially significant spending reductions, which may further impact healthcare expenditures. On August 2, 2011, the Budget Control Act of 2011 among other things, created measures for spending reductions by Congress. A joint select committee on deficit reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation’s automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year. These reductions went into effect on April 1, 2013 and, due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2027 unless additional Congressional action is taken. Moreover, on January 2, 2013, the American Taxpayer Relief Act of

2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. If federal spending is further reduced, anticipated budgetary shortfalls may also impact the ability of relevant agencies, such as the FDA or the National Institutes of Health to continue to function at current levels. Amounts allocated to federal grants and contracts may be reduced or eliminated. These reductions may also impact the ability of relevant agencies to timely review and approve research and development, manufacturing, and marketing activities, which may delay our ability to develop, market and sell any products we may develop.

Moreover, payment methodologies, including payment for companion diagnostics, may be subject to changes in healthcare legislation and regulatory initiatives. For example, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or MMA, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for physician-administered drugs. In addition, this legislation provided authority for limiting the number of drugs that will be covered in any therapeutic class. While the MMA only applies to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates. Therefore, any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private payors. In addition, CMS has begun bundling the Medicare payments for certain laboratory tests ordered while a patient received services in a hospital outpatient setting and, beginning in 2018, CMS will pay for clinical laboratory services based on a weighted average of reported prices that private payors, Medicare Advantage plans, and Medicaid Managed Care plans pay for laboratory services. Further, on March 16, 2018, CMS finalized its National Coverage Determination, or NCD, for certain diagnostic laboratory tests using next generation sequencing, or NGS, that are approved by the FDA as a companion in vitro diagnostic and used in a cancer with an FDA-approved companion diagnostic indication. Under the NCD, diagnostic tests that gain FDA approval or clearance as an in vitro companion diagnostic will automatically receive full coverage and be available for patients with recurrent, metastatic relapsed, refractory or stages III and IV cancer. Additionally, the NCD extended coverage to repeat testing when the patient has a new primary diagnosis of cancer.

Recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. At the federal level, the current U.S. presidential administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. Additionally, on May 11, 2018, the current U.S. presidential administration laid out the administration's "Blueprint" to reduce the cost of prescription medications while preserving innovation and cures. While the Department of Health and Human Services, or HHS, is soliciting feedback on some of these measures, other actions may be immediately implemented by HHS under existing authority. Although a number of these, and other potential, proposals will require authorization through additional legislation to become effective, Congress and the current U.S. presidential administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and

transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Additionally, on May 30, 2018, the Trickett Wendler, Frank Mongiello, Jordan McLinn, and Matthew Bellina Right to Try Act of 2017 was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase I clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA authorization under an FDA expanded access program.

Employees

As of June 30, 2018, we had 128 full-time employees, 21 full-time contract employees and one part-time contract employee. Of these employees, 41 have an M.D. or a Ph.D. None of our employees are represented by a labor union or covered by collective bargaining agreements, and we believe our relationship with our employees is good.

Research and Development

Research and development expenses for the years ended December 31, 2016 and 2017 were $43.6 million and $54.6 million, respectively, and for the six months ended June 30, 2017 and 2018, were $25.8 million and $26.8 million, respectively.

Properties and Facilities

Our principal executive office is located in South San Francisco, California, where we lease a total of approximately 52,200 square feet of office and laboratory space in two buildings that we use for our administrative, research and development and other activities. The lease under each of our South San Francisco buildings expires in November 2021, unless we exercise our option to extend each lease term through November 2026. We also have a manufacturing facility and manufacturing-support facility in San Carlos, California, where we lease a total of approximately 29,600 square feet of space in two buildings. The lease on one of our San Carlos buildings expires in July 2021, for which we have two three-year options to extend our lease to July 2027. The lease on the second San Carlos building expires in June 2021, for which we have two three-year options to extend the lease to June 2027.

Legal Proceedings

From time to time, we may be involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any legal proceedings that, in the opinion of management, would have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us due to defense and settlement costs, diversion of management resources, negative publicity and reputational harm, and other factors.

MANAGEMENT

Executive Officers and Directors

The following table provides information regarding our executive officers and directors as of July 31, 2018:

Name	Age	Position
Executive Officers:		
William J. Newell	61	Chief Executive Officer and Director
Arturo Molina, M.D., M.S., FACP	60	Chief Medical Officer
Trevor J. Hallam, Ph.D.	60	Chief Scientific Officer
Edward Albini	61	Chief Financial Officer
Shabbir T. Anik, Ph.D.	66	Chief Technical Operations Officer
Linda Fitzpatrick	62	Chief People and Communications Officer
Stephen T. Worsley	55	Chief Business Officer
Non-Employee Directors:		
Michael Dybbs(4)	43	Director
John G. Freund, M.D.(1)	64	Director
Daniel Janney(2)(3)(5)	52	Director
V. Bryan Lawlis, Ph.D.(1)(3)	66	Director
Joseph M. Lobacki(1)(2)	59	Director
Daniel H. Petree	63	Director
Michael Ross, Ph.D.(2)(4)	69	Director
Armen B. Shanafelt, Ph.D.(6)	59	Director

(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

(3) Member of the Nominating and Governance Committee.

(4) Member of the Science and Technology Committee.

(5) Chairman of the board of directors.

(6) Dr. Shanafelt has informed us that he intends to resign from our board of directors immediately prior to the effectiveness of the registration statement of which this prospectus is a part.

Executive Officers

William J. Newell has served as our Chief Executive Officer and a member of our board of directors since January 2009. Previously, he served as the President of Aerovance, Inc., a biotechnology company focused on respiratory diseases, from 2006 to 2007. Mr. Newell has also served as the Chief Business Officer and Senior Vice President at QLT Inc., in several senior management positions at Axys Pharmaceuticals, Inc., and has experience as a corporate lawyer. He currently serves on the boards of directors of two private biotechnology companies, Biotechnology Innovation Organization's Health Section and Emerging Company Section and the California Life Sciences Association, where he also serves as a Chair and as a member of the executive committee. Mr. Newell received an A.B. in Government from Dartmouth College and a J.D. from the University of Michigan Law School. We believe that Mr. Newell is qualified to serve on our board of directors because of his experience with various biotechnology companies, including working with and serving in various executive positions in life sciences companies.

Arturo Molina, M.D., M.S., *FACP*, has served as our Chief Medical Officer since February 2016. From February 2013 to February 2016, Dr. Molina served as Vice President of Oncology Scientific Innovation at Johnson & Johnson's California Innovation Center, an organization focused on building early stage collaborations with emerging companies. Previously, Dr. Molina served as Chief Medical Officer and Vice President of Clinical Development for Johnson and Johnson's Ortho Biotech Oncology

Research and Development, a unit of Cougar Biotechnology, Inc., Chief Medical Officer of Cougar Biotechnology, Inc., Senior Director and Interim Head of Oncology/Hematology in the Department of Medical Research and Clinical Development at Biogen Idec, Inc., and Senior Director of Medical Affairs at IDEC Pharmaceuticals Corporation. Since 2006, Dr. Molina has served as a National Advisory Committee Member for the Harold Amos Medical Faculty Development Program of the Robert Wood Johnson Foundation. From 1991 to 2002, Dr. Molina was a faculty staff physician in the Department of Hematology/Bone Marrow Transplantation and Department of Medical Oncology/Therapeutics Research at City of Hope Comprehensive Cancer Center and Adjunct Professor from 2004 to 2007. Dr. Molina was also on the Board of Directors of the City of Hope Medical Group. Dr. Molina received a B.S. in Zoology and B.A. in Psychology from the University of Texas at Austin and an M.S. in Physiology and M.D. from Stanford University School of Medicine. He is board certified in internal medicine and medical oncology, has an active California medical license and is a staff physician (volunteer) in the Oncology Clinic at the Veterans Affairs Palo Alto Health Care System.

Trevor J. Hallam, Ph.D., has served as our Chief Science Officer since December 2010. Prior to joining us, Dr. Hallam was Executive Vice President of Research & Development at Palatin Technologies, Inc., and held several senior management positions in various pharmaceutical companies, including AstraZeneca PLC, SmithKline & French Laboratories, Ltd., Glaxo Group Research Ltd., Roche Research and Rhone-Poulenc Rorer. Dr. Hallam received a BSc (Hons) in Biochemistry from the University of Leeds and a Ph.D. in Biochemistry from Kings College, University of London. He then conducted post-doctoral training at the Physiological Laboratory, University of Cambridge.

Edward Albini has served as our Chief Financial Officer since January 2013. During 2012, Mr. Albini served as a consulting Chief Financial Officer for Carbylan Biosurgery, a company focused on the development and commercialization of advanced biomaterial-based joint therapies. From 2011 to 2016, Mr. Albini also served as Chief Financial Officer and Secretary for Itero Holdings, LLC, a successor entity to Itero Biopharmaceuticals, Inc., a company focused on the development and commercialization of protein therapeutics, at which Mr. Albini served as Chief Financial Officer and Senior Vice President from 2009 to 2011. Previously, Mr. Albini served as Chief Financial Officer of Novacea, Inc. and Lynx Therapeutics, Inc., both biopharmaceutical companies. Mr. Albini received a B.S.C. in Accounting from Santa Clara University and an M.B.A. from the Walter A. Haas School of Business at the University of California, Berkeley. Mr. Albini is also a certified public accountant (inactive status) in California.

Shabbir T. Anik, Ph.D., has served as our Chief Technical Operations Officer since March 2016. From August 2011 to December 2015, Dr. Anik served as Senior Vice President of Technical Operations at Onyx Pharmaceuticals, Inc., a pharmaceutical company focused on developing medicines for the treatment of cancer. Previously, Dr. Anik served as President and Chief Executive Officer of Althea Technologies Inc., President of Global Pharmaceutical Development Services and Chief Scientific Officer for Patheon Inc. and in various leadership positions at Neurex Corporation and Syntex Inc. Dr. Anik received a B.S. in Pharmacy from the University of Bombay, a Ph.D. in Pharmaceutical Sciences from the University of Wisconsin, Madison and an M.B.A. from Santa Clara University.

Linda Fitzpatrick has served as our Chief People and Communications Officer since August 2018. From January 2008 to August 2018, Ms. Fitzpatrick served as our VP of Human Resources and Communications in the capacity of Senior Advisor. In addition to her strategic consulting practice, she co-founded Parallax Venture Partners, an early stage health care venture fund in April 2002. From October 1992 to March 2002, Ms. Fitzpatrick served as Vice President of Human Resources, Corporate Communications and Operations for Gilead Sciences, Inc. and from February 1985 to September 1992 she served as Director of Investor Relations and Director of Compensation, Benefits and Systems for Genentech, Inc., in addition to heading the human resources and corporate

communications strategy for a variety of publicly held biotechnology companies. Ms. Fitzpatrick also serves on a variety of non-profit boards, including board chair roles, in the science, education and community development arenas. Ms. Fitzpatrick received a B.A. in Psychology and Sociology from San Francisco State University.

Stephen T. Worsley has served as our Chief Business Officer since September 2018. From October 2017 to September 2018, Mr. Worsley served as Sr. Vice President, Business Development for Indi Molecular, Inc., an emerging life sciences company developing a synthetic class of diagnostic and therapeutic agents. From November 2013 to October 2017, Mr. Worsley served as Vice President of Business Development for Peregrine Pharmaceutical, Inc., now Avid BioServices, Inc, a biopharmaceutical company developing immuno-oncology related antibodies and manufacturing of biopharmaceutical products. Prior to Peregrine, Mr. Worsley held several senior management positions in various pharmaceutical companies, including Centrose Pharmaceutical, Inc., Intrexon Corporation, Raven Biotechnologies, Inc. and Abgenix, Inc. Mr. Worsley also previously served on the Board of Directors of Peregrine Beijing, Ltd. Mr. Worsley received a B.S. in International Economics and Finance from the University of Utah and an M.B.A. in Finance from the University of Washington.

Non-Employee Directors

Michael Dybbs, *Ph.D.*, has served as a member of our board of directors since July 25, 2018. Dr. Dybbs is currently a partner at Samsara BioCapital, where he has worked since March 2017. Prior to joining Samsara, Dr. Dybbs was a partner at New Leaf Venture Partners, where he worked from May 2009 until September 2016. Before joining New Leaf Venture Partners, L.L.C., Dr. Dybbs was a principal at the Boston Consulting Group. Dr. Dybbs currently serves on the boards of directors of several private companies. Dr. Dybbs previously served on the boards of directors of Versartis, Inc. and Dimension Therapeutics, Inc. Dr. Dybbs received an A.B. in biochemical sciences from Harvard College and a Ph.D. in molecular biology from U.C. Berkeley, where he was awarded a Howard Hughes Medical Institute fellowship. We believe that Dr. Dybbs is qualified to serve on our board of directors due to his experience in the life sciences industry and the venture capital industry, and his leadership and management experience.

John G. Freund, M.D., has served as a member of our board of directors since February 2014. Dr. Freund founded Skyline Ventures, a venture capital firm, in September 1997, where he has served as a Managing Director since its founding. Prior to founding Skyline, Dr. Freund served as Managing Director at Chancellor Capital Management, cofounded Intuitive Surgical, Inc., served in various positions at Acuson Corporation, was a general partner at Morgan Stanley Venture Partners and co-founded the Healthcare Group in the Corporate Finance Department of Morgan Stanley. Dr. Freund currently serves on the boards of directors of Proteon Therapeutics, Inc., Collegium Pharmaceutical, Inc., Tetraphase Pharmaceuticals, Inc. and six U.S. registered investment funds managed by affiliates of Capital Group, Inc. Dr. Freund is a member of the Advisory Board for the Harvard Business School Healthcare Initiative. Dr. Freund previously served on the boards of directors of several publicly traded companies, including XenoPort, Inc., where he was Chairman, Concert Pharmaceuticals, Inc., MAP Pharmaceuticals, Inc. and MAKO Surgical Corp. Dr. Freund received an A.B. in History from Harvard College, an M.D. from Harvard Medical School and an M.B.A. from Harvard Business School. We believe that Dr. Freund is qualified to serve on our board of directors because of his training as a physician and his extensive investment, business and board experience with public healthcare and biopharmaceutical companies.

Daniel Janney has served as a member of our board of directors since February 2014. In 1996, Mr. Janney joined Alta Partners, a life sciences venture capital firm, where he is currently a managing director. Prior to joining Alta, Mr. Janney was Vice President of the healthcare and biotechnology investment banking group at Montgomery Securities. Mr. Janney currently serves on the boards of directors of Esperion Therapeutics, Inc., Krystal Biotech and Viveve Medical, Inc., as well as on the boards of directors of several private companies. Mr. Janney is a member of The President’s Council

of the J. David Gladstone Institutes, serves on the Board of Regents of Georgetown University and serves of the Board of Trustees of the California Academy of Sciences. Mr. Janney received a B.A. in History from Georgetown University and an M.B.A. from the Anderson School at the University of California, Los Angeles. We believe that Mr. Janney is qualified to serve on our board of directors because of his experience working with and serving on the boards of directors of various life sciences companies.

V. Bryan Lawlis, Ph.D., has served as a member of our board of directors since January 2004. From 2011 to 2016, Dr. Lawlis served as the President and Chief Executive Officer of Itero Biopharmaceuticals, LLC, a pharmaceutical company focused on protein therapeutics. Previously, he served in various senior management positions at Itero Biopharmaceuticals, Inc., Aradigm Corporation, Covance Biotechnology Services, Inc. and Genentech, Inc. Dr. Lawlis currently serves on the boards of directors at BioMarin Pharmaceutical Inc., Geron, Inc. and Coherus Biosciences, Inc., as well as on the boards of directors of several private companies. Dr. Lawlis is also an advisor for Phoenix Venture Partners, a venture capital firm that invests in material science and manufacturing technology. Dr. Lawlis holds a B.A. in Microbiology from the University of Texas at Austin and a Ph.D. in Biochemistry from Washington State University. We believe that Dr. Lawlis is qualified to serve on our board of directors because of his longtime involvement in the biotechnology industry and extensive service as a director or officer of other life sciences companies.

Joseph M. Lobacki has served as a member of our board of directors since February 2017. Since January 2018, Mr. Lobacki has served as Executive Vice President and Chief Commercial Officer for Verastem Oncology, a biopharmaceutical company focused on the development and commercialization of therapies for the treatment of hematologic malignancies. From November 2016 to December 2017, Mr. Lobacki served as Chief Operating Officer for Crestovo, a clinical-stage biopharmaceutical company focused on microbiome therapies. From 2014 to 2016, Mr. Lobacki served as Chief Commercial Officer at Medivation, Inc., a biopharmaceutical company focused on development of novel therapies for the treatment of serious diseases. From 2012 to 2014, Mr. Lobacki also served as General Manager of Oncology and an independent biotechnology consultant at Idera Pharmaceuticals, Inc., a biopharmaceutical company focused on therapies for cancer and rare diseases. Previously, Mr. Lobacki served as Senior Vice-President and Chief Commercial Officer at Micromet, Inc., Senior Vice-President and General Manager of US Transplant and Oncology at Genzyme Corporation and in various other positions at SangStat Medical Corporation, Cell Pathways, Inc., Rhone-Poulenc Rorer and Lederle Laboratories. Mr. Lobacki previously served on the board of directors of Celator Pharmaceuticals Inc. Mr. Lobacki earned a B.S. in Biology from Boston College and a B.S. in Pharmacy from the Massachusetts College of Pharmacy. We believe that Mr. Lobacki is qualified to serve on our board of directors because of his strong biopharmaceutical managerial and commercial experience, including his expertise with biopharmaceutical research and development, sales and marketing and strategy and operations.

Daniel H. Petree, has served as a member of our board of directors since August 2009. In April 2012, Mr. Petree co-founded Four Oaks Partners Consulting, LLC, which provides transaction advisory services to small and medium-sized life science companies and in 2000, Mr. Petree co-founded P2 Partners, LLC, Four Oaks' predecessor in the same business. Before co-founding P2 Partners, Mr. Petree served as President and Chief Operating Officer of Axys Pharmaceuticals, Inc., Executive Vice President and Chief Financial Officer of Arris Pharmaceuticals, Incorporated and Vice President of Business Development at TSI Corporation and was a corporate and securities lawyer. Mr. Petree previously served on the boards of directors of Lpath, Inc., Biocept, Inc. and Cypress Bioscience, Inc. along with a number of privately held biotechnology companies. Mr. Petree received an A.B. in History and Political Science from Stanford University and a J.D. from the University of Michigan Law School. We believe that Mr. Petree is qualified to serve on our board of directors because of his experience in

the biotechnology industry, including structuring and negotiating pharmaceutical partnering arrangements and strategic transactions.

Michael Ross, Ph.D., has served as a member of our board of directors since October 2006. Since 2002, Dr. Ross has served as a Managing Partner at SV Health Investors LLC, a venture capital firm. Previously, Dr. Ross served in various senior management roles at CyThera, Inc., Carta Proteomics Inc., MetaXen LLC, Arris Pharmaceuticals, Incorporated and Genentech, Inc. Dr. Ross currently serves on the boards of directors of Deciphera Pharmaceuticals, Inc., Ophthotech Corporation, Arsanis, Inc. and Catabasis Pharmaceuticals, Inc., as well on the boards of directors of Adimab Inc. and Ribometrix, Inc., both private companies. Dr. Ross is also on the Board of Overseers of the Thayer School of Engineering at Dartmouth College. Dr. Ross received an A.B. in Chemistry from Dartmouth College and a Ph.D. in Chemistry from the California Institute of Technology and completed post doctorate training in molecular biology at Harvard University. We believe that Dr. Ross is qualified to serve on our board of directors because of his experience in the biopharmaceutical industry, including his expertise in drug discovery and development.

Armen B. Shanafelt, Ph.D., has served as a member of our board of directors since November 2010. Since April 2009, Dr. Shanafelt has served as venture partner, then general partner, of Lilly Ventures, a venture capital firm. Prior to joining Lilly Ventures, Dr. Shanafelt was one of several Chief Science Officers at Eli Lilly and Company, a pharmaceutical research company, specifically responsible for the generation of the early biotherapeutic pipeline which spanned the therapeutic areas of oncology, endocrine and neuroscience. Dr. Shanafelt serves on the boards of directors of Aeglea Biotherapeutics, Inc., Aileron Therapeutics, Inc., Protagonist Therapeutics, Inc. and Surface Oncology, Inc., as well as on the boards of directors of several private companies. Dr. Shanafelt received his B.S. in Chemistry and Physics from Pacific Lutheran University and his Ph.D. in Chemistry from the University of California, Berkeley. He completed his postdoctoral work at DNAX Research Institute. He is a Kauffman Fellow (Class 14). Dr. Shanafelt has informed us that he intends to resign from our board of directors immediately prior to the effectiveness of the registration statement of which this prospectus is a part.

Election of Officers

Our executive officers are appointed by, and serve at the discretion of, our board of directors. There are no family relationships among any of our directors or executive officers.

Board Composition

Our board of directors currently consists of nine members and will consist of eight members upon Dr. Shanafelt's resignation prior to the effectiveness of the registration statement of which this prospectus is a part. Seven of our nine directors are independent within the meaning of the independent director guidelines of the Nasdaq Global Market, or Nasdaq. Pursuant to our current voting agreement and certificate of incorporation, Michael Ross, Daniel Janney, John Freund, Armen B. Shanafelt, Michael Dybbs, Joseph Lobacki, William Newell, Daniel Petree and Bryan Lawlis have been designated to serve as members of our board. Michael Ross was elected by the holders of our Series A redeemable convertible preferred stock. Daniel Janney was elected by the holders of our Series B redeemable convertible preferred stock. John Freund and Armen B. Shanafelt were elected by the holders of our Series C redeemable convertible preferred stock. Michael Dybbs was elected by the holders of our Series E redeemable convertible preferred stock. Joseph Lobacki was elected by the holders of our common stock. William Newell, Daniel Petree and Bryan Lawlis were elected by the holders of our common stock and redeemable convertible preferred stock, voting together as a single class on an as-converted basis.

The voting agreement and the provisions of our current certificate of incorporation that govern the election and designation of our directors will terminate in connection with this offering, after which no contractual obligations will concern the election of our directors. Each of our current directors will continue to serve until the election and qualification of his successor, or until his earlier death, resignation or removal.

Classified Board of Directors

Upon the completion of this offering, our board of directors will be divided into three staggered classes of directors. At each annual meeting of stockholders, a class of directors will be subject to re-election for a three-year term. As a result, only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Our directors will be divided among the three classes as follows:

- the Class I directors will be Dr. Dybbs, Dr. Freund and Dr. Ross and their terms will expire at the first annual meeting of stockholders held following the completion of the offering;
- the Class II directors will be Mr. Janney, Dr. Lawlis and Mr. Newell and their terms will expire at the second annual meeting of stockholders held following the completion of the offering; and
- the Class III directors will be Mr. Lobacki and Mr. Petree and their terms will expire at the third annual meeting of stockholders held following the completion of the offering.

Each director's term continues until the election and qualification of his or her successor, or his or her earlier death, resignation or removal. Our restated certificate of incorporation and restated bylaws that will be in effect upon the completion of this offering authorize only our board of directors to fill vacancies on our board of directors. Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This classification of our board of directors may have the effect of delaying or preventing changes in control of our company. See the section entitled "Description of Capital Stock—Anti-Takeover Provisions—Restated Certificate of Incorporation and Restated Bylaw Provisions."

Director Independence

In connection with this offering, we have applied to list our common stock on Nasdaq. Under the rules of Nasdaq, independent directors must comprise a majority of a listed company's board of directors within a specified period following the completion of this offering. In addition, the rules of Nasdaq require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and governance committees be independent. Under the rules of Nasdaq, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (i) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or (ii) be an affiliated person of the listed company or any of its subsidiaries. We intend to satisfy the audit committee independence requirements of Rule 10A-3 as of the completion of this offering. Additionally, compensation committee members must not have a relationship with us that is material to the director's ability to be independent from management in connection with the duties of a compensation committee member.

Our board of directors has undertaken a review of the independence of each director and considered whether each director has a material relationship with us that could compromise his ability to exercise

independent judgment in carrying out his responsibilities. As a result of this review, our board of directors determined that all of our directors, except for Messrs. Newell and Petree, are "independent directors" as defined under the applicable rules and regulations of the Securities and Exchange Commission, or SEC, and the listing requirements and rules of Nasdaq. In making these determinations, our board of directors reviewed and discussed information provided by the directors and us with regard to each director's business and personal activities and relationships as the may relate to us and our management, including the beneficial ownership of our capital stock by each non-employee director and then transactions involving them described in the section entitled "Certain Relationships and Related Party Transactions."

Committees of the Board of Directors

Our board of directors has an audit committee, a compensation committee, a nominating and governance committee and a science and technology committee, each of which will have the composition and responsibilities described below as of the completion of this offering. Each of the below committees has a written charter approved by our board of directors. Upon completion of this offering, copies of each charter will be posted on the investor relations section of our website. Members serve on these committees will serve until their resignation or until otherwise determined by our board of directors.

Audit Committee

Our audit committee is comprised of Dr. Freund, Dr. Lawlis and Mr. Lobacki, with Dr. Lawlis as the chairman of our audit committee. The composition of our audit committee meets the requirements for independence under the current Nasdaq and SEC rules and regulations. Each member of our audit committee is financially literate. In addition, our board of directors has determined that Dr. Lawlis is an "audit committee financial expert" as defined in Item 407(d)(5)(ii) of Regulation S-K promulgated under the Securities Act of 1933, as amended. This designation does not impose on him any duties, obligations or liabilities that are greater than are generally imposed on members of our audit committee and our board of directors. Our audit committee is directly responsible for, among other things:

- selecting and hiring our independent registered public accounting firm;
- the qualifications, independence and performance of our independent auditors;
- the preparation of the audit committee report to be included in our annual proxy statement;
- our compliance with legal and regulatory requirements;
- our accounting and financial reporting processes, including our financial statement audits and the integrity of our financial statements; and
- reviewing and approving related-person transactions.

Compensation Committee

Our compensation committee is comprised of Mr. Janney, Mr. Lobacki and Dr. Ross, with Mr. Lobacki as the chairman of our compensation committee. Each member of our compensation committee is a non-employee director, as defined by Rule 16b-3 promulgated under the Exchange Act and meets the requirements for independence under the current Nasdaq listing standards and SEC rules and regulations. Our compensation committee is responsible for, among other things:

- evaluating, recommending, approving and reviewing executive officer compensation arrangements, plans, policies and programs;
- evaluating and recommending non-employee director compensation arrangements for determination by our board of directors;
- administering our cash-based and equity-based compensation plans; and
- overseeing our compliance with regulatory requirements associated with the compensation of directors, officers and employees.

Nominating and Governance Committee

Our nominating and governance committee is comprised of Mr. Janney and Dr. Lawlis, with Mr. Janney as the chairman of our nominating and governance committee. Each member of our nominating and governance committee meets the requirements for independence under the current Nasdaq listing standards. Our nominating and governance committee is responsible for, among other things:

- identifying, considering and recommending candidates for membership on our board of directors;
- overseeing the process of evaluating the performance of our board of directors; and
- advising our board of directors on other corporate governance matters.

Science and Technology Committee

Our science and technology committee is comprised of Dr. Dybbs and Dr. Ross, with Dr. Dybbs as the chairman of our science and technology committee. Our science and technology committee is responsible for, among other things:

- reviewing our overall scientific, research and development and platform strategy;
- overseeing our research and development and platform programs;
- reviewing external scientific research, discoveries and commercial developments, as appropriate; and
- evaluating our overall intellectual property strategies.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has at any time been one of our officers or employees, and none of our executive officers has served as a member of the board of directors, or as a member of the compensation or similar committee, of any entity that has one or more executive officers who served on our board of directors or compensation committee during the year ended December 31, 2017. Prior to establishing the compensation committee, our full board of directors made decisions relating to the compensation of our officers.

Scientific and Clinical Advisory Boards

We have established a scientific advisory board and a clinical advisory board composed of leading academic and industry scientists. We seek advice and input from these scientists on an ad hoc basis, individually or as a group, to provide scientific and clinical feedback and advice related to our research and development platform and programs. The members of our advisory boards consist of experts across a range of key disciplines relevant to our programs. Our advisors are not our employees or directors and have no decision-making authority over our activities. Our advisors may have commitments to, or consulting or advisory contracts with, other entities that may limit their availability to us. In addition, our advisors may have arrangements with other companies to assist those companies in developing products or technologies that may compete with ours. All of our advisors are affiliated with other entities and devote only a small portion of their time to us. Our advisors are retained under consulting agreements and receive cash compensation based upon consulting services rendered. In addition, in the past we have granted stock options to purchase common stock to certain advisory members for their service.

Code of Business Conduct and Ethics

Prior to the completion of this offering, our board of directors will adopt a code of business conduct and ethics that applies to all of our employees, officers and directors, including our Chief Executive

Officer, Chief Financial Officer and other executive and senior officers. The full text of our code of business conduct and ethics will be posted on the investor relations section of our website. The reference to our website address in this prospectus does not include or incorporate by reference the information on our website into this prospectus. We intend to disclose future amendments to certain provisions of our code of business conduct and ethics, or waivers of these provisions, on our website or in public filings to the extent required by the applicable rules.

Non-Employee Director Compensation

The following table presents the total compensation earned by each of our non-employee directors in the year ended December 31, 2017. Our Chief Executive Officer, Mr. Newell, receives no compensation for his service as a director. Other than as described below, none of our non-employee directors received any fees or reimbursement of any expenses (other than customary expenses in connection with the attendance of meetings of our board of directors) or any equity or non-equity awards in the year ended December 31, 2017.

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)(1)(4)	All Other Compensation ($)	Total ($)
John G. Freund, M.D.	–	–	–	–
Dan Janney	–	–	–	–
Bryan Lawlis, Ph.D.	–	–	30,000(2)	30,000
Joseph M. Lobacki	–	115,565	25,000(2)	140,565
Daniel H. Petree	–	–	188,571(2)(3)	188,571
Michael Ross, Ph.D.	–	–	–	–
Armen B. Shanafelt, Ph.D.	–	–	–	–

(1) The amounts reported in this column represent the aggregate grant date fair value of the awards granted under our 2004 Stock Plan, or 2004 Plan, to our directors during the year ended December 31, 2017 as computed in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant date fair value of the awards reported in the Option Awards column are set forth in Note 11 to our financial statements included elsewhere in this prospectus. Note that the amounts reported in this column reflect the aggregate accounting cost for these awards, and do not necessarily correspond to the actual economic value that may be received by the director from the awards.

(2) In 2017, Dr. Lawlis and Messrs. Lobacki and Petree received $30,000, $25,000 and $60,000, respectively, pursuant to their respective consulting agreements with us. We expect to terminate the consulting agreements with each of Dr. Lawlis and Messrs. Lobacki and Petree prior to the completion of this offering.

(3) In 2017, Mr. Petree received approximately $128,571 pursuant to a letter agreement between us and Four Oaks Partners Consulting LLC, or Four Oaks, relating to consulting services provided by Four Oaks. Mr. Petree is a member and managing director of Four Oaks. For additional information regarding the letter agreement, see the section entitled “Certain Relationships and Related Party Transactions —Letter Agreement with Four Oaks.”

(4) The following table sets forth the aggregate number of shares of our common stock subject to outstanding options held by our non-employee directors as of December 31, 2017:

Director Name	Number of Shares Underlying Options Held as of December 31, 2017(1)
John G. Freund, M.D.	–
Dan Janney	–
Bryan Lawlis, Ph.D.	19,198(2)
Joseph M. Lobacki	16,345(3)
Daniel H. Petree	26,148(4)
Michael Ross, Ph.D.	–
Armen B. Shanafelt, Ph.D.	–

(1) All of the outstanding equity awards were granted under our 2004 Plan. In the event of a merger or a change in control (as defined in the 2004 Plan), each outstanding option will be assumed or an equivalent option substituted by the successor corporation or a parent or subsidiary of the successor corporation. In the event that the successor corporation in a merger or change in control refuses to assume or substitute for the option, then the optionee will fully vest in and have the right to exercise the option as to all of the optioned stock, including shares as to which it would not otherwise be vested or exercisable.

(2) This amount reflects (i) options to purchase 15,929 shares, all of which are fully vested and (ii) options to purchase 3,269 shares, 1/48 th of which vest monthly following the September 15, 2015 vesting commencement date.

(3) This amount reflects options to purchase 16,345 shares, 1/24 th of which vest monthly following the February 6, 2017 vesting commencement date.

(4) This amount reflects (i) options to purchase 22,568 shares, all of which are fully vested, (ii) options to purchase 2,124 shares, 1/48 th of which vest monthly following the February 27, 2014 vesting commencement date and (iii) options to purchase 1,456 shares, 1/48th of which vest monthly following the September 15, 2015 vesting commencement date.

Prior to this offering, we did not have a formal policy to provide any cash or equity compensation to our non-employee directors for their service on our board of directors or committees of our board of directors.

In September 2018, our board of directors approved compensation for our non-employee directors, to be effective in connection with the consummation of this offering. Beginning after this offering, our non-employee directors will receive annual cash compensation of $35,000 for service on the board, and additional cash compensation for the chairperson and committee members as set forth below. All cash payments will be made quarterly in arrears, and pro-rated for any partial quarters of service.

- Board Chairperson: $35,000
- Audit Committee Chair: $15,000
- Audit Committee Member (Non-Chair): $7,500
- Compensation Committee Chair: $10,000
- Compensation Committee Member (Non-Chair): $5,000
- Nominating and Corporate Governance Committee Chair: $10,000
- Nominating and Corporate Governance Committee Member (Non-Chair): $5,000
- Science and Technology Committee Chair: $10,000
- Science and Technology Committee Member (Non-Chair): $5,000

In addition, each non-employee director who is elected or appointed to our board of directors after completion of this offering will automatically be granted an option to purchase 17,355 shares of our common stock upon the director's initial appointment to our board of directors, referred to as the Initial Grant. The Initial Grant will vest in 36 equal installments on each monthly anniversary of the date of grant, such that the Initial Grant will become fully vested and exercisable on the three-year anniversary of the date of grant, subject to the director's continued service on each applicable vesting date.

Each non-employee director who is serving on our board of directors immediately prior to, and will continue to service on the Board following, our annual meeting of stockholders, will be granted an option to purchase 8,677 shares of our common stock on the date of such annual meeting of stockholders, referred to as the Annual Grant. Each Annual Grant will vest in 12 substantially equal installments on each monthly anniversary of the date of grant, such that the Annual Grant will become fully vested and exercisable on the one-year anniversary of the date of grant, or if earlier, the next annual meeting of the Company's stockholders, subject to the director's continued service on each applicable vesting date.

In connection with this offering, our board of directors approved the grant of an option to purchase 26,033 shares of our common stock to automatically be made to each of our non-employee directors upon the pricing of this offering. Each option will have an exercise price per share equal to the per share price to the public set forth on the cover to this prospectus, and will vest in 36 equal installments on each monthly anniversary of the grant date, subject to the director's continued service on each applicable vesting date. The options will be subject to the terms and conditions of the 2018 Equity Incentive Plan.

EXECUTIVE COMPENSATION

The following tables and accompanying narrative disclosure set forth information about the compensation earned by our named executive officers during the year ended December 31, 2017. Our named executive officers, who are our principal executive officer and the two most highly-compensated executive officers (other than our principal executive officer) serving as executive officers as of December 31, 2017, were:

- William J. Newell, Chief Executive Officer and Director;
- Arturo Molina, M.D., M.S., FACP, Chief Medical Officer; and
- Trevor Hallam, Ph.D., Chief Science Officer.

Summary Compensation Table

The following table presents summary information regarding the total compensation for services rendered in all capacities that was awarded to and earned by our named executive officers during the year ended December 31, 2017.

Name and Principal Position	Salary($)	Non-equity Incentive Plan Compensation ($)(1)	All Other Compensation($)	Total($)
William J. Newell *Chief Executive Officer*	467,620	199,000	35,903(2)	702,523
Arturo Molina *Chief Medical Officer*	427,450	145,300	–	572,750
Trevor Hallam *Chief Science Officer*	393,975	134,000	149,951(2)(3)	677,926

(1) For additional information regarding the non-equity incentive plan compensation, see "—Non-equity Incentive Plan Awards."

(2) The amount reported in this column for Mr. Newell and $17,951 of the amount reported in this column for Dr. Hallam represent the aggregate grant-date fair value of the awards granted under our 2017 Call Option Plan to our named executive officers during the year ended December 31, 2017 as computed in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant date fair value of the awards reported in the All Other Compensation column are set forth in Note 11 to our financial statements included elsewhere in this prospectus. Note that the amounts reported in this column reflect the aggregate accounting cost for these awards, and do not necessarily correspond to the actual economic value that may be received by the named executive officers from the awards. For additional information regarding all other compensation, see the section entitled "—2017 Call Option Equity Awards."

(3) The amount includes $132,000 for travel and rental housing expenses paid to Dr. Hallam, whose residence is in Pennsylvania, in conjunction with his regular duties in our California facilities.

Non-equity Incentive Plan Awards

Annual bonuses for our executive officers are based on the achievement of corporate performance objectives. For the 2017 bonuses, these objectives included the Series E redeemable convertible preferred financing and collaboration with Merck Sharp & Dohme Corp, a subsidiary of Merck & Co., Inc., Kenilworth, NJ. In July 2018, based on the achievement of these corporate performance objectives, our board of directors determined to award bonuses equal to 85% of each executive officer's target bonus. For 2017, each of Mr. Newell, Drs. Molina and Hallam were awarded the bonuses reflected in the table above, which represented 85% of each individual's 2017 target bonus of $233,810, $170,980 and $157,590, respectively.

2017 Call Option Equity Awards

In February 2017, our board of directors granted Mr. Newell and Dr. Hallam options to purchase 150,000 and 75,000 shares of common stock, respectively, of SutroVax, Inc., or SutroVax, a company in which we own a minority interest, with an exercise price of $0.76 per share. The options vest as to 25% annually over a period of four years as measured from the date of grant and each 25% tranche that vests in a given year must be exercised within the fourth calendar quarter in the year in which such tranche vests. In 2017, Mr. Newell and Dr. Hallam exercised their vested options in full for a total of 37,500 shares and 18,750 shares in SutroVax, respectively. For additional information regarding the 2017 Call Option Plan, see the section entitled "—Equity Compensation Plans and Other Benefit Plans—2017 Call Option Plan."

Outstanding Equity Awards at 2017 Fiscal Year-End Table

	Option Awards					
Name	Grant Date(1)	Vesting Commencement Date	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price ($)	Option Expiration Date
William J. Newell	9/28/2015(2)	9/15/2015	59,065	–	11.98	9/27/2025
	9/28/2015(3)	9/15/2015	13,774	–	11.98	9/27/2025
Arturo Molina	2/24/2016(4)	2/22/2016	98,071	–	14.16	2/23/2026
Trevor Hallam	2/8/2011(4)	12/1/2010	33,116	–	4.36	2/7/2021
	9/20/2012(2)	3/28/2012	19,405	–	4.36	9/19/2022
	2/14/2013(2)	2/14/2013	6,343	–	5.81	2/13/2023
	2/27/2014(2)	2/27/2014	24,783	–	5.81	2/26/2024
	9/28/2015(3)	9/15/2015	15,426	–	11.98	9/27/2025
	9/28/2015(2)	9/15/2015	17,911	–	11.98	9/27/2025

(1) All of the outstanding equity awards were granted under our 2004 Stock Plan, or 2004 Plan. In the event of a merger or a change in control (as defined in the 2004 Plan), each outstanding option shall be assumed or an equivalent option substituted by the successor corporation or a parent or subsidiary of the successor corporation. In the event that the successor corporation in a merger or change in control refuses to assume or substitute for the option, then the optionee shall fully vest in and have the right to exercise the option as to all of the optioned stock, including shares as to which it would not otherwise be vested or exercisable.

(2) 1/48th of the option vests on each monthly anniversary of the vesting commencement date, subject to the executive's continued service.

(3) 100% of the shares subject to the option are fully vested.

(4) 1/4th of the option vested on the one year anniversary of the vesting commencement date and an additional 1/48 th vests monthly thereafter, subject to the executive's continued service.

Employment Agreements

We have entered into employment agreements with certain senior management personnel, including our named executive officers. Each of these agreements provides for at-will employment and includes each officer's base salary, a discretionary annual incentive bonus opportunity that may be based on individual and company performance and standard employee benefit plan participation. These agreements also provide for severance benefits upon termination of employment or a change in control of our company.

Mr. Newell's Employment Offer Letter

Mr. Newell is party to an offer letter with us dated December 29, 2008 pursuant to which he serves as our Chief Executive Officer. The terms and conditions of his offer letter provide for an annual base

salary, and eligibility for an annual bonus, health insurance and other benefits, all subject to adjustment from time to time. The offer letter also provides for the grant of an option to purchase 39,351 shares of our common stock, with an exercise price equal to the fair market value of our common stock on the date of grant, which has been granted to Mr. Newell. Mr. Newell is an at-will employee.

On January 28, 2009, we entered into a Management Continuity Agreement with Mr. Newell, subsequently amended on September 27, 2016, which entitles Mr. Newell to certain severance benefits.

Upon a Change of Control (as defined in the Management Continuity Agreement) and subject to Mr. Newell's execution of a release of claims in a form satisfactory to us, he will be entitled to (i) 18 months of his then current annual base salary and (ii) 100% accelerated vesting on all outstanding Company stock options and restricted stock. Additionally, Mr. Newell will be entitled to 100% paid premiums for his continued health benefits under COBRA for 18 months if we terminate his employment without Cause (as defined in the Management Continuity Agreement) or Mr. Newell voluntarily terminates his employment for Good Reason (as defined in the Management Continuity Agreement) following such Change of Control.

Absent a Change of Control, if we terminate Mr. Newell's employment without Cause (as defined in the Management Continuity Agreement), or Mr. Newell voluntarily terminates his employment for Good Reason (as defined in the Management Continuity Agreement), and subject to his execution of a separation agreement and release of claims in a form satisfactory to us, he will be entitled to (i) 18 months of his annual base salary, (ii) 18 months of accelerated vesting on all outstanding Company stock options and restricted stock and (iii) 100% paid premiums for his continued health benefits under COBRA for 18 months.

Dr. Hallam's Employment Offer Letter

Dr. Hallam is party to an offer letter with us dated November 12, 2010 pursuant to which he serves as our Chief Scientific Officer. The terms and conditions of his offer letter provide for an annual base salary and eligibility for an annual bonus, health insurance and other benefits, all subject to adjustment from time to time. The offer letter also provides for the grant of an option to purchase 46,890 shares of our common stock, with an exercise price equal to the fair market value of our common stock on the date of grant, which has been granted to Dr. Hallam. Dr. Hallam is an at-will employee.

On September 27, 2016, we entered into an amendment with Dr. Hallam to amend certain severance provisions of his offer letter.

Absent a Change of Control (as defined in his amended offer letter), if we terminate Dr. Hallam's employment without Cause or he resigns for Good Reason (each as defined in his amended offer letter), subject to Dr. Hallam's execution of a separation agreement and release of claims in a form satisfactory to us, he will be entitled to (i) 12 months of his then current annual base salary, (ii) 12 months of accelerated vesting on all outstanding stock options and restricted stock and (iii) reimbursement for paid premiums for his continued health benefits under COBRA for 12 months.

If we terminate Dr. Hallam's employment without Cause or he resigns for Good Reason (each as defined in his amended offer letter) and such termination occurs on or within 12 months following a Change of Control (as defined in his amended offer letter), subject to Dr. Hallam's execution of a separation agreement and release of claims in a form satisfactory to us, he will be entitled to (i) 12 months of his then current annual base salary, (ii) 100% accelerated vesting on all outstanding stock options and restricted stock and (iii) reimbursement for paid premiums for his continued health benefits under COBRA for 12 months.

Dr. Molina's Employment Offer Letter

Dr. Molina is a party to an offer letter with us dated December 11, 2015 pursuant to which he serves as our Chief Medical Officer. The terms and conditions of his offer letter provide for an annual base salary and eligibility for an annual bonus, health insurance and other benefits, all subject to adjustment from time to time. The offer letter also provides for the grant of an option to purchase 98,071 shares of our common stock, with an exercise price equal to the fair market value of our common stock on the date of grant, which has been granted to Dr. Molina. Dr. Molina is an at-will employee.

On September 27, 2016, we entered into an amendment with Dr. Molina to amend certain severance provisions of his offer letter.

Absent a Change of Control (as defined in his amended offer letter), if we terminate Dr. Molina's employment without Cause or he resigns for Good Reason, (as defined in his amended offer letter), subject to Dr. Molina's execution of a separation agreement and release of claims in a form satisfactory to us, he will be entitled to (i) 12 months of his then current annual base salary, (ii) 12 months of accelerated vesting on all outstanding stock options and restricted stock and (iii) reimbursement for paid premiums for his continued health benefits under COBRA for 12 months.

If we terminate Dr. Molina's employment without Cause or he resigns for Good Reason (each as defined in his amended offer letter) and such termination occurs on or within 12 months following a Change of Control (as defined in his amended offer letter), subject to Dr. Molina's execution of a separation agreement and release of claims in a form satisfactory to us, he will be entitled to (i) 12 months of his then current annual base salary, (ii) 100% accelerated vesting on all outstanding Company stock options and restricted stock and (iii) reimbursement for paid premiums for his continued health benefits under COBRA for 12 months.

Equity Compensation Plans and Other Benefit Plans

2004 Stock Plan

We maintain the 2004 Plan. The purposes of the 2004 Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to employees, directors and consultants and to promote the success of the Company's business. The material terms of the 2004 Plan are summarized below:

Share Reserve. As of June 30, 2018, we had 2,916,113 shares of our common stock reserved for issuance pursuant to grants under our 2004 Plan of which 1,691,759 shares remained available for grant. As of June 30, 2018, options to purchase 410,083 shares had been exercised and options to purchase 820,875 of shares remained outstanding, with a weighted-average exercise price of $10.41 per share. As of June 30, 2018, 10,157 shares of restricted stock were granted, of which all shares remained outstanding. In July 2018, we increased the number of shares of our common stock reserved for issuance to 4,068,914 shares, of which 2,845,957 shares remained available for grant as of August 31, 2018.

Administration. Our 2004 Plan is administered by our board of directors or a committee appointed by our board of directors. Subject to the terms of the 2004 Plan, our board of directors has the authority to, among other things, select the persons to whom awards will be granted, construe and interpret our 2004 Plan as well as to prescribe, amend and rescind rules and regulations relating to the 2004 Plan and awards granted thereunder.

Eligibility. Pursuant to the 2004 Plan, we may grant incentive stock options only to our employees (including officers and directors who are also employees). We may grant non-statutory stock options and stock purchase rights to our employees (including officers and directors who are also employees), non-employee directors and consultants.

Options. The 2004 Plan provides for the grant of both (i) incentive stock options, which are intended to qualify for tax treatment as set forth under Section 422 of the Internal Revenue Code, as amended, or the Code, and (ii) non-statutory stock options to purchase shares of our common stock, each at a stated exercise price. The exercise price of each incentive stock option must be at least equal to the fair market value of our common stock on the date of grant and the exercise price of each non-statutory option should be at least equal to 85% of the fair market value of our common stock on the date of grant. However, the exercise price of any stock option granted to an individual who owns more than ten percent of the total combined voting power of all classes of our capital stock must be at least equal to 110% of the fair market value of our common stock on the date of grant.

Except in the case of options granted to our officers, directors and consultants, options granted pursuant to our 2004 Plan may become exercisable at a rate of no less than 20% per year over five years from the date grant. The maximum permitted term of options granted under our 2004 Plan is ten years from the date of grant, except that the maximum permitted term of incentive stock options granted to an individual who owns more than ten percent of the total combined voting power of all classes of our capital stock is five years from the date of grant.

Stock Purchase Rights. In addition, the 2004 Plan provides for the issuance of stock purchase rights pursuant to which the holder may purchase restricted shares of our common stock. Among other terms and conditions, the Company may retain an option to repurchase the restricted stock within 90 days of the holder's termination of service. Except with respect to shares purchased by our officers, directors and consultants, the repurchase option may not lapse at a rate less than 20% per year over five years from the date of purchase.

Limited Transferability. Unless otherwise determined by the Administrator, options and stock purchase rights generally may not be sold, pledged, assigned, hypothecated, transferred or disposed of in any manner other than by will, the laws of descent and distribution or qualified domestic relations orders.

Change of Control. In the event of a merger of the Company with or into another corporation, or a change in control (as defined in the 2004 Plan), the 2004 Plan provides that awards may be assumed or an equivalent option may be substituted by the successor corporation (or any parent or subsidiary of such corporation). If any successor corporation fails to assume or substitute such awards, then each award holder will fully vest in his or her stock purchase right and his or her options shall become fully vested and exercisable. Any awards outstanding under the 2004 Plan will terminate if not exercised (as applicable) during a specified time at, or prior to, the consummation of the change in control.

Adjustments. In the event of a dividend or other distribution, recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of any of our securities, or other change in our corporate structure affecting the shares of common stock issued under the 2004 Plan, our Board may adjust the number and class of shares that may be delivered under 2004 Plan and/or the number, class and price of shares covered by each outstanding award, in order to prevent diminution or enlargement of benefits or potential benefits intended to be made available under the 2004 Plan or otherwise as required by applicable law.

Dissolution or Liquidation. In the event of a proposed dissolution or liquidation, the 2004 Plan provides that each outstanding award will terminate if not exercised prior to the dissolution or liquidation event.

Termination. We expect to terminate the 2004 Plan and will cease issuing awards thereunder upon the effective date of our 2018 Equity Incentive Plan (described below), which is the date immediately prior to the date of the effectiveness of the registration statement of which this prospectus

forms a part. Any outstanding options and stock purchase rights granted under the 2004 Plan will remain outstanding, subject to the terms of our 2004 Plan and applicable award agreements, until such awards are exercised (in the case of an option) or vest (in the case of stock purchase right) or until they terminate or expire by their terms.

2017 Call Option Plan

We currently maintain the 2017 Call Option Plan, pursuant to which our board of directors may grant eligible service providers call options to purchase common stock of SutroVax that are held by us. Such options are generally subject to vesting based on the holder's continued service with us. As of June 30, 2018, we had reserved for distribution 450,000 of our shares in SutroVax pursuant to call options under the 2017 Call Option Plan, of which 30,000 remained available for grant. As of June 30, 2018, 105,000 call options had been exercised and 315,000 remained outstanding. The options vest as to 25% annually over a period of four years as measured from the date of grant and each 25% tranche that vests in a given year must be exercised within the fourth calendar quarter in the year in which such tranche vests. If the vested option is not so exercised, then that vested portion is forfeited by the option holder. Upon a change of control (as defined in the 2017 Call Option Plan) of SutroVax any unvested portion of an outstanding option will become immediately vested and exercisable.

2018 Equity Incentive Plan

We have adopted our 2018 Equity Incentive Plan, or the 2018 Plan, which will become effective on the date immediately prior to the date of the effectiveness of the registration of which this prospectus forms a part and will serve as the successor to our 2004 Plan. Our 2018 Plan authorizes the award of stock options, restricted stock awards, or RSAs, stock appreciation rights, or SARs, restricted stock units, or RSUs, performance awards and stock bonus awards. We have initially reserved 2,300,000 shares of our common stock, plus any reserved shares not issued or subject to outstanding grants under the 2004 Plan on the effective date of the 2018 Plan, for issuance pursuant to awards granted under our 2018 Plan. In connection with this offering, our employees, including our named executive officers, and certain of our non-employee directors will be granted restricted stock units with respect to 312,406 shares of our common stock and options to purchase 2,267,266 shares of our common stock, at an exercise price per share equal to the initial public offering price.

The number of shares reserved for issuance under our 2018 Plan will increase automatically on January 1 of each of 2019 through 2028 by the number of shares equal to the lesser of 5% of the aggregate number of outstanding shares of our common stock as of the immediately preceding December 31, or a number as may be determined by our board of directors. In addition, the following shares will again be available for issuance pursuant to awards granted under our 2018 Plan:

- shares subject to options or SARs granted under our 2018 Plan that cease to be subject to the option or SAR for any reason other than exercise of the option or SAR;
- shares subject to awards granted under our 2018 Plan that are subsequently forfeited or repurchased by us at the original issue price;
- shares subject to awards granted under our 2018 Plan that otherwise terminate without such shares being issued;
- shares subject to awards granted under our 2018 Plan that are surrendered, cancelled or exchanged for cash or a different award (or combination thereof);
- shares issuable upon the exercise of options or subject to other awards granted under our 2004 Plan that cease to be subject to such options or other awards, by forfeiture or otherwise, after the termination of the 2004 Plan;
- shares subject to awards granted under our 2004 Plan that are forfeited or repurchased by us at the original price after the termination of the 2004 Plan; and
- shares subject to awards under our 2004 Plan or our 2018 Plan that are used to pay the exercise price of an option or withheld to satisfy the tax withholding obligations related to any award.

Administration. Our 2018 Plan is expected to be administered by our compensation committee, or by our board of directors acting in place of our compensation committee. Subject to the terms and conditions of the 2018 Plan, the compensation committee will have the authority, among other things, to select the persons to whom awards may be granted, construe and interpret our 2018 Plan as well as to determine the terms of such awards and prescribe, amend and rescind the rules and regulations relating to the plan or any award granted thereunder. The 2018 Plan provides that the board or compensation committee may delegate its authority, including the authority to grant awards, to one or more executive officers to the extent permitted by applicable law, provided that awards granted to non-employee directors may only be determined by our board of directors.

Eligibility. Our 2018 Plan provides for the grant of awards to our employees, directors, consultants, independent contractors and advisors. No non-employee director may receive awards under our 2018 Plan that, when combined with cash compensation received for service as non-employee director, exceed $500,000 in a calendar year or $1,000,000 in the calendar year of his or her initial services as a non-employee director with us.

Options. The 2018 Plan provides for the grant of both incentive stock options intended to qualify under Section 422 of the Code, and non-statutory stock options to purchase shares of our common stock at a stated exercise price. Incentive stock options may only be granted to employees, including officers and directors who are also employees. The exercise price of stock options granted under the 2018 Plan must be at least equal to the fair market value of our common stock on the date of grant. Incentive stock options granted to an individual who holds, directly or by attribution, more than ten percent of the total combined voting power of all classes of our capital stock must have an exercise price of at least 110% the fair market value of our common stock on the date of grant. Subject to stock splits, dividends, recapitalizations or similar events, no more than 23,000,000 shares may be issued pursuant to the exercise of incentive stock options granted under the 2018 Plan.

Options may vest based on service or achievement of performance conditions. Our compensation committee may provide for options to be exercised only as they vest or to be immediately exercisable, with any shares issued on exercise being subject to our right of repurchase that lapses as the shares vest. The maximum term of options granted under our 2018 Plan is ten years from the date of grant, except that the maximum permitted term of incentive stock options granted to an individual who holds, directly or by attribution, more than ten percent of the total combined voting power of all classes of our capital stock is five years from the date of grant.

Restricted Stock Awards. An RSA is an offer by us to sell shares of our common stock subject to restrictions, which may lapse based on the satisfaction of service or achievement of performance conditions. The price, if any, of an RSA will be determined by the compensation committee. Holders of RSAs, unlike holders of options, will have the right to vote and any dividends or stock distributions paid pursuant to RSAs will be accrued and paid when the restrictions on such shares lapse. Unless otherwise determined by the compensation committee at the time of award, vesting will cease on the date the participant no longer provides services to us and unvested shares may be forfeited to or repurchased by us.

Stock Appreciation Rights. A SAR provides for a payment, in cash or shares of our common stock (up to a specified maximum of shares, if determined by our compensation committee), to the holder based upon the difference between the fair market value of our common stock on the date of exercise and a predetermined exercise price, multiplied by the number of shares. The exercise price of a SAR must be at least the fair market value of a share of our common stock on the date of grant. SARs may vest based on service or achievement of performance conditions, and may not have a term that is longer than ten years from the date of grant.

Restricted Stock Units. RSUs represent the right to receive shares of our common stock at a specified date in the future, and may be subject to vesting based on service or achievement of

performance conditions. Payment of earned RSUs will be made as soon as practicable on a date determined at the time of grant, and may be settled in cash, shares of our common stock or a combination of both. No RSU may have a term that is longer than ten years from the date of grant.

Performance Awards. Performance awards granted to pursuant to the 2018 Plan may be in the form of a cash bonus, or an award of performance shares or performance units denominated in shares of our common stock that may be settled in cash, property or by issuance of those shares subject to the satisfaction or achievement of specified performance conditions.

Stock Bonus Awards. A stock bonus award provides for payment in the form of cash, shares of our common stock or a combination thereof, based on the fair market value of shares subject such award as determined by our compensation committee. The awards may be granted as consideration for services already rendered, or at the discretion of the compensation committee, may be subject to vesting restrictions based on continued service or performance conditions.

Dividend Equivalents Rights. Dividend equivalent rights may be granted at the discretion of our compensation committee, and represent the right to receive the value of dividends, if any, paid by us in respect of the number of shares of our common stock underlying an award. Dividend equivalent rights will be subject to the same vesting or performance conditions as the underlying award and will be paid only at such time as the underlying award has become fully vested. Dividend equivalent rights may be settled in cash, shares or other property, or a combination of thereof as determined by the compensation committee.

Change of Control. Our 2018 Plan provides that, in the event of a change of control (as defined in the 2018 Plan), outstanding awards under our 2018 Plan shall be subject to the agreement evidencing the change of control, which need not treat all outstanding awards in an identical manner, and may include one or more of the following: (i) the continuation of the outstanding awards; (ii) the assumption of the outstanding awards by the surviving corporation or its parent; (iii) the substitution by the surviving corporation or its parent of new options or equity awards for the outstanding awards; (iv) the full or partial acceleration of exercisability or vesting or lapse of the Company's right to repurchase or other terms of forfeiture and accelerated expiration of the award; or (v) the settlement of the full value of the outstanding awards (whether or not then vested or exercisable) in cash, cash equivalents, or securities of the successor entity with a fair market value equal to the required amount, as determined in accordance with the 2018 Plan, which payments may be deferred until the date or dates the award would have become exercisable or vested. However, in the event a successor or acquiring corporation refuses to assume, substitute or settle outstanding awards, all such awards will become fully vested and exercisable immediately prior to the consummation of the change in control. In addition, upon a change in control the vesting of all awards granted to our non-employee directors will accelerate and such awards will become exercisable (to the extent applicable) and vested in full prior to the consummation of the change of control at such times and on such conditions as the committee determines.

Adjustment. In the event of a change in the number of outstanding shares of our common stock without consideration by reason of a stock dividend, extraordinary dividend or distribution, recapitalization, stock split, reverse stock split, subdivision, combination, consolidation reclassification, spin-off or similar change in our capital structure, appropriate proportional adjustments will be made to the number of shares reserved for issuance under our 2018 Plan; the exercise prices, number and class of shares subject to outstanding options or SARs; the number and class of shares subject to other outstanding awards; and any applicable maximum award limits with respect to incentive stock options.

Clawback; Transferability. All awards will be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by our board of directors or required by law

during the term of service of the award holder, to the extent set forth in such policy or applicable agreement. Except in limited circumstances, awards granted under our 2018 Plan may generally not be transferred in any manner prior to vesting other than by will or by the laws of descent and distribution.

Amendment and Termination. Our board of directors may amend our 2018 Plan at any time, subject to stockholder approval as may be required. Our 2018 Plan will terminate ten years from the date our board of directors adopts the plan, unless it is terminated earlier by our board of directors. No termination or amendment of the 2018 Plan may adversely affect any then-outstanding award without the consent of the affected participant, except as is necessary to comply with applicable laws.

2018 Employee Stock Purchase Plan

We have adopted a 2018 Employee Stock Purchase Plan, or ESPP, which will become effective upon the effectiveness of the registration statement of which this prospectus forms a part in order to enable eligible employees to purchase shares of our common stock with accumulated payroll deductions. Our ESPP is intended to qualify under Section 423 of the Code.

Shares Available. We have initially reserved 230,000 shares of our common stock for sale under our ESPP. The aggregate number of shares reserved for sale under our ESPP will increase automatically on January 1st of each of the first ten calendar years after the effective date by the number of shares equal to the lesser of 1% of the total outstanding shares of our common stock as of the immediately preceding December 31 (rounded to the nearest whole share) or a number of shares as may be determined by our board of directors in any particular year. The aggregate number of shares issued over the term of our ESPP, subject to stock-splits, recapitalizations or similar events, may not exceed 2,300,000 shares of our common stock.

Administration. Our compensation committee will administer our ESPP subject to the terms and conditions of the ESPP. Among other things, the compensation committee will have the authority to determine eligibility for participation in the ESPP, designate separate offerings under the plan, and construe, interpret and apply the terms of the plan.

Eligibility. Employees eligible to participate in any offering pursuant to the ESPP generally include any employee that is employed by us or certain of our designated subsidiaries at the beginning of the offering period. However, employees who are customarily employed for 20 hours or less per week or for five months or less in a calendar year may not be eligible to participate in the ESPP. In addition, any employee who owns (or is deemed to own as a result of attribution) 5% or more of the total combined voting power or value of all classes of our capital stock, or the capital stock of one of our qualifying subsidiaries, or who will own such amount as a result of participation in the ESPP, will not be eligible to participate in the ESPP. The compensation committee may impose additional restrictions on eligibility from time to time.

Offerings. Under our ESPP, eligible employees will be offered the option to purchase shares of our common stock at a discount over a series of offering periods. Each offering period may itself consist of one or more purchase periods. No offering period may be longer than 27 months.

Participation. Participating employees will be able to purchase the offered shares of our common stock by accumulating funds through payroll deductions. Participants may select a rate of payroll deduction between 1% and 15% of their compensation. However, a participant may not purchase more than 2,500 shares during any one purchase period, and may not subscribe for more than $25,000 in fair market value of shares of our common stock (determined as of the date the offering period commences) in any calendar year in which the offering is in effect. Our compensation committee, in its discretion, may set a lower maximum amount of shares which may be purchased.

The purchase price for shares of our common stock purchased under the ESPP will be 85% of the lesser of the fair market value of our common stock on (i) the first trading day of the applicable offering period or (ii) the last trading day of each purchase period in the applicable offering period.

Once an employee becomes a participant in an offering period, the participant will be automatically enrolled in each subsequent offering period at the same contribution level. A participant may reduce his or her contribution in accordance with procedures set forth by the compensation committee and may withdraw from participation in the ESPP at any time prior the end of an offering period, or such other time as may be specified by the compensation committee. Upon withdrawal, the accumulated payroll deductions will be returned to the participant without interest.

Adjustments upon Recapitalization. If the number of outstanding shares of our common stock is changed by stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in our capital structure without consideration, then our compensation committee will proportionately adjust the number and class of common stock that is available under the ESPP, the purchase price and number of shares any participant has elected to purchase as well as the maximum number of shares which may be purchased by participants.

Change of Control. If we experience a change of control transaction, any offering period that commenced prior to the closing of the proposed change of control transaction will be shortened and terminated on a new purchase date. The new purchase date will occur on or prior to the closing of the proposed change of control transaction, and our ESPP will then terminate on the closing of the proposed change of control.

Transferability. A participant may not assign, transfer, pledge or otherwise dispose of payroll deductions credited to his or her account, or any rights with regard to an election to purchase shares pursuant to the ESPP other than by will or the laws of descent or distribution.

Amendment; Termination. The compensation committee may amend, suspend or terminate the ESPP at any time without stockholder consent, except as required by law. Our ESPP will continue until the earlier to occur of (a) termination of the ESPP by the Board, (b) issuance of all of the shares reserved for issuance under the ESPP, or (c) the tenth anniversary of the effective date under the ESPP.

401(k) Plan

We sponsor a retirement savings plan established in April 2008 that is intended to qualify for favorable tax treatment under Section 401(a) of the Code, and contains a cash or deferred feature that is intended to meet the requirements of Section 401(k) of the Code. Participants may make pre-tax and certain after-tax (Roth) salary deferral contributions to the plan from their eligible earnings up to the statutorily prescribed annual limit under the Code. Participants who are 50 years of age or older may contribute additional amounts based on the statutory limits for catch-up contributions. Participant contributions are held in trust as required by law. No minimum benefit is provided under the plan. An employee's interest in his or her salary deferral contributions is 100% vested when contributed. We have the ability to make discretionary contributions under the plan but have not done so to date.

Other Benefits

Our named executive officers are eligible to participate in our employee benefit plans on the same basis as our other employees, including our health and welfare plans.

Limitations on Liability and Indemnification Matters

Our restated certificate of incorporation that will become effective in connection with the completion of this offering contains provisions that limit the liability of our directors for monetary damages to the

fullest extent permitted by the Delaware General Corporation Law, or DGCL. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the DGCL; or
- any transaction from which the director derived an improper personal benefit.

Our restated certificate of incorporation and our restated bylaws that will become effective in connection with the completion of this offering require us to indemnify our directors and officers to the maximum extent not prohibited by the DGCL and allow us to indemnify other employees and agents as set forth in the DGCL.

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors, officers and certain of our key employees, in addition to the indemnification provided for in our restated certificate of incorporation and restated bylaws. These agreements, among other things, require us to indemnify our directors, officers and key employees for certain expenses, including attorneys' fees, judgments, penalties, fines and settlement amounts actually incurred by these individuals in any action or proceeding arising out of their service to us or any of our subsidiaries or any other company or enterprise to which these individuals provide services at our request. Subject to certain limitations, our indemnification agreements also require us to advance expenses incurred by our directors, officers and key employees for the defense of any action for which indemnification is required or permitted.

We believe that these indemnification provisions and agreements are necessary to attract and retain qualified directors, officers and key employees. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our restated certificate of incorporation and restated bylaws may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions.

At present, there is no pending litigation or proceeding involving any of our directors or executive officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or Securities Act, may be permitted to directors, executive officers or persons controlling us, we have been informed that, in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

In addition to the compensation arrangements, including employment, termination of employment and change in control arrangements, with our directors and executive officers, including those discussed in the sections entitled “Management” and “Executive Compensation,” the following is a description of each transaction since January 1, 2015 and each currently proposed transaction in which:

- we have been or are to be a participant;
- the amounts involved exceeded or will exceed $120,000; and
- any of our directors, executive officers or holders of more than 5% of our capital stock, or an affiliate or immediate family member of the foregoing persons, had or will have a direct or indirect material interest.

Other than as described below, there have not been, nor are there any currently proposed, transactions or series of similar transactions to which we have been or will be a party other than compensation arrangements, which are described where required under the section entitled “Executive Compensation.”

Series E Redeemable Convertible Preferred Stock Financing

In May and June 2018, we sold an aggregate of 124,840,500 shares of our Series E redeemable convertible preferred stock at a purchase price of $0.2674 per share for an aggregate purchase price of approximately $33.4 million. In July 2018, we sold an aggregate of 194,465,218 additional shares of our Series E redeemable convertible preferred stock at a purchase price of $0.2674 per share for an aggregate purchase price of approximately $52.0 million. Each share of our Series E redeemable convertible preferred stock will convert into 0.0275 share of our common stock upon the completion of this offering.

The following table summarizes the Series E redeemable convertible preferred stock purchased by members of our board of directors or their affiliates and holders of more than 5% of our outstanding capital stock:

Name of Stockholder	Shares of Series E Redeemable Convertible Preferred Stock	Total Purchase Price ($)
Alta Partners VIII, L.P.(1)	18,698,578	4,999,999.81
Celgene Corporation	18,726,075	5,007,352.67
Citadel Multi-Strategy Equities Master Fund Ltd.	37,397,157	9,999,999.79
Lilly Ventures Fund I, LLC(2)	22,438,294	5,999,999.83
Merck Sharpe & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ	74,794,315	19,999,999.84
Samsara BioCapital, L.P.(3)	33,657,442	9,000,000.00
Skyline Venture Partners V, L.P.(4)	18,698,578	4,999,999.81
Entities affiliated with SV Health Investors(5)	9,349,286	2,499,999.60
Vida Ventures, LLC	33,657,442	9,000,000.00

(1) Alta Partners VIII, L.P., or Alta Partners, holds more than 5% of our outstanding capital stock. Daniel S. Janney, a member of our board of directors is a managing director of Alta Partners Management VIII, LLC, which is the general partner of Alta Partners.

(2) Lilly Ventures Fund I, LLC, or LVFI, holds more than 5% of our outstanding capital stock. LV Management Group, LLC, or LVMG, is the management company for LVFI and may be deemed to indirectly beneficially own the shares held by LVFI. Armen B. Shanafelt, Ph.D., a member of our board of directors, is a member of LVMG’s management committee.

(3) Samsara BioCapital, L.P., or Samsara, holds more than 5% of our outstanding capital stock. Michael Dybbs, a member of our board of directors, is a partner at Samsara.

(4) Skyline Venture Partners V, L.P., or Skyline L.P., holds more than 5% of our outstanding capital stock. John G. Freund, a member of our board of directors, is a managing director of Skyline Venture Management V, LLC, which is the general partner of Skyline L.P.

(5) SV Health Investors and affiliated entities hold more than 5% of our outstanding capital stock. ILSF III, LLC, or ILSF LLC, is the general partner of International Life Sciences Fund III (GP), L.P., which is the general partner of each of International Life Sciences Fund III (LP1), L.P., International Life Sciences Fund III Co-Investment, L.P. and International Life Sciences Fund III Strategic Partners, L.P. SVLSF V, LLC is the general partner of SV Life Sciences Fund V (GP), L.P., which is the general partner of each of SV Life Sciences Fund V, L.P. and SV Life Sciences Fund V Strategic Partners, L.P. Michael Ross, Ph.D., a member of our board of directors, is a member of ILSF LLC's and SVLSF V, LLC's investment committee.

Loan to Executive Officer

In August 2010, we received a promissory note with recourse from Mr. Newell, our Chief Executive Officer, in connection with Mr. Newell's purchase of shares of our common stock. The principal amount of the note was approximately $200,000, which accrued interest at a rate of 0.53%, compounding semiannually. The note could have been prepaid without penalty and was due on August 30, 2019. The outstanding balance of approximately $208,000 as of June 30, 2018, including principal and accrued and unpaid interest on the note, was repaid in full in August 2018.

Transactions with Celgene

In September 2014, we entered into a collaboration and license agreement with Celgene Corporation, or Celgene, a beneficial owner of approximately 10.5% of our stock as of July 31, 2018, or the 2014 Celgene Agreement, to jointly develop up to six prioritized anti-cancer bispecific antibodies and/or antibody-drug conjugates directed primarily to immuno-oncology targets. In August 2017, we amended our agreement with Celgene and entered into the 2017 Celgene Agreement to focus the collaboration on four programs and to change certain material features of the 2014 Celgene Agreement. Pursuant to these agreements, we received aggregate payments from Celgene of $15.0 million, $35.0 million, $22.5 million and $3.2 million during the years ended December 31, 2015, 2016 and 2017 and the six months ended June 30, 2018, respectively. See the section entitled "Business—Collaborations and License Agreements" for more information.

Transactions with Merck

In July 2018, we entered into a collaboration and license agreement, or the 2018 Merck Agreement, with Merck Sharpe & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, or Merck, a beneficial owner of approximately 12.5% of our stock as of July 31, 2018, to jointly develop up to three research programs focusing on cytokine derivatives for cancer and autoimmune disorders. Pursuant to the 2018 Merck Agreement, we received an upfront payment of $60.0 million in August 2018 for the research and development of two target programs, with an option for a third program upon the payment of an additional amount. In addition, Merck purchased $20.0 million in Series E redeemable convertible preferred stock from us in July 2018. See the section entitled "Business—Collaborations and License Agreements" for more information.

In connection with the 2018 Merck Agreement, we also entered into a common stock purchase agreement, or the Merck Purchase Agreement, with Merck. Under the Merck Purchase Agreement, Merck has agreed to purchase from us, concurrently with this offering in a private placement, up to $10.0 million of shares of our common stock at a price per share equal to the initial public offering price, or up to approximately 666,666 shares based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the estimated offering price range set forth on the cover of

this prospectus, subject to a 17.5% ownership cap after giving effect to the concurrent private placement and this offering. The sale of these shares to Merck will not be registered in this offering.

Letter Agreement with Four Oaks

In April 2012, we entered into a letter agreement with Four Oaks Partners Consulting, LLC, or Four Oaks, to provide advisory services related to licensing, collaboration co-development and co-promotion opportunities with several large pharmaceutical companies. Mr. Petree, one of our directors, is a member and managing director of Four Oaks. We made payments of $300,000, $700,000 and $450,000 during the years ended December 31, 2015, 2016 and 2017, respectively, to Four Oaks for advisory services related to the collaboration with Celgene. While the letter agreement was terminated in October 2013, under the terms of the letter agreement, we will make future payments to Four Oaks of amounts equal to 2% of any future payments received from Celgene under the 2017 Celgene Agreement. We have no other payment obligations to Four Oaks under the terms of the letter agreement.

Agreement with Mr. Petree

In June 2018, we entered into a side letter to our consulting agreement with Mr. Petree pursuant to which we agreed to pay Mr. Petree a one-time success fee of $400,000 within 30 days of the execution of a definitive collaboration agreement with a third-party pharmaceutical company. Following the execution of the 2018 Merck Agreement in July 2018, we paid Mr. Petree $400,000. We expect to terminate the consulting agreement and side letter with Mr. Petree prior to the completion of this offering.

Amended and Restated Investors' Rights Agreement

We have entered into a third amended and restated investors' rights agreement, dated May 24, 2018, with certain holders of our redeemable convertible preferred stock, including entities with which certain of our directors are affiliated. These stockholders are entitled to rights with respect to the registration of their shares following this offering under the Securities Act of 1933, as amended. For a description of these registration rights, see the section entitled "Description of Capital Stock—Registration Rights."

Potential Insider Participation

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing shares of common stock in this offering with an aggregate value of up to approximately $30.0 million at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering.

Equity Grants to Executive Officers and Directors

We have granted stock options to our executive officers and certain directors, as more fully described in the sections entitled "Executive Compensation" and "Management—Non-Employee Director Compensation," respectively.

Director and Executive Officer Compensation

Please see the sections entitled "Management—Non-Employee Director Compensation" and "Executive Compensation" for information regarding the compensation of our directors and executive officers.

Employment Agreements

We have entered into employment agreements with our executive officers. For more information regarding these agreements, see the section entitled “Executive Compensation—Employment Agreements.”

Indemnification Agreements

In connection with this offering, we intend to enter into new indemnification agreements with each of our directors and executive officers. The indemnification agreements, our restated certificate of incorporation and our restated bylaws will require us to indemnify our directors to the fullest extent not prohibited by Delaware law. Subject to certain limitations, our restated bylaws also require us to advance expenses incurred by our directors and officers. For more information regarding these agreements, see the section entitled “Executive Compensation—Limitations on Liability and Indemnification Matters” for information on our indemnification arrangements with our directors and executive officers.

Policies and Procedures for Related Party Transactions

In connection with this offering, we have adopted a written related person transactions policy that provides that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of our common stock, and any members of the immediate family of and any entity affiliated with any of the foregoing persons, are not permitted to enter into a material related person transaction with us without the review and approval of our audit committee, or a committee composed solely of independent directors in the event it is inappropriate for our audit committee to review such transaction due to a conflict of interest. The policy provides that any request for us to enter into a transaction with an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of our common stock or with any of their immediate family members or affiliates in which the amount involved exceeds $120,000 will be presented to our audit committee (or the committee composed solely of independent directors, if applicable) for review, consideration and approval. In approving or rejecting any such proposal, we expect that our audit committee (or the committee composed solely of independent directors, if applicable) will consider the relevant facts and circumstances available and deemed relevant to the audit committee (or the committee composed solely of independent directors, if applicable), including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person’s interest in the transaction.

PRINCIPAL STOCKHOLDERS

The following table and accompanying footnotes set forth certain information with respect to the beneficial ownership of our common stock at August 31, 2018, and as adjusted to reflect the shares of common stock to be issued and sold in this offering and the concurrent private placement, for:

- each of our directors;
- each of our named executive officers;
- all of our current directors and executive officers as a group; and
- each person, or group of affiliated persons, who beneficially owned more than 5% of our outstanding shares of common stock.

We have determined beneficial ownership in accordance with the rules of the Securities and Exchange Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. Except as indicated by the footnotes below, we believe, based on information furnished to us, that the persons and entities named in the table below have sole voting and sole investment power with respect to all shares of common stock that they beneficially owned, subject to applicable community property laws.

Beneficial ownership prior to this offering is based on 16,489,964 shares of common stock outstanding as of August 31, 2018, assuming the conversion of all outstanding shares of our redeemable convertible preferred stock into common stock in connection with this offering. Beneficial ownership after this offering is based on 22,156,630 shares of common stock outstanding, assuming (i) the conversion of all outstanding shares of our redeemable convertible preferred stock into common stock as described above, (ii) the issuance of 5,000,000 shares of common stock in this offering and (iii) the issuance of up to approximately 666,666 shares of common stock in the concurrent private placement based on the assumed initial public offering price.

In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding all shares of common stock subject to options held by that person or entity that are currently exercisable or that will become exercisable within 60 days of August 31, 2018. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Sutro Biopharma, Inc., 310 Utah Avenue, Suite 150, South San Francisco, California 94080.

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing shares of common stock in this offering with an aggregate value of up to approximately $30.0 million at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering. The following table does not reflect any potential purchases by these parties.

	Beneficial Ownership Prior to this Offering		Beneficial Ownership After this Offering and the Concurrent Private Placement	
Name of Beneficial Owner	Number	Percent	Number	Percent
Directors and Named Executive Officers:				
William Newell(1)	308,253	1.9%	308,253	1.4%
Arturo Molina, M.D., M.S., FACP(2)	98,070	*	98,070	*
Trevor Hallam, Ph.D.(3)	129,891	*	129,891	*
Michael Dybbs, Ph.D.(4)	—	—	—	—
John G. Freund, M.D.(5)	1,960,053	11.9	1,960,053	8.9
Daniel S. Janney(6)	1,944,901	11.8	1,944,901	8.8
V. Bryan Lawlis, Ph.D.(7)	19,274	*	19,274	*
Joseph Lobacki(8)	13,620	*	13,620	*
Daniel H. Petree(9)	25,814	*	25,814	*
Michael Ross, Ph.D.(10)	1,804,846	11.0	1,804,846	8.2
Armen B. Shanafelt, Ph.D.(11)	1,540,813	9.4	1,540,813	7.0
All executive officers and directors as a group (15 persons)(12)	8,050,646	47.3	8,050,646	35.5
Other 5% Stockholders:				
Alta Partners III, L.P.(6)	1,944,901	11.8	1,944,901	8.8
Celgene Corporation(13)	1,726,197	10.5	1,726,197	7.8
Citadel Multi-Strategy Equities Master Fund Ltd.(14)	1,028,421	6.2	1,028,421	4.7
Lilly Ventures Fund I LLC(11)	1,540,813	9.4	1,540,813	7.0
Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ(15)	2,056,843	12.5	2,723,509	11.9
Samsara BioCapital, L.P.(16)	925,579	5.6	925,579	4.2
Skyline Venture Partners, L.P.(5)	1,960,053	11.9	1,960,053	8.9
Entities affiliated with SV Health Investors(10)	1,804,846	11.0	1,804,846	8.2
Vida Ventures, LLC(17)	925,579	5.6	925,579	4.2

* Represents beneficial ownership of less than one percent.

(1) Represents (i) 188,170 shares of common stock, (ii) 72,838 shares underlying options to purchase common stock that are exercisable within 60 days of August 31, 2018, (iii) 21,154 shares of common stock held by Newell Family Revocable Trust DTD 08/14/2008, or Newell Trust, and (iv) 26,091 shares of common stock held by Taluswood Partners, L.P. Mr. Newell is the trustee of the Newell Trust and the general partner of Taluswood Partners, L.P.

(2) Represents 98,070 shares underlying options to purchase common stock that are exercisable within 60 days of August 31, 2018.

(3) Represents (i) 15,800 shares of common stock and (ii) 114,091 shares underlying options to purchase common stock that are exercisable within 60 days of August 31, 2018.

(4) Dr. Dybbs is a partner of Samsara BioCapital, L.P., or Samsara, but Dr. Dybbs does not hold voting or dispositive power over the shares held of record by Samsara. See note (16) below for more information regarding Samsara.

(5) Represents (i) 1,960,053 shares of common stock held by Skyline Venture Partners V, L.P., or Skyline L.P. John G. Freund, a member of our board of directors, and Yasunori Kaneko are the managing directors of Skyline Venture Management V, LLC, which is the general partner of Skyline L.P. Messrs. Freund and Kaneko may be deemed to share voting and dispositive power over the shares held by Skyline L.P. The address of Skyline L.P. is 525 University Avenue, Suite 1350, Palo Alto, California 94301.

(6) Represents 1,944,901 shares of common stock held by Alta Partners VIII, L.P., or Alta Partners. Daniel S. Janney, a member of our board of directors, Farah Champsi and Guy Nohra are the managing directors of Alta Partners Management VIII, LLC, which is the general partner of Alta Partners. Messrs. Janney, Champsi and Nohra may be deemed to share voting and dispositive power over the shares held by Alta Partners. The address of Alta Partners is One Embarcadero Center, Suite 3700, San Francisco, California 94111.

(7) Represents (i) 2,478 shares of common stock and (ii) 16,796 shares underlying options to purchase common stock that are exercisable within 60 days of August 31, 2018.

(8) Represents 13,620 shares underlying options to purchase common stock that are exercisable within 60 days of August 31, 2018.

(9) Represents 25,814 shares underlying options to purchase common stock that are exercisable within 60 days of August 31, 2018.

(10) Represents (i) 10,723 shares of common stock held by International Life Sciences Fund III Co-Investment, L.P., or ILSF Co-Investment, (ii) 903,739 shares of common stock held by International Life Sciences Fund III (LP1), L.P., or ILSF LP1, (iii) 8,633 shares of common stock held by International Life Sciences Fund III Strategic Partners, L.P., or ILSF Strategic Partners, (iv) 863,503 shares of common stock held by SV Life Sciences Fund V, L.P., or SV Fund V, and (v) 18,248 shares of common stock held by SV Life Sciences Fund V Strategic Partners, L.P., or SV Strategic Partners. ILSF III, LLC, or ILSF LLC, is the general partner of International Life Sciences Fund III (GP), L.P., which is the general partner of each of ILSF Co-Investment, ILSF LP1 and ILSF Strategic Partners. SVLSF V, LLC is the general partner of SV Life Sciences Fund V (GP), L.P., which is the general partner of each of SV Fund V and SV Strategic Partners. Michael Ross, Ph.D., a member of our board of directors, Kate Bingham, James Garvey and Eugene D. Hill III are the members of ILSF LLC's and SVLSF V, LLC's investment committee and may be deemed to share voting and dispositive power over the shares held by each of ILSF Co-Investment, ILSF LP1, ILSF Strategic Partners, SV Fund V and SV Strategic Partners. The address of SV Health Investors is One Boston Place, 201 Washington Street, Suite 3900, Boston, Massachusetts 02108.

(11) Represents 1,540,813 shares of common stock held by Lilly Ventures Fund I, LLC, or LVFI. LV Management Group, LLC, or LVMG, is the management company for LVFI and may be deemed to indirectly beneficially own the shares held by LVFI. LVMG's voting and dispositive decisions with respect to the shares held by LVFI are made by LVMG's management committee, which consists of Armen B. Shanafelt, Ph.D., a member of our board of directors, S. Edward Torres and Steven E. Hall, Ph.D. The address of LVFI is Lilly Ventures, 115 W. Washington Street, South Tower, Suite 1680, Indianapolis, Indiana 46204.

(12) Represents (i) 7,516,377 shares of common stock and (ii) 534,269 shares underlying options to purchase common stock that are exercisable within 60 days of August 31, 2018.

(13) Represents 1,726,197 shares of common stock held by Celgene Corporation. The address of Celgene is 86 Morris Avenue, Summit, New Jersey 07901.

(14) Represents 1,028,421 shares of common stock held by Citadel Multi-Strategy Equities Master Fund Ltd., or Citadel. Citadel Advisors LLC, or Citadel Advisors, acts as the portfolio manager of Citadel. Citadel Advisors Holdings LP, or CAH, is the sole member of Citadel Advisors, and Citadel GP LLC, or CGP, is the general partner of CAH. Kenneth Griffin owns a controlling interest in CGP and may be deemed to share voting and dispositive power over the shares held by Citadel. The address of Citadel is c/o Citadel Advisors, 601 Lexington Avenue, New York, New York 10022.

(15) Represents 2,056,843 shares of common stock held by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth NJ, or Merck. Beneficial ownership following the completion of this offering reflects the issuance of up to approximately 666,666 shares to Merck in a concurrent private placement, based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus. The address of Merck is 2000 Galloping Hill Road, Kenilworth, New Jersey 07033.

(16) Represents 925,579 shares of common stock held by Samsara. Samsara BioCapital GP, LLC, is the general partner of Samsara, of which Srinivas Akkaraju, M.D., Ph.D. is the sole managing member. Dr. Akkaraju may be deemed to have sole voting and dispositive power over the shares held by Samsara. The address of Samsara is 628 Middlefield Road, Palo Alto, California.

(17) Represents 925,579 shares of common stock held by Vida Ventures, LLC, or Vida. VV Manager, LLC, or VV Manager, is the managing member of Vida. Arjun Goyal, Fred Cohen, Arie Belldegrun, Leonard Potter and Stefan Vitorovic are managers of VV Manager, and may be deemed to share voting and dispositive power over the shares held by Vida. The address of Vida is 40 Broad Street, Suite 201, Boston, Massachusetts 02109.

DESCRIPTION OF CAPITAL STOCK

The following description summarizes the most important terms of our capital stock, as they will be in effect following this offering. Because it is only a summary, it does not contain all the information that may be important to you. We expect to adopt a restated certificate of incorporation and restated bylaws that will become effective upon the completion of this offering, and this description summarizes provisions that are expected to be included in these documents. For a complete description, you should refer to our restated certificate of incorporation and restated bylaws, which are included as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of Delaware law.

Upon the completion of this offering, our authorized capital stock will consist of 300,000,000 shares of common stock, $0.001 par value per share, and 10,000,000 shares of undesignated preferred stock, $0.001 par value per share.

Pursuant to the provisions of our current certificate of incorporation all of the outstanding redeemable convertible preferred stock will automatically convert into common stock in connection with the completion of this offering if the public offering is priced within the range reflected on the cover page of this prospectus. Our Series A redeemable convertible preferred stock will convert at a ratio of 1:0.0433, our Series B redeemable convertible preferred stock will convert at a ratio of 1:0.0578, our Series C redeemable convertible preferred stock will convert at a ratio of 1:0.0370, our Series C-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0405, our Series D redeemable convertible stock will convert at a ratio of 1:0.0405, our Series D-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0419 and our Series E redeemable convertible preferred stock will convert at a ratio of 1:0.0275 Assuming the effectiveness of this conversion as of August 31, 2018, there were 16,489,964 shares of our common stock issued, held by approximately 157 stockholders of record, and no shares of our redeemable convertible preferred stock outstanding. Our board of directors is authorized, without stockholder approval, to issue additional shares of our capital stock.

Common Stock

Dividend Rights

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and then only at the times and in the amounts that our board of directors may determine. See the section entitled “Dividend Policy.”

Voting Rights

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our restated certificate of incorporation, which means that holders of a majority of the shares of our common stock will be able to elect all of our directors. Our restated certificate of incorporation will establish a classified board of directors, to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights, and is not subject to conversion, redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any

participating preferred stock outstanding at that time, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights of and the payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Preferred Stock

If the public offering price is within the range indicated on the cover page of this prospectus, immediately prior to the completion of this offering, each outstanding share of redeemable convertible preferred stock will automatically be converted into common stock at the current conversion ratios. Our Series A redeemable convertible preferred stock will convert at a ratio of 1:0.0433, our Series B redeemable convertible preferred stock will convert at a ratio of 1:0.0578, our Series C redeemable convertible preferred stock will convert at a ratio of 1:0.0370, our Series C-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0405, our Series D redeemable convertible stock will convert at a ratio of 1:0.0405, our Series D-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0419 and our Series E redeemable convertible preferred stock will convert at a ratio of 1:0.0275.

Following the completion of this offering, our board of directors will be authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of their qualifications, limitations or restrictions, in each case without further vote or action by our stockholders. Our board of directors will also be able to increase or decrease the number of shares of any series of preferred stock, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and might adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. We have no current plan to issue any shares of preferred stock.

Warrants

As of June 30, 2018, we had outstanding the following warrants to purchase shares of our capital stock:

Type of Capital Stock Underlying Warrant	Total Number of Shares Subject to Warrants	Exercise Price Per Share($)	Issuance Date
Common Stock(1)	1,099	5.81	6/21/2013
Series C Redeemable Convertible Preferred Stock(1)	917,232	0.48	7/13/2010
Series C Redeemable Convertible Preferred Stock(1)	437,276	0.48	9/20/2010
Series C Redeemable Convertible Preferred Stock(1)	437,276	0.48	10/22/2010
Series C Redeemable Convertible Preferred Stock(2)	687,928	0.48	11/18/2011
Series E Redeemable Convertible Preferred Stock(3)	1,409,332	0.32	8/4/2017

(1) The exercise price of these warrants may be paid either in cash or by surrendering the right to receive shares having a value equal to the exercise price. These warrants will expire immediately prior to the completion of this offering if not exercised.

(2) The exercise price of these warrants may be paid either in cash or by surrendering the right to receive shares having a value equal to the exercise price. These warrants will convert into warrants to receive 25,453 shares of our common stock upon the completion of this offering.

(3) In connection with the July 2018 closing of the Series E redeemable convertible preferred stock financing, these warrants were adjusted such that they represented warrants to purchase a total of

1,682,871 shares of Series E redeemable convertible preferred stock at an exercise price of $0.2674 per share. The exercise price of these warrants may be paid either in cash or by surrendering the right to receive shares having a value equal to the exercise price. These warrants will convert into warrants to receive 46,278 shares of our common stock upon the completion of this offering.

Stock Options

As of June 30, 2018, we had outstanding options to purchase an aggregate 820,875 shares of our common stock, with a weighted-average exercise price of $10.41.

Registration Rights

Pursuant to the terms of our amended and restated investors' rights agreement, immediately following this offering, the holders of 16,023,174 shares of our common stock will be entitled to rights with respect to the registration of these shares under the Securities Act of 1933, as amended, or the Securities Act, as described below. We refer to these shares collectively as registrable securities.

Demand Registration Rights

Beginning 180 days after the completion of this offering, the holders of at least a majority of the then-outstanding registrable securities may make a written request to us for the registration under the Securities Act of registrable securities representing at least a majority of the then outstanding registrable securities held by such holders. Promptly following such request, we are obligated to provide written notice of such request to all stockholders to file a registration statement under the Securities Act covering all registrable securities that the initiating holders requested to be registered and any additional registrable securities requested to be included in such registration by any other holders. We are only required to file two registration statements that are declared effective upon exercise of these demand registration rights. We may postpone taking action with respect to such filing not more than once during any 12-month period for a total period of not more than 90 days, if within 30 days after receiving a request for registration, we furnish to the holders requesting such registration a certificate signed by our Chief Executive Officer stating that, in the good faith judgment of our board of directors, it would be seriously detrimental to us and our stockholders for such registration statement to be effected at such time.

Form S-3 Registration Rights

Any holder of then-outstanding registrable securities can request that we register all or part of their shares on Form S-3 if we are eligible to file a registration statement on Form S-3 and if the aggregate price to the public of the shares offered is at least $3.0 million. The stockholders may only require us to effect two registration statements on Form S-3 in a 12-month period. We may postpone taking action with respect to such filing twice during any 12-month period for a total cumulative period of not more than 120 days if our board of directors determines in its good faith judgment that the filing would be seriously detrimental to us and our stockholders.

Piggyback Registration Rights

If we register any of our securities for public sale, holders of then-outstanding registrable securities or their permitted transferees will have the right to include their registrable securities in the registration statement. However, this right does not apply to a registration relating to this offering, a Form S-3 registration as described above, employee benefit plans or a registration relating to a corporate reorganization. The underwriters of any underwritten offering will have the right to limit the number of shares registered by these holders if they determine that marketing factors require limitation, in which case the number of shares to be registered will be apportioned pro rata among these holders, according to the total number of registrable securities originally requested by such holders to be

included in the registration statement. However, the number of shares to be registered by these holders cannot be reduced below 40% of the registrable securities such holders requested to be included in such offering.

Expenses of Registration Rights

We generally will pay all expenses, other than underwriting discounts and commissions.

Expiration of Registration Rights

The registration rights described above will expire, with respect to any particular holder of these rights, on the earlier of a deemed liquidation event, as defined in our restated certificate of incorporation, and such time after this offering as the registrable securities held by such holder may be sold within any ninety day period without restriction pursuant to Rule 144 promulgated under the Securities Act.

Anti-Takeover Provisions

The provisions of Delaware General Corporation Law, or DGCL, our restated certificate of incorporation and our restated bylaws, as we expect they will be in effect upon the completion of this offering, could have the effect of delaying, deferring or discouraging another person from acquiring control of our company. These provisions, which are summarized below, may have the effect of discouraging takeover bids. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Delaware Law

We are subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years following the date on which the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (i) shares owned by persons who are directors and also officers and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66.67% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a business combination includes a merger, asset or stock sale, or other transaction or series of transactions together resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of a

corporation's outstanding voting stock. We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may also discourage attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Restated Certificate of Incorporation and Restated Bylaw Provisions

Our restated certificate of incorporation and our restated bylaws, as we expect they will be in effect upon the completion of this offering, include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of our company, including the following:

- *Board of Directors Vacancies.* Our restated certificate of incorporation and restated bylaws will authorize only our board of directors to fill vacant directorships, including newly created seats. In addition, the number of directors constituting our board of directors is permitted to be set only by a resolution adopted by a majority vote of our entire board of directors. These provisions would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our board of directors but promotes continuity of management.
- *Classified Board.* Our restated certificate of incorporation and restated bylaws will provide that our board of directors is classified into three classes of directors, each with staggered three-year terms. A third party may be discouraged from making a tender offer or otherwise attempting to obtain control of us as it is more difficult and time consuming for stockholders to replace a majority of the directors on a classified board of directors. See the section entitled "Management—Board Composition."
- *Stockholder Action; Special Meetings of Stockholders.* Our restated certificate of incorporation will provide that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. As a result, a holder controlling a majority of our capital stock would not be able to amend our restated bylaws or remove directors without holding a meeting of our stockholders called in accordance with our restated bylaws. Further, our restated bylaws will provide that special meetings of our stockholders may be called only by a majority of our board of directors, the chairman of our board of directors, our Chief Executive Officer or our President, thus prohibiting a stockholder from calling a special meeting. These provisions might delay the ability of our stockholders to force consideration of a proposal or for stockholders controlling a majority of our capital stock to take any action, including the removal of directors.
- *Advance Notice Requirements for Stockholder Proposals and Director Nominations.* Our restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders or to nominate candidates for election as directors at our annual meeting of stockholders. Our restated bylaws also will specify certain requirements regarding the form and content of a stockholder's notice. These provisions might preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders if the proper procedures are not followed. We expect that these provisions might also discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company.
- *No Cumulative Voting.* The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless a corporation's certificate of incorporation provides otherwise. Our restated certificate of incorporation and restated bylaws will not provide for cumulative voting.

- *Directors Removed Only for Cause.* Our restated certificate of incorporation will provide that stockholders may remove directors only for cause and only by the affirmative vote of the holders of at least two-thirds of our outstanding common stock.
- *Amendment of Charter Provisions.* Any amendment of the above expected provisions in our restated certificate of incorporation would require approval by holders of at least two-thirds of our outstanding common stock.
- *Issuance of Undesignated Preferred Stock.* Our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors. The existence of authorized but unissued shares of preferred stock would enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by merger, tender offer, proxy contest or other means.
- *Choice of Forum.* Our restated certificate of incorporation will provide that, to the fullest extent permitted by law, the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the DGCL, our restated certificate of incorporation or our restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. The provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act. In addition, our amended and restated bylaws will also provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable.

Transfer Agent and Registrar

Upon the completion of this offering, the transfer agent and registrar for our common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 15th Avenue, Brooklyn, New York 11219 and its telephone number is (800) 937-5449.

The Nasdaq Global Market Listing

We have applied to list our common stock on the Nasdaq Global Market under the symbol "STRO."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock, and we cannot predict the effect, if any, that market sales of shares of our common stock or the availability of shares of our common stock for sale will have on the market price of our common stock prevailing from time to time. Nevertheless, sales of substantial amounts of our common stock, including shares issued upon exercise of outstanding options and warrants, in the public market following this offering could adversely affect market prices prevailing from time to time and could impair our ability to raise capital through the sale of our equity securities.

Based on shares outstanding as of June 30, 2018 and giving effect to our July 2018 financing, upon the completion of this offering and the concurrent private placement, we will have a total of 22,153,791 shares of our common stock outstanding, assuming (i) the conversion of all outstanding shares of our redeemable convertible preferred stock into an aggregate of 16,007,748 shares of our common stock, (ii) the issuance of 5,000,000 shares of common stock in this offering and (iii) the issuance of up to approximately 666,666 shares of common stock in the concurrent private placement based on the assumed initial public offering price. Of these outstanding shares, all of the shares of common stock sold in this offering and the concurrent private placement will be freely tradable, except that, the shares purchased by Merck in the concurrent private placement, any shares purchased in this offering by our affiliates, as that term is defined in Rule 144 under the Securities Act of 1933, as amended, or the Securities Act, and shares purchased in this offering by participants in our directed share program, who have signed lock-up agreements, can only be sold in compliance with the Rule 144 limitations described below or in compliance with the lock-up agreements.

The remaining outstanding shares of our common stock will be deemed “restricted securities” as defined in Rule 144. Restricted securities may be sold in the public market only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rule 144 or Rule 701 promulgated under the Securities Act, which rules are summarized below. In addition, substantially all of our security holders have entered into market standoff agreements with us or lock-up agreements with the underwriters under which they have agreed, subject to specific exceptions, not to sell any of our stock for at least 180 days following the date of this prospectus, as described below. As a result of these agreements and the provisions of our amended and restated investors’ rights agreement described above under the section entitled “Description of Capital Stock—Registration Rights,” subject to the provisions of Rule 144 or Rule 701, shares will be available for sale in the public market as follows:

- beginning on the date of this prospectus, all of the shares sold in this offering and the concurrent private placement will be immediately available for sale in the public market; and
- beginning 181 days after the date of this prospectus, 16,487,125 additional shares will become eligible for sale in the public market, of which 8,032,407 shares will be held by affiliates and subject to the volume and other restrictions of Rule 144, as described below.

Lock-Up/Market Standoff Agreements

All of our directors and officers and substantially all of our security holders are subject to lock-up agreements or market standoff provisions that prohibit them from offering for sale, selling, contracting to sell, granting any option for the sale of, transferring or otherwise disposing of any shares of our common stock, options or warrants to acquire shares of our common stock or any security or instrument related to our common stock, or entering into any swap, hedge or other arrangement that transfers any of the economic consequences of ownership of our common stock, for a period of 180 days following the date of this prospectus without the prior written consent of Cowen and Company, LLC and Piper Jaffray & Co., subject to certain exceptions. See the section entitled “Underwriting.”

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the three months preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell those shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then that person would be entitled to sell those shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up and market standoff agreements described above, within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately 221,538 shares immediately after this offering and the concurrent private placement; or
- the average reported weekly trading volume of our common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to that sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

Rule 701 generally allows a stockholder who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been an affiliate of our company during the immediately preceding three months to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation or notice provisions of Rule 144. Rule 701 also permits affiliates of our company to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required by that rule to wait until 90 days after the date of this prospectus before selling those shares pursuant to Rule 701 and are subject to the lock-up and market standoff agreements described above.

Form S-8 Registration Statement

In connection with this offering, we intend to file a registration statement on Form S-8 under the Securities Act covering all of the shares of our common stock subject to outstanding options and the shares of our common stock reserved for issuance under our stock plans. We expect to file this registration statement as soon as permitted under the Securities Act. However, the shares registered on Form S-8 may be subject to the volume limitations and the manner of sale, notice and public information requirements of Rule 144 and will not be eligible for resale until expiration of the lock-up and market standoff agreements to which they are subject. Of the 820,875 shares of our common stock that were subject to options outstanding as of June 30, 2018, options to purchase 617,265 shares of common stock were vested as of June 30, 2018. Shares of our common stock underlying outstanding options will not be eligible for sale until expiration of the 180 day lock-up and market standoff agreements to which they are subject.

Registration Rights

We have granted demand, piggyback and Form S-3 registration rights to certain of our stockholders to sell our common stock. Registration of the sale of these shares under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration, except for shares purchased by affiliates. For a further description of these rights, see the section entitled “Description of Capital Stock—Registration Rights.”

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following summary describes the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income taxes, does not discuss the potential application of the alternative minimum tax or Medicare Contribution tax on net investment income and does not deal with state or local taxes, U.S. federal gift and estate tax laws, except to the limited extent provided below, or any non-U.S. tax consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances. This summary does not apply to any shares acquired in the concurrent private placement.

Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Internal Revenue Code of 1986, as amended, or the Code, such as:

- insurance companies, banks and other financial institutions;
- tax-exempt organizations (including private foundations) and tax-qualified retirement plans;
- foreign governments and international organizations;
- broker-dealers and traders in securities;
- U.S. expatriates and certain former citizens or long-term residents of the United States;
- persons required for U.S. federal income tax purposes to conform the timing of income accruals to their financial statements under Section 451(b) of the Code;
- persons that own, or are deemed to own, more than 5% of our capital stock;
- "controlled foreign corporations," "passive foreign investment companies" and corporations that accumulate earnings to avoid U.S. federal income tax;
- persons that hold our common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security" or integrated investment or other risk reduction strategy;
- persons who do not hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, for investment purposes); and
- partnerships and other pass-through entities, and investors in such pass-through entities (regardless of their places of organization or formation).

Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them.

Furthermore, the discussion below is based upon the provisions of the Code, and U.S. Treasury Regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, possibly retroactively, and are subject to differing interpretations which could result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the Internal Revenue Service, or the IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions or will not take a contrary position regarding the tax consequences described herein, or that any such contrary position would not be sustained by a court.

PERSONS CONSIDERING THE PURCHASE OF OUR COMMON STOCK PURSUANT TO THIS OFFERING SHOULD CONSULT THEIR OWN TAX ADVISORS CONCERNING THE U.S. FEDERAL INCOME TAX CONSEQUENCES OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK IN LIGHT OF THEIR PARTICULAR SITUATIONS AS WELL AS ANY CONSEQUENCES ARISING UNDER THE LAWS OF ANY OTHER TAXING JURISDICTION, INCLUDING ANY STATE, LOCAL OR NON-U.S. TAX CONSEQUENCES OR ANY U.S. FEDERAL NON-INCOME TAX CONSEQUENCES, AND THE POSSIBLE APPLICATION OF TAX TREATIES.

For the purposes of this discussion, a "Non-U.S. Holder" is a beneficial owner of common stock that is not a U.S. Holder or a partnership for U.S. federal income tax purposes. A "U.S. Holder" means a beneficial owner of our common stock that is, for U.S. federal income tax purposes, (a) an individual citizen or resident of the United States, (b) a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes), created or organized in or under the laws of the United States, any state thereof or the District of Columbia, (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (d) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons (within the meaning of Section 7701(a)(30) of the Code) have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

If you are an individual non-U.S. citizen, you may, in some cases, be deemed to be a resident alien (as opposed to a nonresident alien) by virtue of being present in the United States for at least 31 days in the calendar year and for an aggregate of at least 183 days during a three-year period ending in the current calendar year. Generally, for this purpose, all the days present in the current year, one-third of the days present in the immediately preceding year, and one-sixth of the days present in the second preceding year, are counted.

Resident aliens are generally subject to U.S. federal income tax as if they were U.S. citizens. Individuals who are uncertain of their status as resident or nonresident aliens for U.S. federal income tax purposes are urged to consult their own tax advisors regarding the U.S. federal income tax consequences of the ownership or disposition of our common stock.

Distributions

We do not expect to make any distributions on our common stock in the foreseeable future. If we do make distributions on our common stock, however, such distributions made to a Non-U.S. Holder of our common stock will constitute dividends for U.S. tax purposes to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles). Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital that is applied against and reduces, but not below zero, a Non-U.S. Holder's adjusted tax basis in our common stock. Any remaining excess will be treated as gain realized on the sale or exchange of our common stock as described below under the section entitled "—Gain on Disposition of Our Common Stock."

Any distribution on our common stock that is treated as a dividend paid to a Non-U.S. Holder that is not effectively connected with the holder's conduct of a trade or business in the United States will generally be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and the Non-U.S. Holder's country of residence. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide the applicable withholding agent with a properly executed IRS Form W-8BEN, IRS Form W-8BEN-E or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. Such form must be provided prior to the payment of dividends and must be updated periodically. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent may then be required to provide certification to the applicable withholding agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. withholding tax under an income tax treaty, you should consult with your own tax advisor to determine if you are able to obtain a refund of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the holder's conduct of a trade or business within the United States (and, if

required by an applicable income tax treaty, are attributable to a permanent establishment that the holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to the applicable withholding agent). In general, such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates applicable to U.S. persons. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

See also the section below entitled "—Foreign Accounts" for additional withholding rules that may apply to dividends paid to certain foreign financial institutions or non-financial foreign entities.

Gain on Disposition of Our Common Stock

Subject to the discussions below under the sections entitled "—Backup Withholding and Information Reporting" and "—Foreign Accounts," a Non-U.S. Holder generally will not be subject to U.S. federal income or withholding tax with respect to gain realized on a sale or other disposition of our common stock unless (a) the gain is effectively connected with a trade or business of the holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that the holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or the holder's holding period in the common stock.

If you are a Non-U.S. Holder described in (a) above, you will be required to pay tax on the net gain derived from the sale at the regular graduated U.S. federal income tax rates applicable to U.S. persons. Corporate Non-U.S. Holders described in (a) above may also be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (b) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses (even though you are not considered a resident of the United States), provided you have timely filed U.S. federal income tax returns with respect to such losses. With respect to (c) above, in general, we would be a United States real property holding corporation if U.S. real property interests as defined in the Code and the U.S. Treasury Regulations comprised (by fair market value) at least half of our worldwide real property interests plus our other assets used or held for use in a trade or business. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation. However, there can be no assurance that we will not become a United States real property holding corporation in the future. Even if we are treated as a U.S. real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly or constructively, no more than five percent of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will qualify as regularly traded on an established securities market.

See the section entitled "—Foreign Accounts" for additional information regarding withholding rules that may apply to proceeds of a disposition of our common stock paid to foreign financial institutions or non-financial foreign entities.

U.S. Federal Estate Tax

The estates of nonresident alien individuals generally are subject to U.S. federal estate tax on property with a U.S. situs. Because we are a U.S. corporation, our common stock will be U.S. situs property and, therefore, will be included in the taxable estate of a nonresident alien decedent, unless an applicable estate tax treaty between the United States and the decedent's country of residence provides otherwise. The terms "resident" and "nonresident" are defined differently for U.S. federal estate tax purposes than for U.S. federal income tax purposes. Investors are urged to consult their own tax advisors regarding the U.S. federal estate tax consequences of the ownership or disposition of our common stock.

Backup Withholding and Information Reporting

Generally, we or certain financial middlemen must report information to the IRS with respect to any dividends we pay on our common stock including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or otherwise establishes an exemption, provided that the applicable withholding agent does not have actual knowledge or reason to know the holder is a U.S. person.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or non-U.S., unless the Non-U.S. Holder provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or otherwise meets documentary evidence requirements for establishing non-U.S. person status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. If backup withholding is applied to you, you should consult with your own tax advisor to determine whether you have overpaid your U.S. federal income tax, and whether you are able to obtain a tax refund or credit of the overpaid amount.

Foreign Accounts

In addition, U.S. federal withholding taxes may apply under the Foreign Account Tax Compliance Act, or FATCA, on certain types of payments, including dividends and, on or after January 1, 2019, the gross proceeds of a disposition of our common stock, made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or, on or after January 1, 2019, gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution agrees to undertake certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise

qualifies for an exemption from these rules. The 30% federal withholding tax described in this paragraph cannot be reduced under an income tax treaty with the United States. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS SUCH AS ESTATE AND GIFT TAX.

UNDERWRITING

We and the underwriters for the offering named below have entered into an underwriting agreement with respect to the common stock being offered. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase from us the number of shares of our common stock set forth opposite its name below. Cowen and Company, LLC and Piper Jaffray & Co. are the representatives of the underwriters.

Underwriter	Number of Shares
Cowen and Company, LLC	
Piper Jaffray & Co.	
JMP Securities LLC	
Wedbush Securities Inc.	
Total	5,000,000

The underwriting agreement provides that the obligations of the underwriters are subject to certain conditions precedent and that the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased, other than those shares covered by the option to purchase additional shares described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act of 1933, as amended, or Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing shares of common stock in this offering with an aggregate value of up to approximately $30.0 million at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these parties as they will on any other shares sold to the public in this offering.

At our request, the underwriters have reserved for sale, at the initial public offering price, up to 5% of the shares offered hereby for employees, directors and other persons associated with us who have expressed an interest in purchasing common stock in the offering. Our officers and directors who are participating in this program have agreed that any shares purchased through this program will be subject to a 180-day lock-up restriction. The number of shares available for sale to the general public in the offering will be reduced to the extent these persons purchase the reserved shares. Any reserved shares not so purchased will be offered by the underwriters to the general public on the same terms as the other shares.

Option to Purchase Additional Shares. We have granted to the underwriters an option to purchase up to 750,000 additional shares of common stock at the public offering price, less the

underwriting discount. This option is exercisable for a period of 30 days. The underwriters may exercise this option solely for the purpose of covering overallotments, if any, made in connection with the sale of common stock offered hereby. To the extent that the underwriters exercise this option, the underwriters will purchase additional shares from us in approximately the same proportion as shown in the table above.

Discounts and Commissions. The following table shows the public offering price, underwriting discount and proceeds, before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

We estimate that the total expenses of the offering, excluding underwriting discount, will be approximately $3.9 million and are payable by us. We have agreed to reimburse the underwriters for certain of their expenses in an amount up to $35,000.

		Total	
	Per Share	Without Option to Purchase Additional Shares Exercise	With Full Option to Purchase Additional Shares Exercise
Public offering price			
Underwriting discount			
Proceeds, before expenses, to us			

The underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus. The underwriters may offer the shares of common stock to securities dealers at the public offering price less a concession not in excess of $ per share. If all of the shares are not sold at the public offering price, the underwriters may change the offering price and other selling terms.

Discretionary Accounts. The underwriters do not intend to confirm sales of the shares to any accounts over which they have discretionary authority.

Market Information. Prior to this offering, there has been no public market for shares of our common stock. The initial public offering price will be determined by negotiations between us and the representatives of the underwriters. In addition to prevailing market conditions, the factors to be considered in these negotiations will include:

- the history of, and prospects for, our company and the industry in which we compete;
- our past and present financial information;
- an assessment of our management; its past and present operations, and the prospects for, and timing of, our future revenues;
- the present state of our development; and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

We have applied to list our common stock on the Nasdaq Global Market under the symbol "STRO."

Stabilization. In connection with this offering, the underwriters may engage in stabilizing transactions, overallotment transactions, syndicate covering transactions, penalty bids and purchases to cover positions created by short sales.

- Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the common stock while the offering is in progress.
- Overallotment transactions involve sales by the underwriters of shares of common stock in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the option to purchase additional shares. In a naked short position, the number of shares involved is greater than the number of shares in the option to purchase additional shares. The underwriters may close out any short position by exercising their option to purchase additional shares and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the option to purchase additional shares. If the underwriters sell more shares than could be covered by exercise of the option to purchase additional shares and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the shares in the open market that could adversely affect investors who purchase in the offering.
- Penalty bids permit the representatives to reclaim a selling concession from a syndicate member when the common stock originally sold by that syndicate member is purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the Nasdaq Stock Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive Market Making. In connection with this offering, underwriters and selling group members may engage in passive market making transactions in our common stock on the Nasdaq Stock Market in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934, as amended, during a period before the commencement of offers or sales of common stock and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, such bid must then be lowered when specified purchase limits are exceeded.

Lock-Up Agreements. Pursuant to certain "lock-up" agreements, we and our executive officers, directors and substantially all of our other stockholders, have agreed, subject to certain exceptions, not

to offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of or announce the intention to otherwise dispose of, or enter into any swap, hedge or similar agreement or arrangement that transfers, in whole or in part, the economic consequence of ownership of, directly or indirectly, or make any demand or request or exercise any right with respect to the registration of, or file with the Securities and Exchange Commission a registration statement under the Securities Act relating to, any common stock or securities convertible into or exchangeable or exercisable for any common stock without the prior written consent of Cowen and Company, LLC and Piper Jaffray & Co., for a period of 180 days after the date of the pricing of the offering.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition. The lock-up provision will not restrict broker-dealers from engaging in market making and similar activities conducted in the ordinary course of their business.

Cowen and Company, LLC and Piper Jaffray & Co., in their sole discretion, may release our common stock and other securities subject to the lock-up agreements described above in whole or in part at any time. When determining whether or not to release our common stock and other securities from lock-up agreements, Cowen and Company, LLC and Piper Jaffray & Co. will consider, among other factors, the holder's reasons for requesting the release, the number of shares for which the release is being requested and market conditions at the time of the request. In the event of such a release or waiver for one of our directors or officers, Cowen and Company, LLC and Piper Jaffray & Co. shall provide us with notice of the impending release or waiver at least three business days before the effective date of such release or waiver and we will announce the impending release or waiver by issuing a press release at least two business days before the effective date of the release or waiver.

Electronic Offer, Sale and Distribution of Shares. A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representatives may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other Relationships. Certain of the underwriters and their affiliates have provided, and may in the future provide, various investment banking, commercial banking and other financial services for us and our affiliates for which they have received, and may in the future receive, customary fees.

Selling Restrictions.

Canada. The common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a

misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

European Economic Area. In relation to each Member State of the European Economic Area, or each, a Relevant Member State, no offer of common stock may be made to the public in that Relevant Member State other than:

- to any legal entity which is a qualified investor, as defined in the European Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives; or
- in any other circumstances falling within Article 3(2) of the European Prospectus Directive,

provided that no such offer of shares shall require the Company or the representative(s) to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a "qualified investor" within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for the Company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither the Company nor the underwriters have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for the Company or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of

sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom. In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons").

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

France. This prospectus has not been prepared in the context of a public offering of financial securities in France within the meaning of Article L.411-1 of the French Code Monétaire et Financier and Title I of Book II of the Reglement Général of the Autorité des marchés financiers, or the AMF, and therefore has not been and will not be filed with the AMF for prior approval or submitted for clearance to the AMF. Consequently, the shares of our common stock may not be, directly or indirectly, offered or sold to the public in France and offers and sales of the shares of our common stock may only be made in France to qualified investors (investisseurs qualifiés) acting for their own, as defined in and in accordance with Articles L.411-2 and D.411-1 to D.411-4, D.734-1, D.744-1, D.754-1 and D.764-1 of the French Code Monétaire et Financier. Neither this prospectus nor any other offering material may be released, issued or distributed to the public in France or used in connection with any offer for subscription on sale of the shares of our common stock to the public in France. The subsequent direct or indirect retransfer of the shares of our common stock to the public in France may only be made in compliance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 through L.621-8-3 of the French Code Monétaire et Financier.

Germany. Each person who is in possession of this prospectus is aware of the fact that no German securities prospectus (wertpapierprospekt) within the meaning of the securities prospectus act (wertpapier-prospektgesetz), or the act, of the federal republic of Germany has been or will be published with respect to the shares of our common stock. In particular, each underwriter has represented that it has not engaged and has agreed that it will not engage in a public offering in the federal republic of Germany (öffertliches angebot) within the meaning of the act with respect to any of the shares of our common stock otherwise than in accordance with the act and all other applicable legal and regulatory requirements.

Switzerland. The shares common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of, and has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the Company, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA (FINMA), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Netherlands. The offering of the shares of our common stock is not a public offering in The Netherlands. The shares of our common stock may not be offered or sold to individuals or legal entities in The Netherlands unless (1) a prospectus relating to the offer is available to the public, which has been approved by the Dutch Authority for the Financial Markets (Autoriteit Financiële Markten) or by the competent supervisory authority of another state that is a member of the European Union or party to the Agreement on the European Economic Area, as amended or (2) an exception or exemption applies to the offer pursuant to Article 5:3 of The Netherlands Financial Supervision Act (Wet op het financieel toezicht) or Article 53 paragraph 2 or 3 of the Exemption Regulation of the Financial Supervision Act, for instance due to the offer targeting exclusively “qualified investors” (gekwalificeerde beleggers) within the meaning of Article 1:1 of The Netherlands Financial Supervision Act.

Japan. The shares have not been and will not be registered under the Financial Instruments and Exchange Act. Accordingly, the shares may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan.

Hong Kong. The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to our common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to our common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Singapore. This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the

offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

- to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- where no consideration is or will be given for the transfer;
- where the transfer is by operation of law;
- as specified in Section 276(7) of the SFA; or
- as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

We have not authorized and do not authorize the making of any offer of securities through any financial intermediary on our behalf, other than offers made by the underwriters and their respective affiliates, with a view to the final placement of the securities as contemplated in this document. Accordingly, no purchaser of the shares, other than the underwriters, is authorized to make any further offer of shares on our behalf or on behalf of the underwriters.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Fenwick & West LLP, San Francisco, California. Certain legal matters relating to the offering will be passed upon for the underwriters by Cooley LLP, San Francisco, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements as of December 31, 2016 and December 31, 2017 and for each of the two years in the period ended December 31, 2017, as set forth in their report (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the financial statements). We have included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

ADDITIONAL INFORMATION

We have filed with the Securities and Exchange Commission, or SEC, a registration statement on Form S-1 under the Securities Act of 1933, as amended, with respect to the shares of common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits filed therewith. For further information about us and the common stock offered hereby, reference is made to the registration statement and the exhibits filed therewith. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and in each instance we refer you to the copy of such contract or other document filed as an exhibit to the registration statement.

We currently do not file periodic reports with the SEC. Upon the completion of this offering, we will be required to file periodic reports, proxy statements and other information with the SEC pursuant to the Securities Exchange Act of 1934, as amended. A copy of the registration statement and the exhibits filed therewith may be inspected without charge at the public reference room maintained by the SEC, located at 100 F Street, NE, Washington, DC 20549, and copies of all or any part of the registration statement may be obtained from that office. Please call the SEC at 1-800-SEC-0330 for further information about the public reference room. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the website is www.sec.gov.

We also maintain a website at www.sutrobio.com. Upon completion of this offering, you may access these materials at our website free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

SUTRO BIOPHARMA, INC.

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of Sutro Biopharma, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Sutro Biopharma, Inc. (the Company), as of December 31, 2016 and 2017, the related statements of operations, comprehensive income (loss), redeemable convertible preferred stock and stockholders' deficit and cash flows for the years then ended, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2016 and 2017, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations, has a working capital deficiency, and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP
We have served as the Company's auditor since 2007.

Redwood City, California
June 1, 2018, except for the third paragraph of Note 1 and for Note 14, as to which the date is September 17, 2018.

Sutro Biopharma, Inc.

Balance Sheets
(in thousands, except share and per share amounts)

	December 31, 2016	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 11,593	$ 22,020
Marketable securities	35,928	–
Accounts receivable (including amounts from related parties of $10 and $784 as of December 31, 2016 and 2017, respectively)	577	1,624
Prepaid expenses and other current assets	1,590	1,985
Total current assets	49,688	25,629
Property and equipment, net	18,690	13,997
Other long-term assets	624	1,128
Restricted cash	275	15
Total assets	$ 69,277	$ 40,769
Liabilities, Redeemable Convertible Preferred Stock, and Stockholders' Deficit		
Current liabilities:		
Accounts payable	$ 3,394	$ 2,902
Accrued compensation	3,189	3,639
Deferred revenue—current	43,576	10,709
Debt—current	–	14,634
Other current liabilities	22	72
Total current liabilities	50,181	31,956
Deferred revenue, non-current	5,858	13,159
Deferred rent	342	428
Redeemable convertible preferred stock warrant liability	1,193	1,708
Other noncurrent liabilities	99	14
Total liabilities	57,673	47,265
Commitments and contingencies (Note 8)		
Redeemable convertible preferred stock, $0.001 par value—176,400,163 and 177,082,393 shares authorized as of December 31, 2016 and 2017, respectively; 173,750,421 shares issued and outstanding as of December 31, 2016 and 2017; aggregate liquidation preference of $102,988 as of December 31, 2017	102,505	102,505
Stockholders' deficit:		
Common stock, $0.001 par value—270,000,000 and 271,000,000 shares authorized as of December 31, 2016 and 2017, respectively; 451,831 and 465,330 shares issued and outstanding as of December 31, 2016 and 2017, respectively	–	–
Note receivable from stockholder	(207)	(208)
Additional paid-in-capital	4,646	6,218
Accumulated other comprehensive loss	(17)	–
Accumulated deficit	(95,323)	(115,011)
Total stockholders' deficit	(90,901)	(109,001)
Total liabilities, redeemable convertible preferred stock, and stockholders' deficit	$ 69,277	$ 40,769

See accompanying notes to financial statements

Sutro Biopharma, Inc.

Statements of Operations
(in thousands, except share and per share amounts)

	Year Ended December 31,	
	2016	2017
Collaboration revenue (including amounts from a related party of $54,001 and $44,606 during the years ended December 31, 2016 and 2017, respectively)	$ 59,731	$ 51,741
Operating expenses:		
Research and development	43,550	54,639
General and administrative	14,817	16,374
Total operating expenses	58,367	71,013
Income (loss) from operations	1,364	(19,272)
Interest income	251	273
Interest expense	–	(612)
Other income (expense), net	87	(77)
Net income (loss)	$ 1,702	$ (19,688)
Net income (loss) per share attributable to common stockholders, basic and diluted	$ –	$ (43.95)
Weighted-average shares used in computing net income (loss) per share attributable to common stockholders, basic and diluted	407,735	447,946
Pro forma net loss per share, basic and diluted (unaudited)		$ (3.54)
Weighted-average shares used in computing pro forma net loss per share, basic and diluted (unaudited)		5,511,350

See accompanying notes to financial statements

Sutro Biopharma, Inc.

Statements of Comprehensive Income (Loss)
(in thousands)

	Year Ended December 31,	
	2016	2017
Net income (loss)	$ 1,702	$ (19,688)
Other comprehensive income:		
Unrealized gain on available-for-sale securities	34	17
Comprehensive income (loss)	$ 1,736	$ (19,671)

See accompanying notes to financial statements

Sutro Biopharma, Inc.

Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Note Receivable from Stockholder	Additional Paid-In-Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount					
Balances at December 31, 2015	173,750,421	$102,505	416,279	$ –	$ (200)	$ 3,378	$ (51)	$ (97,025)	$ (93,898)
Exercise of common stock options for cash	–	–	35,552	–	–	184	–	–	184
Stock-based compensation expense	–	–	–	–	–	968	–	–	968
Vesting of early exercised shares	–	–	–	–	–	116	–	–	116
Interest on note receivable from stockholder	–	–	–	–	(7)	–	–	–	(7)
Net unrealized gain on available-for-sale securities	–	–	–	–	–	–	34	–	34
Net income	–	–	–	–	–	–	–	1,702	1,702
Balances at December 31, 2016	173,750,421	102,505	451,831	–	(207)	4,646	(17)	(95,323)	(90,901)
Exercise of common stock options for cash	–	–	13,499	–	–	95	–	–	95
Stock-based compensation expense	–	–	–	–	–	1,391	–	–	1,391
Vesting of early exercised shares	–	–	–	–	–	86	–	–	86
Interest on note receivable from stockholder	–	–	–	–	(1)	–	–	–	(1)
Net unrealized gain on available-for-sale securities	–	–	–	–	–	–	17	–	17
Net loss	–	–	–	–	–	–	–	(19,688)	(19,688)
Balances at December 31, 2017	173,750,421	$102,505	465,330	$ –	$ (208)	$ 6,218	$ –	$ (115,011)	$ (109,001)

See accompanying notes to financial statements

Sutro Biopharma, Inc.

Statements of Cash Flows
(in thousands)

	Year Ended December 31,	
	2016	2017
Operating activities		
Net income (loss)	$ 1,702	$ (19,688)
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation and amortization	5,662	4,990
Amortization of premium on marketable securities	168	106
Stock-based compensation expense	968	1,391
Revaluation of redeemable convertible preferred stock warrant liability	(88)	186
Revaluation of SutroVax option liability	–	(30)
Accretion of debt discount	–	133
Interest on note receivable from stockholder	(7)	(1)
Loss on disposal of property and equipment	98	–
Impairment of long-lived assets	–	2,742
Changes in operating assets and liabilities:		
Accounts receivable	(171)	(1,047)
Prepaid expenses and other assets	(371)	(354)
Accounts payable	874	(473)
Accrued compensation	1,238	451
Other current liabilities	(18)	–
Deferred rent	(95)	86
Deferred revenue	(23,120)	(25,566)
Net cash used in operating activities	(13,160)	(37,074)
Investing activities		
Purchases of marketable securities	(52,304)	(14,220)
Maturities of marketable securities	57,773	34,850
Sales of marketable securities	8,500	15,208
Proceeds from exercise of options for SutroVax shares	–	80
Purchases of property and equipment	(4,394)	(3,316)
Proceeds from sale of property and equipment	16	–
Net cash provided by investing activities	9,591	32,602
Financing activities		
Proceeds from issuance of debt	–	15,000
Payment of debt issuance fees	–	(170)
Payment of deferred offering costs	–	(286)
Proceeds from issuances of common stock upon exercise of stock options	184	95
Net cash provided by financing activities	184	14,639
Net (decrease) increase in cash, cash equivalents and restricted cash	(3,385)	10,167
Cash, cash equivalents and restricted cash at beginning of year	15,253	11,868
Cash, cash equivalents and restricted cash at end of year	$ 11,868	$ 22,035
Supplemental disclosure of cash flow information		
Cash paid for interest	$ –	$ 479
Supplemental Disclosures of Non-Cash Investing and Financing Information		
Vesting of early exercised shares	$ 116	$ 86
Purchase of property and equipment included in accounts payable	$ 532	$ 255
Deferred initial public offering costs included in accounts payable	$ –	$ 259

See accompanying notes to financial statements

Sutro Biopharma, Inc.

Notes to Financial Statements

1. Organization and Principal Activities

Description of Business

Sutro Biopharma, Inc. (the "Company") is a clinical stage drug discovery, development and manufacturing company focused on leveraging its integrated cell-free protein synthesis platform, XpressCF, to create a broad variety of optimally designed, next-generation protein therapeutics for cancer and autoimmune disorders. The Company was incorporated on April 21, 2003, and was formerly known as Fundamental Applied Biology, Inc. The Company is headquartered in South San Francisco, California.

The Company operates in one business segment, the development of biopharmaceutical products.

Reverse Stock Split

On September 14, 2018, the Company effected a reverse split of all shares of its common stock at a ratio of 36.3-for-1. Upon the effectiveness of the reverse stock split, (i) all shares of outstanding common stock were adjusted; (ii) the number of shares of common stock for which each outstanding option to purchase common stock is exercisable were adjusted; (iii) the exercise price of each outstanding option to purchase common stock were adjusted; (iv) the conversion ratio for each share of outstanding redeemable convertible preferred stock which is convertible into the Company's common stock was proportionately reduced; (v) the number of shares of common stock for which each outstanding warrant to purchase common stock is exercisable was proportionally decreased; (vi) the conversion ratio for each outstanding warrant to purchase redeemable convertible preferred stock which is convertible into warrants to purchase the Company's common stock after the offering was proportionally decreased; and (vii) the exercise price of each outstanding warrant was proportionally increased. All of the outstanding common stock share numbers (including shares of common stock subject to the Company's options, as converted for the outstanding redeemable convertible preferred stock shares and warrants), share prices, exercise prices and per share amounts contained in the financial statements have been retroactively adjusted in the financial statements to reflect this reverse stock split for all periods presented. The par value per share and the authorized number of shares of common stock and redeemable convertible preferred stock were not adjusted as a result of the reverse stock split.

Going Concern

The Company has incurred significant losses and has negative cash flows from operations. As of December 31, 2017, there was an accumulated deficit of $115.0 million. Management expects to continue to incur additional substantial losses in the foreseeable future as a result of the Company's research and development activities.

As of December 31, 2017, the Company had unrestricted cash and cash equivalents of $22.0 million, which is available to fund future operations. The Company will need to raise additional capital to support the completion of its research and development activities. The Company's activities are subject to significant risks and uncertainties, including failing to secure additional funding to continue to operationalize the Company's current technology and to advance the development of its product candidates.

The Company completed an equity financing and obtained $31.6 million in gross proceeds from the sale of its Series E redeemable convertible preferred stock in May 2018 (see Note 14). The

Company believes that its cash and cash equivalents as of December 31, 2017, plus the proceeds from the Series E financing will not be sufficient for the Company to continue as a going concern for at least one year from the issuance date of its financial statements. The Company believes that this raises substantial doubt about its ability to continue as a going concern. As a result, the Company will be required to raise additional capital. If sufficient funds on acceptable terms are not available when needed, the Company could be required to significantly reduce its operating expenses and delay, reduce the scope of, or eliminate one or more of its development programs. Failure to manage discretionary spending or raise additional financing, as needed, may adversely impact the Company's ability to achieve its intended business objectives. In August 2017, the Company entered into a loan and security agreement with Oxford Finance LLC and Silicon Valley Bank under which it borrowed $15.0 million (the "August 2017 Loan") (see Note 7). The August 2017 Loan provides that an event of default will occur if, among other triggers, there occurs any circumstances that could reasonably be expected to result in a material adverse effect on the Company's business, operations or condition, or on its ability to perform its obligations under the loan. The Company has disclosed above that there is currently substantial doubt about its ability to continue as a going concern given its continuing operating losses and its current available capital resources, which could be deemed to be an event of default if such condition was considered to have a material adverse effect on the Company's business, operations or condition. As a result, the Company has classified the entire debt balance as a current liability given that a determination of such an event of default is outside of the Company's control. The accompanying financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. Other than with respect to the aforementioned loan, the financial statements do not reflect any adjustments relating to the recoverability and reclassifications of assets and liabilities that might be necessary if the Company is unable to continue as a going concern.

2. Summary of Significant Accounting Policies

Basis of Presentation and Use of Estimates

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP"). The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The Company bases its estimates on historical experience and market-specific or other relevant assumptions that it believes are reasonable under the circumstances. The amounts of assets and liabilities reported in the Company's balance sheets and the amount of expenses and income reported for each of the periods presented are affected by estimates and assumptions, which are used for, but are not limited to, determining research and development periods under multiple element arrangements, stock-based compensation expense, fair value of redeemable convertible preferred stock and warrant liabilities, fair value of common stock, income taxes and certain accrued liabilities. Actual results could differ from such estimates or assumptions.

Unaudited Pro Forma Financial Information

Pro forma basic and diluted net loss per share has been computed to give effect to the conversion of all outstanding redeemable convertible preferred stock into shares of common stock and the net exercise of certain redeemable convertible preferred stock warrants. Also, the numerator in the pro forma basic and diluted net loss per share calculation has been adjusted to remove gains or losses resulting from the remeasurement of the redeemable convertible preferred stock warrant liability. The

unaudited pro forma net loss per share does not include the shares expected to be sold and related proceeds to be received from the completion of an initial public offering ("IPO"). The unaudited pro forma net loss per share for the year ended December 31, 2017 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of redeemable convertible preferred stock into shares of common stock as if such conversion had occurred at the beginning of the period, or their issuance dates if later.

Cash, Cash Equivalents, Marketable Securities and Restricted Cash

The Company considers all highly liquid investments with original maturities of 90 days or less from the date of purchase to be cash equivalents. Investments with original maturities of greater than 90 days from the date of purchase but less than one year from the balance sheet date are classified as current, while investments with maturities in one year or beyond one year from the balance sheet date are classified as long-term investments. Available-for-sale marketable securities are carried at fair value, with unrealized gains and losses reported as a component of accumulated other comprehensive income. Realized gains and losses are included in interest income in the Company's Statement of Operations. There were no material realized gains or losses in the periods presented. The cost of securities sold is based on the specific-identification method.

The Company invests in commercial paper, corporate debt instruments and money market funds with high credit ratings. The Company has established guidelines regarding diversification of its investments and their maturities, with the objectives of maintaining safety and liquidity while maximizing yield.

Under certain lease and credit agreements, the Company has pledged cash and cash equivalents as collateral. Restricted cash related to such agreements was $275,000 and $15,000 as of December 31, 2016 and 2017, respectively.

The following table provides a reconciliation of cash and cash equivalents, and restricted cash reported within the balance sheets that sum to the total of the same amounts shown in the statements of cash flows.

	December 31,	
	2016	2017
	(in thousands)	
Cash and cash equivalents	$ 11,593	$ 22,020
Restricted cash	275	15
Total cash, cash equivalents and restricted cash shown in the statements of cash flows	$ 11,868	$ 22,035

Concentrations of Credit Risk

Cash and cash equivalents and marketable securities consist of financial instruments that potentially subject the Company to a concentration of credit risk, to the extent of the amounts recorded on the balance sheets. The Company minimizes the amount of credit exposure by investing cash that is not required for immediate operating needs in money market funds, government obligations and/or commercial paper with short maturities.

The Company regularly reviews the outstanding accounts receivable, including consideration of factors such as the age of the receivable balance. As of December 31, 2016 and 2017, there was no

allowance for doubtful accounts deemed necessary. As of December 31, 2016 and 2017, the Company had an accounts receivable balance of $577,000 and $1.6 million, respectively, attributable to the Company's collaboration agreements.

Deferred Offering Costs

The Company has deferred offering costs consisting of legal, accounting and other fees and costs directly attributable to the Company's planned IPO. The deferred offering costs will be offset against the proceeds received upon the completion of the planned IPO. In the event the planned IPO is terminated, all of the deferred offering costs will be expensed within the Company's statements of operations. As of December 31, 2016, no amounts were deferred. As of December 31, 2017, $545,000 of deferred offering costs were recorded within other long-term assets on the balance sheet.

Property and Equipment, Net

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation is determined using the straight-line method over the estimated useful lives of the respective assets, generally three to five years. Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or the term of the lease. Maintenance and repairs are charged to expense as incurred and costs of improvement are capitalized.

Impairment of Long-Lived Assets

The Company reviews long-lived assets, including property and equipment, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. An impairment loss would be recognized when the estimated, undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. Impairment, if any, is measured as the amount by which the carrying amount of a long-lived asset exceeds its fair value.

The Company did not recognize any impairment charges during the year ended December 31, 2016. During the year ended December 31, 2017, the Company recognized within research and development expenses in the statement of operations an impairment charge of $2.7 million pertaining to manufacturing equipment that had been custom built for the Company, and failed to meet the acceptance criteria; therefore, the Company believes the carrying value may not be recoverable. As of December 31, 2016 and 2017, management believes that no revision to the remaining useful lives or write down of the remaining long-lived assets is required.

Redeemable Convertible Preferred Stock Warrants

The Company accounts for its redeemable convertible preferred stock warrants as a liability, and they are recorded at their estimated fair value, because the warrants may conditionally obligate the Company to transfer assets at some point in the future. At the end of each reporting period, changes in the estimated fair value during the period are recorded in other income (expense), net in the statement of operations. The Company will continue to adjust the liability for changes in estimated fair value until the earlier of the expiration of the warrants, exercise of the warrants, or conversion of the redeemable convertible preferred stock warrants into common stock warrants upon the completion of a liquidation event, including the completion of an IPO.

Leases

The Company enters into lease agreements for its laboratory and office facilities. These leases are classified as operating leases. Rent expense is recognized on a straight-line basis over the term of the

lease. Incentives granted under the Company's facilities leases, including allowances to fund leasehold improvements and rent holidays, are recorded as a deferred rent liability and are recognized as reductions to rental expense on a straight-line basis over the remaining term of the lease.

Revenue Recognition

Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

For multiple-element arrangements, each deliverable within a multiple-deliverable revenue arrangement is accounted for as a separate unit of accounting if both of the following criteria are met: (i) the delivered item or items has value to the customer on a stand-alone basis; and (ii) for an arrangement that includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in management's control.

The Company recognizes revenue from milestone payments when: (i) the milestone event is substantive and its achievability has substantive uncertainty at the inception of the agreement, and (ii) the Company has completed its performance obligations related to the achievement of the milestone. Milestone payments are considered substantive if all of the following conditions are met: the milestone payment (a) is commensurate with either the Company's performance subsequent to the inception of the arrangement to achieve the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from the Company's performance subsequent to the inception of the arrangement to achieve the milestone, (b) relates solely to past performance, and (c) is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

Determining whether and when these revenue recognition criteria have been satisfied often involves assumptions and judgments that can have a significant impact on the timing and amount of reported revenue. Changes in assumptions or judgments or changes to the elements in an arrangement could cause a material increase or decrease in the amount of revenue that is reported in a particular period.

Under certain collaborative arrangements, the Company is entitled to payments for certain research and development activities and for providing product and other related materials. The Company's policy is to account for such payments by its collaboration partners as collaboration revenue.

Stock-Based Compensation

The Company maintains a stock-based compensation plan as a long-term incentive for employees, consultants, and members of the Company's Board of Directors. The plan allows for the issuance of non-statutory and incentive stock options to employees and non-statutory stock options ("NSOs") to nonemployees.

Share-based payments are measured using fair-value-based measurements and recognized as compensation expense over the service period in which the awards are expected to vest. The Company's fair-value-based measurements of awards to employees and directors as of the grant date utilize the single-option award-valuation approach, and the Company uses the straight-line method for expense attribution. The fair-value-based measurements of options granted to nonemployees are

remeasured at each period end until the options vest and are amortized to expense as earned. The valuation model used for calculating the estimated fair value of stock awards is the Black-Scholes option-pricing model. The Black-Scholes model requires the Company to make assumptions and judgments about the variables used in the calculations, including the expected term (weighted-average period of time that the options granted are expected to be outstanding), the expected volatility of the Company's common stock, the related risk-free interest rate and the expected dividend. The Company also estimates the expected forfeitures of unvested stock awards. Potential forfeitures of awards are estimated based on the Company's historical forfeiture experience. The estimate of forfeitures will be adjusted over the service period, to the extent that actual forfeitures differ, or are expected to differ, from prior estimates.

Research and Development

Research and development costs are expensed as incurred. Research and development expenses consist of costs incurred in performing research and development activities: salaries, employee benefits, laboratory supplies, outsourced research and development expenses, professional services and allocated facilities-related costs. Amounts incurred in connection with collaboration arrangements are also included as a research and development expense.

Nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized and recognized as an expense as the goods are delivered or the related services are performed.

For outsourced research and development expenses, such as professional fees payable to third parties for preclinical studies, clinical trials and research services, and other consulting costs, the Company estimates the expenses based on the services performed, pursuant to contracts with research institutions that conduct and manage preclinical studies, clinical trials and research services on its behalf. The Company estimates these expenses based on discussions with internal management personnel and external service providers as to the progress or stage of completion of services and the contracted fees to be paid for such services. If the actual timing of the performance of services or the level of effort varies from the original estimates, the Company will adjust the accrual accordingly. Payments made to third parties under these arrangements in advance of the performance of the related services by the third parties are recorded as prepaid expenses until the services are rendered.

Income Taxes

The Company provides for income taxes under the asset and liability method. Current income tax expense or benefit represents the amount of income taxes expected to be payable or refundable for the current year. Deferred income tax assets and liabilities are determined based on differences between the financial statement reporting and tax bases of assets and liabilities and net operating loss and credit carryforwards, and are measured using the enacted tax rates and laws that will be in effect when such items are expected to reverse. Deferred income tax assets are reduced, as necessary, by a valuation allowance when management determines it is more likely than not that some or all of the tax benefits will not be realized.

The Company accounts for uncertain tax positions in accordance with Accounting Standards Codification ("ASC") 740-10, *Accounting for Uncertainty in Income Taxes*. The Company assesses all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an

uncertain tax position begins with the initial determination of the position's sustainability and is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and the Company will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of a tax benefit might change as new information becomes available.

The Company includes any penalties and interest expense related to income taxes as a component of other income (expense), net and interest expense as necessary.

Fair Value Measurements

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability, or an exit price, in the principal or most advantageous market for that asset or liability in an orderly transaction between market participants on the measurement date, and established a fair value hierarchy that requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value. The Company determined the fair value of financial assets and liabilities using the fair value hierarchy that describes three levels of inputs that may be used to measure fair value, as follows:

Level 1—Quoted prices in active markets for identical assets and liabilities;

Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying amounts of accounts receivable, prepaid expenses, accounts payable, accrued liabilities and accrued compensation and benefits approximate fair value due to the short-term nature of these items.

The fair value of the Company's outstanding loan (See Note 7) is estimated using the net present value of the payments, discounted at an interest rate that is consistent with market interest rate, which is a Level 2 input. The estimated fair value of the Company's outstanding loan approximates the carrying amount, as the loan bears a floating rate that approximates the market interest rate.

Net Income (Loss) Per Share Attributable to Common Stockholders

Basic and diluted net income per share attributable to common stockholders is presented in conformity with the two-class method required for participating securities. The Company considers its redeemable convertible preferred stock to be participating securities. The holders of the Company's redeemable convertible preferred stock are entitled to receive non-cumulative dividends, payable prior and in preference to any dividends on any shares of the Company's common stock. In the event a cash dividend is paid on common stock, the holders of redeemable convertible preferred stock are also entitled to a proportionate share of any such dividend as if they were holders of common stock (on an as-if converted basis). The holders of the redeemable convertible preferred stock do not have a contractual obligation to share in losses. In accordance with the two-class method, earnings allocated to these participating securities and the related number of outstanding shares of the participating

securities, which include contractual participation rights in undistributed earnings, have been excluded from the computation of basic and diluted net income per share attributable to common stockholders.

Basic net income (loss) per share attributable to common stockholders is calculated by dividing the net income (loss) attributable to common stockholders by the weighted-average number of shares of common stock outstanding for the period, without consideration for potential dilutive common shares. Basic net loss per share is the same as diluted net loss per share as the inclusion of all potential dilutive common shares would have been anti-dilutive.

Shares of common stock subject to repurchase are excluded from the computation of weighted-average shares as the continued vesting of such shares is contingent upon the holders' continued service to the Company. For the computation of net income (loss) per share attributable to common stockholders for the years ended December 31, 2016 and 2017, 26,353 and 9,889 shares subject to repurchase, respectively, were excluded from the computation of net income (loss) per share.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB"), or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on the Company's financial statements upon adoption. Under the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"), the Company meets the definition of an emerging growth company, and has elected the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act.

Recently Adopted Accounting Pronouncements

In March 2016, the FASB issued Accounting Standards Update ("ASU") 2016-09 (Topic 718), *Stock Compensation—Improvements to Employee Share-Based Payment Accounting*, which simplifies the accounting for share-based payment transactions, including the income tax consequences, forfeitures, and statutory tax withholding requirements, as well as classification on the statement of cash flows. For public business entities, ASU 2016-09 is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods. For all other entities, the amendments are effective for annual periods beginning after December 15, 2017, and interim periods within annual periods beginning after December 15, 2018. Early adoption is permitted for any entity in any interim or annual period. The Company early adopted this guidance effective January 1, 2017, and the adoption did not have a material impact on the Company's financial statements.

New Accounting Pronouncements Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09 (Topic 606), *Revenue from Contracts with Customers*. In August 2015, the FASB issued ASU No. 2015-14 (Topic 606), *Revenue from Contracts with Customers: Deferral of the Effective Date*, which delayed the effective date of ASU 2014-09 by one year. ASU 2014-09, as amended, became effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. For entities other than public entities, the standard is effective for fiscal years beginning after December 15, 2018, and interim periods beginning after December 15, 2019. Early adoption is permitted. ASU 2014-09 also permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the modified retrospective method). The Company will

adopt the standard as of January 1, 2019 and is still in the process of evaluating the effect this guidance will have on revenue recognition for its collaboration and license agreements.

The core principle of ASU 2014-09 is that an entity should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 defines a five-step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing U.S. generally accepted accounting pronouncements. All of the Company's revenue is currently generated from up-front payments, research and development services, and milestone and contingent payments under its collaboration arrangements. The Company is currently evaluating its collaboration agreements to determine the impact of adopting ASU 2014-09, inclusive of available transitional methods, on its financial statements and related disclosures.

In January 2016, the FASB issued ASU 2016-01 (Topic 825), *Recognition and Measurement of Financial Assets and Financial Liabilities*, which will change how to recognize, measure, present and make disclosures about certain financial assets and financial liabilities. Under ASU 2016-01, if an entity designates a financial liability under the fair value option ("FVO") in accordance with ASC 825, the entity shall measure the financial liability at fair value with qualifying changes in fair value recognized in net income. The entity shall present separately in other comprehensive income the portion of the total change in the fair value of the liability that results from a change in the instrument-specific credit risk. For public business entities, ASU 2016-01 is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. For all other entities, the guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. All entities can early adopt the provision related to financial liabilities measured using the FVO in ASC 825 for financial statements of annual or interim periods that have not yet been issued or made available for issuance. The Company does not expect the adoption of this amendment will have a material impact on its financial statements.

In February 2016, the FASB issued ASU 2016-02 (Topic 842), *Leases*, which requires an entity to recognize assets and liabilities for the rights and obligations created by leased assets. ASU 2016-02 is effective for public entities for interim and annual periods beginning after December 15, 2018. For nonpublic entities, the amendments are effective for fiscal years beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating how and to what extent ASU 2016-02 will affect the Company's financial position, results of operations, cash flows and related disclosures.

In August 2016, the FASB issued ASU 2016-15 (Topic 230), *Classification of Certain Cash Receipts and Cash Payments* . The new guidance clarifies the classification of certain cash receipts and cash payments in the statement of cash flows, including debt prepayment or extinguishment costs, settlement of contingent consideration arising from a business combination, insurance settlement proceeds, and distributions from certain equity method investees. ASU 2016-15 is effective for annual periods beginning after December 15, 2017. Early adoption is permitted. The Company is in the process of assessing the impact, if any, of this ASU on its financial statements. The Company does not expect that the adoption of this amendment will have a material impact on its financial statements.

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3. Fair Value Measurements

The following table sets forth the fair value of the Company's financial assets and liabilities measured on a recurring basis by level within the fair value hierarchy:

	December 31, 2016			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Money market funds	$ 10,516	$ 10,516	$ –	$ –
Commercial paper	11,243	–	11,243	–
Corporate debt securities	14,353	–	14,353	–
Asset-backed securities	7,830	–	7,830	–
U.S. government agency securities	2,502	–	2,502	–
Total	$ 46,444	$ 10,516	$ 35,928	$ –
Liabilities:				
Redeemable convertible preferred stock warrant liability	$ 1,193	$ –	$ –	$ 1,193
Total	$ 1,193	$ –	$ –	$ 1,193

	December 31, 2017			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Money market funds	$ 6,578	$ 6,578	$ –	$ –
Commercial paper	7,689	–	7,689	–
Corporate debt securities	800	–	800	–
U.S. government agency securities	3,893	–	3,893	–
Total	$ 18,960	$ 6,578	$ 12,382	$ –
Liabilities:				
Redeemable convertible preferred stock warrant liability	$ 1,708	$ –	$ –	$ 1,708
Total	$ 1,708	$ –	$ –	$ 1,708

Where applicable, the Company uses quoted market prices in active markets for identical assets to determine fair value. This pricing methodology applies to Level 1 investments, which are composed of money market funds.

If quoted prices in active markets for identical assets are not available, then the Company uses quoted prices for similar assets or inputs other than quoted prices that are observable, either directly or indirectly. These investments are included in Level 2 and consist of commercial paper, corporate debt securities, asset-backed securities and U.S. government agency securities. These assets are valued using market prices when available, adjusting for accretion of the purchase price to face value at maturity.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability.

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In certain cases where there is limited activity or less transparency around inputs to valuation, securities are classified as Level 3 within the valuation hierarchy. Level 3 liabilities that are measured at estimated fair value on a recurring basis consist of the redeemable convertible preferred stock warrant liability. Refer to Note 10 for the valuation techniques used to measure fair value and a description of the inputs and the information used to develop the inputs to the valuation models. Generally, increases or decreases in the fair value of the underlying redeemable convertible preferred stock would result in a directionally similar impact in the fair value measurement of the associated warrant liability. There were no transfers within the hierarchy during the years ended December 31, 2016 and 2017.

The following table sets forth a summary of the changes in the estimated fair value of the Company's redeemable convertible preferred stock warrant liability:

	Redeemable Convertible Preferred Stock Warrant Liability
	(in thousands)
Balance as of December 31, 2015	$ 1,281
Changes in estimated fair value of warrant liability included in other income (expense), net	(88)
Balance as of December 31, 2016	1,193
Estimated fair value of warrants issued	329
Changes in estimated fair value of warrant liability included in other income (expense), net	186
Balance as of December 31, 2017	$ 1,708

4. Cash Equivalents and Available-for-Sale Marketable Securities

Cash equivalents and available-for-sale marketable securities consisted of the following:

	December 31, 2016			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$ 10,516	$ –	$ –	$ 10,516
Commercial paper	11,243	–	–	11,243
Corporate debt securities	14,368	–	(15)	14,353
Asset-backed securities	7,830	1	(1)	7,830
U.S. government agencies	2,504	–	(2)	2,502
Total	46,461	1	(18)	46,444
Less amounts classified as cash equivalents	(10,516)	–	–	(10,516)
Total marketable securities	$ 35,945	$ 1	$ (18)	$ 35,928

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	December 31, 2017			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$ 6,578	$ –	$ –	$ 6,578
Commercial paper	7,689	–	–	7,689
Corporate debt securities	800	–	–	800
U.S. government agencies	3,893	–	–	3,893
Total	18,960	–	–	18,960
Less amounts classified as cash equivalents	(18,960)	–	–	(18,960)
Total marketable securities	$ –	$ –	$ –	$ –

For the years ended December 31, 2016 and 2017, the Company recognized no material realized gains or losses on available-for-sale marketable securities.

5. Collaboration and License Agreements

The Company has recognized revenue from its collaboration and license agreements as follows:

	Year Ended December 31,	
	2016	2017
	(in thousands)	
Celgene Corporation ("Celgene"):		
Amortization of up-front payment	$ 27,730	$ 16,694
Research and development services	–	660
Milestones and contingent payments	26,271	27,252
Total	54,001	44,606
Merck KGaA, Darmstadt, Germany (operating in the United States and Canada under the name "EMD Serono"):		
Amortization of up-front payment	4,120	4,120
Research and development services	1,610	3,015
Total	5,730	7,135
Total collaboration revenue	$ 59,731	$ 51,741

2014 Celgene Agreement

In September 2014, the Company signed a Collaboration and License Agreement with Celgene (the "2014 Celgene Agreement") to discover and develop bispecific antibodies and/or antibody-drug conjugates ("ADCs"), focused primarily on the field of immuno-oncology, using the Company's proprietary integrated cell-free protein synthesis platform, XpressCF.

Upon signing the 2014 Celgene Agreement, the Company received an up-front, nonrefundable payment totaling $83.1 million. Celgene had the option to extend the collaboration beyond the initial three-year research term in exchange for an additional payment. The Company identified multiple deliverables under the 2014 Celgene Agreement, which included access to certain intellectual property rights, performance of research and development services, and joint steering committee participation. The Company considered the provisions of the multiple-element arrangement guidance in determining whether access to the intellectual property rights under the arrangement had stand-alone value. Based

on the Company's expertise in applying its proprietary technology, it concluded that there was no stand-alone value of the intellectual property rights accessed by Celgene. Consequently, the Company determined that the identified deliverables comprise a single unit of accounting, and the up-front payment was deferred and recognized over the relevant estimated period during which the Company has significant obligations to perform research and development services and participate in joint steering committee activities in the collaboration. Consequently, the Company was recognizing revenues from the up-front payment ratably over an approximate three-year period starting in September 2014.

In March 2015, the Company received a $15.0 million contingent payment ("March 2015 payment") from Celgene under the 2014 Celgene Agreement that provided Celgene a right to access certain of the Company's technology for use in conjunction with certain Celgene intellectual property. In June 2016, the Company received a $25.0 million milestone ("June 2016 payment") upon completion of certain preclinical activities. The March 2015 and June 2016 payments are being recognized as revenue over the remaining portion of the estimated period of the research term. Additionally, in June 2016, the Company earned a $10.0 million substantive milestone for certain manufacturing accomplishments. The entire $10.0 million amount was recognized as revenue when earned, as the Company had completed its performance obligations related to the achievement of the substantive milestone. In September 2017, the Company earned a $10.0 million milestone for certain manufacturing accomplishments, which payment was received from Celgene in October 2017, as part of the Amended and Restated Collaboration and License Agreement with Celgene (the "2017 Celgene Agreement"). The entire $10.0 million amount was recognized as revenue when earned, as the Company had completed its performance obligations related to the achievement of the substantive milestone. As of December 31, 2016 and 2017, there was $39.5 million and $7.1 million, respectively, of deferred revenue related to payments received by the Company under the 2014 Celgene Agreement.

Beginning two years after the effective date of the Option Support Agreement and ending upon the expiration of the research term, Celgene, prior to the August 2017 Amended and Restated Collaboration and License Agreement (See 2017 Celgene Agreement), had the exclusive option to acquire the Company, including rights to all programs owned by the Company at the time, at a value based on a pre-specified valuation procedure. Related to Celgene's exclusive option, the Company was subject to operating covenants that prohibited certain actions by the Company without Celgene's prior written consent. The option was terminated in August 2017.

2017 Celgene Agreement

In August 2017, the Company entered into the 2017 Celgene Agreement to refocus its 2014 Celgene Agreement on four programs that are advancing throughout preclinical development, including an ADC program targeting B cell maturation antigen.

Upon signing of the 2017 Celgene Agreement, the Company received an option fee payment of $12.5 million in August 2017 and is eligible to receive a second option fee payment of $12.5 million following the first investigational new drug ("IND") clearance, if any, for one of the four programs, if Celgene desires to maintain its option to acquire the U.S. rights to develop and commercialize a second collaboration program to reach IND status. If Celgene exercises its option to acquire from the Company U.S. rights to a second collaboration program, it will make an option exercise fee payment to the Company, the amount of which depends on which program reaches IND status. The Company determined that the initial $12.5 million payment should be deferred and recognized over the entire

potential period during which Celgene has an option to acquire worldwide rights to a second collaboration program. Consequently, the Company is recognizing revenue from such payment ratably over an approximate three-year period starting in August 2017 and ending in September 2020.

The Company evaluated the terms of the 2017 Celgene Agreement, relative to the 2014 Celgene Agreement, and determined the 2017 Celgene Agreement to be a material modification to the 2014 Celgene Agreement for financial reporting purposes. As a result, the Company determined that the remaining deferred revenue balance of $8.2 million as of the date of entering into the 2017 Celgene Agreement, related to Celgene payments to the Company under the 2014 Celgene Agreement, will also be recognized ratably over an approximate three-year period starting in August 2017 and ending in September 2020. The Company has received and will be eligible to receive financial support for research and development services assigned to the Company by Celgene, based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate, which will be recognized as revenue as the related reimbursable activities approved by Celgene and the Company are performed by the Company.

Under the terms of the 2017 Celgene Agreement, the Company is entitled to earn development and regulatory contingent payments for each of the four programs under the collaboration, and royalties on sales of any commercial products that may result from the 2017 Celgene Agreement. As of December 31, 2017, the Company is eligible to receive a potential future payment for manufacturing activities of $10.0 million, which is considered to be a substantive milestone for which the related payment will be recognized as revenue upon achievement. In addition, for licensed products for which Celgene holds worldwide rights, the Company is eligible to receive aggregate milestone and option fee payments of up to $295.0 million for certain licensed products and up to $393.7 million for certain other licensed products under the collaboration, if approved in multiple indications, and, depending on the licensed product, tiered royalties ranging from single digits to low teen percentages on worldwide sales of any commercial products that may result from the 2017 Celgene Agreement. Additionally, for licensed products for which Celgene holds ex-U.S. rights, the Company will also be eligible to receive pre-commercial contingent payments and tiered royalties ranging from mid to high single digit percentages. The contingent payments under the 2017 Celgene Agreement are not considered to be substantive milestones because the receipt of such payments is based solely on the performance of Celgene.

As of December 31, 2017, there was $10.9 million of deferred revenue related to a payment received by the Company under the 2017 Celgene Agreement.

As of December 31, 2017, the Company had a $750,000 receivable from Celgene related to the 2017 Celgene Agreement, which is included in accounts receivable on the balance sheet.

In addition, the Company granted Celgene the right to purchase shares of Company's stock in certain future financings by the Company. In conjunction with this revision, the option for Celgene to acquire the Company under the 2014 Celgene Agreement was terminated along with restrictions from entering additional collaborations or accessing the public financial markets.

Celgene may terminate the 2017 Celgene Agreement at any time with 120 days' prior written notice. Either the Company or Celgene has the right to terminate the 2017 Celgene Agreement based on the other party's uncured material breach, challenge of the validity and enforceability of intellectual property, or bankruptcy.

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EMD Serono Agreement

The Company signed a Collaboration Agreement and a License Agreement with EMD Serono in May 2014 and September 2014, respectively, which were entered into in contemplation of each other and therefore treated as a single agreement for accounting purposes. The Collaboration Agreement was terminated upon execution of the License Agreement (the "MDA Agreement"), which agreement is to develop ADCs for multiple cancer targets.

Upon signing the Collaboration Agreement, the Company received an up-front, nonrefundable, non-creditable payment totaling $10.0 million. Upon signing the MDA Agreement, the Company received an additional up-front, nonrefundable payment totaling $10.0 million and will receive financial support for research and development services to be provided by the Company, based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate.

The Company identified multiple deliverables under the MDA Agreement, which include access to certain intellectual property rights, performance of research and development services, and joint project team participation. The Company considered the provisions of the multiple-element arrangement guidance in determining whether access to the intellectual property rights under the arrangement has stand-alone value. Based on the Company's expertise in applying its proprietary technology, it concluded that there is no stand-alone value of the intellectual property rights accessed by EMD Serono. Consequently, the Company determined that the identified deliverables comprise a single unit of accounting, and the up-front cash payments will be deferred and recognized over the relevant estimated period during which the Company has significant obligations to perform research and development services and participate in joint project team activities for EMD Serono. Consequently, the Company is recognizing revenues from the up-front payments ratably over an estimated five-year period starting in June 2014. Revenue for research and development services under the MDA Agreement will be recognized as revenue as the related reimbursable activities approved by EMD Serono and the Company are performed by the Company.

The Company is eligible to receive up to $52.5 million for each product developed under the MDA Agreement, primarily from pre-commercial contingent payments. In addition, the Company is eligible to receive tiered royalties ranging from low to mid single digit percentages, along with certain additional one-time royalties, on worldwide sales of any commercial products that may result from the MDA Agreement. The MDA Agreement term expires on a product-by-product and country-by-country basis. Upon expiration, EMD Serono will have a fully paid-up, royalty-free, perpetual, and irrevocable non-exclusive license, with the right to grant sublicenses, under certain Company intellectual property rights. As of December 31, 2016 and 2017, there was $10.0 million and $5.9 million, respectively, of deferred revenue related to payments received by the Company under the MDA Agreement.

EMD Serono may terminate the MDA Agreement at any time with 90 days' prior written notice or upon the inability of the Company to provide EMD Serono access to a specified number of cancer drug targets. Either the Company or EMD Serono has the right to terminate the MDA Agreement based on the other party's uncured material breach or bankruptcy.

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6. Property and Equipment, Net

Property and equipment, net, consists of the following:

	December 31,	
	2016	2017
	(in thousands)	
Computer equipment and software	$ 1,298	$ 1,372
Furniture and office equipment	487	492
Laboratory equipment	21,657	21,375
Leasehold improvements	15,648	15,772
Total	39,090	39,011
Less accumulated depreciation and amortization	(20,400)	(25,014)
Total property and equipment, net	$ 18,690	$ 13,997

7. Loan and Security Agreement

In August 2017, the Company entered into a loan and security agreement with Oxford Finance LLC ("Oxford") and Silicon Valley Bank ("SVB") under which it borrowed $15.0 million (the "August 2017 Loan"). The loan is due in 30 monthly installments from March 2019 through its repayment in August 2021, with interest-only monthly payments until March 2019. If certain qualified funding events occur, the loan will be due in 24 monthly installments from September 2019 through its repayment in August 2021, with interest-only payments until September 2019.

The August 2017 Loan is secured by all assets of the Company, excluding intellectual property and certain other assets. The August 2017 Loan contains customary affirmative and restrictive covenants, including with respect to fundamental transactions, the incurrence of additional indebtedness, grant liens, pay any dividend or make any distributions to the Company's holders, make investments, merge or consolidate with any other person, or engage in transactions with its affiliates, but does not include any financial covenants. The loan agreement provides that an event of default will occur if, among other triggers, there occurs any circumstances that could reasonably be expected to result in a material adverse effect on the Company's business, operations or condition, or on its ability to perform its obligations under the loan. The Company has disclosed in Note 1 that there is currently substantial doubt about its ability to continue as a going concern given its continuing operating losses and its current available capital resources, which could be deemed to be an event of default if such condition was considered to have a material adverse effect on the Company's business, operations or condition. As a result, the Company has classified the entire debt balance as a current liability given that a determination of such an event of default is outside of the Company's control. The loan agreement also includes customary representations and warranties, other events of default and termination provisions.

The interest charges on the loan will be based on a floating rate that equals the greater of 7.39% or the sum of the 30-day U.S. Dollar London Interbank Offered Rate ("LIBOR") plus 6.40%. In addition, the Company will make a final payment equal to 3.83% of the original principal amount of the loan, or $574,500, which will be accrued over the term of the loan using the effective-interest method. During the year ended December 31, 2017, the Company recorded interest expense related to this loan of $611,000. In connection with the August 2017 Loan, the Company issued to Oxford and SVB a warrant to purchase 454,820 shares and 227,410 shares, respectively, of Series D-2 redeemable convertible preferred stock at an exercise price of $0.6596 per share (the "2017 Warrant"). If there is a subsequent convertible preferred stock or other senior equity securities financing with a per share price less than

the Series D-2 redeemable convertible preferred per share price, then the warrant shall instead be to purchase such class of shares, based on the per share price of such (see Note 14). The warrants were exercisable from the date of issuance and have a 10-year term. The estimated fair value upon issuance of the 2017 Warrant based on Series D-2 convertible preferred stock was $329,000, which was recorded a redeemable convertible preferred stock warrant liability. The fair value of the warrant at the date of issuance was determined using an Option Pricing Method and was recorded a redeemable convertible preferred stock warrant liability with an offset to debt discount on the associated borrowings on the Company's balance sheet. The debt discount is being amortized to interest expense over the repayment period of the loan using the effective-interest method. As noted above, the Company has classified the entire debt balance as a current liability on its balance sheet as of December 31, 2017. As of December 31, 2017, the Company's scheduled future principal payments for the loan are as follows:

	Amount (in thousands)
Year ending December 31, 2018	$ –
Year ending December 31, 2019	5,000
Year ending December 31, 2020	6,000
Year ending December 31, 2021	4,000
Total future maturities	15,000
Less unamortized debt discount as of December 31, 2017	(366)
Ending debt balance as of December 31, 2017	$ 14,634

8. Commitments and Contingencies

Operating Lease

The Company leases its South San Francisco facility under an operating lease. The landlord provided the Company with an Extended Term Tenant Work Allowance of $919,000 related to tenant improvements under the lease amendment entered in May 2012. The allowance was repaid through November 2016, in the form of an increased base rent amount. In May 2016, the Company exercised an option to extend the lease term of its South San Francisco facility, with fixed rental payments from December 2016 through November 2021. Under the amended lease agreement, the Company has an option to extend the lease term through November 2026. Additionally, the landlord provided the Company with a tenant improvement allowance of $245,000. If the Company elects to access the tenant improvement allowance, the related amount will be repaid through November 2021, in the form of an increased monthly base rent amount. As of December 31, 2017, the Company had not accessed the tenant improvement allowance.

In May 2011, the Company entered into a lease agreement for a facility in San Carlos, California, which in August 2012 was amended to include an adjoining space in the same building, with fixed rental payments through July 31, 2016. In December 2014, the lease term was extended through July 2021. Under the lease agreement, the Company has two three-year options to extend the lease term, potentially through July 2027.

In August 2013, the Company entered into an agreement to sublease a second facility in South San Francisco, California, with fixed rental payments through March 2017. In May 2016, the Company entered into an agreement for a lease on the second facility in South San Francisco, with fixed rental

payments from May 2017 through November 2021, following the end of the sublease term for the same facility. Under the lease agreement, the Company has an option to extend the lease term through November 2026.

In March 2015, the Company entered into an agreement to lease a second facility in San Carlos, California, with fixed rental payments through June 2021. Under the lease agreement, the Company has two three-year options to extend the lease term, potentially through June 2027.

As of December 31, 2017, the Company's future minimum payments under the noncancelable operating leases for the facilities are as follows:

Year Ending December 31,	Amount (in thousands)
2018	$ 3,540
2019	3,655
2020	3,771
2021	3,195
Total future minimum lease payments	$ 14,161

Rent expense was $2.2 million and $3.2 million for the years ended December 31, 2016 and 2017, respectively.

Indemnification

In the ordinary course of business, the Company may provide indemnifications of varying scope and terms to vendors, lessors, business partners, board members, officers, and other parties with respect to certain matters, including, but not limited to, losses arising out of breach of such agreements, services to be provided by the Company, negligence or willful misconduct of the Company, violations of law by the Company, or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with directors and certain officers and employees that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers or employees. No demands have been made upon the Company to provide indemnification under such agreements, and thus, there are no claims that the Company is aware of that could have a material effect on the Company's balance sheets, statements of operations, or statements of cash flows. The Company currently has directors' and officers' insurance.

9. Related-Party Transactions

Related party transactions with Celgene, which owned 15.4% of the Company's outstanding equity interest as of December 31, 2016 and 2017, are described in Note 5.

Three directors of the Company are performing consulting services for the Company. Subsequent to his appointment to the Company's Board of Directors, the Company paid $60,000 to one of the directors in each of the years ended December 31, 2016 and 2017. Additionally, such director was granted options to purchase 9,805 shares of the Company's common stock from 2009 to 2015, at the then-current fair values of the common stock ranging from $4.36 to $11.98 per share, related to his consulting services, which vest ratably over four years. As of December 31, 2017, 725 shares of these options were unvested. Also, the Company paid a transaction advisory fee of $700,000 and

$450,000 during the years ended December 31, 2016 and 2017, respectively, related to the Celgene agreements to a firm, of which such director is a managing executive. Additional payments, based on a single digit percentage of any future payments, will be made to such transaction advisory firm upon receipt of future payments under the 2017 Celgene Agreement (see Note 5).

The Company paid $30,000 to the second director performing consulting services for the Company in each of the years ended December 31, 2016 and 2017. Additionally, such director was granted an option to purchase 3,269 shares of the Company's common stock in September 2015 at the then-current fair value of the common stock, related to his consulting services, which vests ratably over four years.

The Company paid $25,000 to the third director performing consulting services for the Company in the year ended December 31, 2017.

On August 30, 2010, the Company received a promissory note with recourse from its chief executive officer, which was used to purchase common stock. The principal amount of the note was approximately $200,000, which accrues interest at 0.53%, compounding semiannually. The note can be prepaid without penalty and is due on August 30, 2019. The note and related interest receivable has been recorded as a component of stockholders' deficit. As of December 31, 2016 and 2017, the outstanding balance is approximately $207,000 and $208,000, respectively.

Investment in SutroVax, Inc. ("SutroVax")

In December 2013, the Company and Johnson & Johnson Innovation, through the Johnson & Johnson Development Corporation, provided initial co-funding for a new company, SutroVax. SutroVax leverages the Company's proprietary integrated cell-free protein synthesis platform, XpressCF, to develop novel vaccines for a broad range of disease targets. The Company had a $10,000 and $34,000 receivable due from SutroVax as of December 31, 2016 and 2017, respectively, which was included in accounts receivable on the balance sheet.

In December 2013, the Company purchased 3,000,000 shares of common stock of SutroVax at a purchase price of $0.001 per share for an aggregate purchase price of $3,000. The investment was initially accounted for under the equity method and the investment was reduced to zero as its share of losses exceeded the investment balance. The Company provided initial funding for SutroVax of $250,000, with an additional investment in August 2014 of $250,000, which were both in exchange for a convertible promissory note. In 2015 and 2016, SutroVax completed its $22.0 million Series A preferred stock financings, and at such time the convertible promissory notes were repaid with interest and cancelled. As of December 31, 2016, the Company held an 18.6% common stock ownership interest in SutroVax on a fully-diluted basis, which was recorded at a value of $0 and was accounted for under the cost method.

In 2017, SutroVax completed additional preferred stock financings, in which the Company did not participate. As of December 31, 2017, the Company held a 7.8% common stock ownership interest in SutroVax on a fully-diluted basis, with a carrying value of $0.

SutroVax qualifies as a variable interest entity. However, the Company maintains only shared power to direct the activities that most significantly impact the performance of SutroVax. Therefore, the Company is not considered the primary beneficiary and consolidation is not required.

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10. Redeemable Convertible Preferred Stock and Stockholders' Deficit

Redeemable Convertible Preferred Stock

Redeemable convertible preferred stock, $0.001 par value, as of December 31, 2016 and 2017, consisted of:

	Shares Authorized	Shares Issued and Outstanding	Original Issue Price Per Share	Carrying Value	Liquidation Preference
		(in thousands, except for share and per share amounts)			
Series A	3,503,692	3,503,692	$ 0.5900	$ 1,992	$ 2,067
Series B	24,515,966	24,345,936	0.8822	19,865	21,478
Series C	78,582,049	76,102,337	0.4797	38,035	36,506
Series C-2	8,338,892	8,338,892	0.5996	4,845	5,000
Series D	43,362,233	43,362,233	0.5996	25,900	26,000
Series D-2	18,097,331	18,097,331	0.6596	11,868	11,937
Balance at December 31, 2016	176,400,163	173,750,421		$ 102,505	$ 102,988

	Shares Authorized	Shares Issued and Outstanding	Original Issue Price Per Share	Carrying Value	Liquidation Preference
		(in thousands, except for share and per share amounts)			
Series A	3,503,692	3,503,692	$ 0.5900	$ 1,992	$ 2,067
Series B	24,515,966	24,345,936	0.8822	19,865	21,478
Series C	78,582,049	76,102,337	0.4797	38,035	36,506
Series C-2	8,338,892	8,338,892	0.5996	4,845	5,000
Series D	43,362,233	43,362,233	0.5996	25,900	26,000
Series D-2	18,779,561	18,097,331	0.6596	11,868	11,937
Balance at December 31, 2017	177,082,393	173,750,421		$ 102,505	$ 102,988

The significant rights, preferences and privileges of the redeemable convertible preferred stock are as follows:

Redemption

At the election of certain major investors, the Company will redeem all outstanding shares of preferred stock in three equal annual installments commencing September 26, 2019, by paying in cash an amount per share equal to the original issuance prices of $0.59 per share of Series A redeemable convertible preferred stock, $0.8822 per share of Series B redeemable convertible preferred stock, $0.4797 per share of Series C redeemable convertible preferred stock, $0.5996 per share of Series C-2 redeemable convertible preferred stock, $0.5996 per share of Series D redeemable convertible preferred stock, and $0.6596 per share of Series D-2 redeemable convertible preferred stock, plus 8% of the applicable original issuance prices per annum calculated from the original issuance date of each share of preferred stock.

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Additionally, all shares of preferred stock are redeemable in the event of a change in control or sale of substantially all of the assets of the Company. As certain redemption events are outside the control of the Company, all preferred stock amounts have been presented outside of stockholders' deficit.

The carrying value of the redeemable convertible preferred stock has not been accreted up to its redemption value as no redemption events are considered probable as of December 31, 2017.

Dividends

The holders of preferred stock are entitled to receive, when and as declared by the Board of Directors, dividends at the per annum rate of $0.0472 per share of Series A redeemable convertible preferred stock, $0.07056 per share of Series B redeemable convertible preferred stock, $0.03838 per share of Series C redeemable convertible preferred stock, $0.048 per share of Series C-2 redeemable convertible preferred stock, $0.048 per share of Series D redeemable convertible preferred stock and $0.0528 per share of Series D-2 redeemable convertible preferred stock, prior and in preference to any declaration or payment of a dividend to the common stockholders. Such dividends are not cumulative, and no right to such dividends shall accrue to holders of the preferred stock unless declared by the Board of Directors. Payment of any dividends to the holders of preferred stock shall be on a pro rata, pari passu basis in proportion to the dividend rates set forth above for each series of preferred stock. Following payment of these dividends to the preferred stockholders, any additional dividends will be payable to the holders of the Company's common and preferred stock on an as-if-converted-to-common-stock basis. No dividends have been declared to date.

Liquidation

In the event of any liquidation, dissolution, or winding up of the Company, either voluntary or involuntary, the holders of the preferred stock shall be entitled to receive pro rata, prior and in preference to any distribution to the holders of the common stock, an amount equal to the original issuance prices of each series (in each case, as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events) and all declared but unpaid dividends, if any.

After giving effect to the liquidation preferences noted above, all of the remaining assets of the Company shall be distributed to the holders of preferred stock and common stock pro rata based on the number of shares of common stock held by each such holder, treating, for this purpose, all such securities as if they had been converted to common stock immediately prior to the liquidation event. However, if the aggregate amount that the holders of preferred stock are entitled to receive exceeds two times the applicable original issuance prices per share for such series of preferred stock plus any dividends declared but unpaid thereon (the "Maximum Participation Amount"), each holder of preferred stock shall be entitled to receive upon such liquidation the greater of (i) the Maximum Participation Amount and (ii) the amount such holder would have received if all shares of such series of preferred stock had been converted into common stock immediately prior to the liquidation event.

Unless certain major investors elect otherwise, any of the following events shall be treated as a liquidation: (i) any consolidation, merger, acquisition, or any other corporate reorganization in which the stockholders of the Company immediately prior to such event own less than 50% of the voting power of the surviving or successor entity or its parent immediately after such event; (ii) any transaction or series of related transactions in which in excess of 50% of the Company's voting power is transferred; or (iii) any sale, lease, transfer, exclusive license, or other disposition of all or substantially all of the assets of the Company.

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Voting

Each share of redeemable convertible preferred stock is entitled to voting rights equivalent to the number of shares of common stock into which each share can be converted.

The holders of Series C redeemable convertible preferred stock are entitled to elect two directors of the Company, and the holders of Series A redeemable convertible preferred stock and Series B redeemable convertible preferred stock are each entitled to elect one director of the Company. Additionally, holders of common stock are entitled to elect one director of the Company, and all stockholders can elect the balance of the total number of directors of the Company.

Conversion

The conversion price as of December 31, 2017 of each series of redeemable convertible preferred stock listed below is subject to adjustment upon certain dilutive events, including in the event the Company issues certain additional equity securities at a purchase price less than the current conversion price (see Note 14).

Each share of Series D-2 redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.6596 by the Series D-2 redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series D-2 redeemable convertible preferred stock conversion price as of December 31, 2017 is $0.6596 per share of common stock. The Series D-2 redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events.

Each share of Series D redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.5996 by the Series D redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series D redeemable convertible preferred stock conversion price as of December 31, 2017 is $0.5996 per share of common stock. The Series D redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events.

Each share of Series C-2 redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.5996 by the Series C-2 redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series C-2 redeemable convertible preferred stock conversion price as of December 31, 2017 is $0.5996 per share of common stock. The Series C-2 redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events.

Each share of Series C redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.4797 by the Series C redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series C redeemable convertible preferred stock conversion price as of December 31, 2017 is $0.4797 per share of common stock. The Series C redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events.

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Each share of Series B redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.8822 by the Series B redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series B redeemable convertible preferred stock conversion price as of December 31, 2017 is $0.6283 per share of common stock. The Series B redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events.

Each share of Series A redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.59 by the Series A redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series A redeemable convertible preferred stock conversion price as of December 31, 2017 is $0.5227 per share of common stock. The Series A redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events.

Each share of redeemable convertible preferred stock shall automatically be converted into shares of common stock at the then-effective rate applicable to voluntary conversion as described above, upon either (i) the completion of an underwritten public offering at a price of not less than $65.30 per share (as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events) that results in at least $50.0 million in net cash proceeds; or (ii) the written consent of certain major investors.

Warrants

During the period from 2008 to 2012, the Company issued various warrants for the purchase of redeemable convertible preferred stock in connection with debt financings and the issuance of redeemable convertible preferred stock.

In August 2017, the Company issued warrants to Oxford and SVB to purchase an aggregate of 682,230 shares of Series D-2 redeemable convertible preferred stock at an exercise price of $0.6596 per share in connection with the issuance of August 2017 Loan (see Note 7). If there is a subsequent convertible preferred stock or other senior equity securities financing with a per share price less than the Series D-2 redeemable convertible preferred per share price, then the warrant shall automatically convert to a warrant to purchase such class of shares, based on the per share price of such equity (See Note 14). The warrant was exercisable from the date of issuance and has a 10-year term. As of December 31, 2017, the 2017 Warrant to purchase 682,230 shares of Series D-2 redeemable convertible preferred stock was outstanding.

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The Company has reserved shares of its Series B, Series C and Series D-2 redeemable convertible preferred stock for issuance upon exercise of the respective warrants. As of December 31, 2016 and 2017, the warrants outstanding and exercisable were as follows:

Stock	Expiration Date	Exercise Price Per Share	Shares as of December 31, 2016	Shares as of December 31, 2017	Estimated Fair Value as of December 31, 2016	Estimated Fair Value as of December 31, 2017
			(in thousands except for share and per share amounts)			
Series B redeemable convertible preferred	June 2018	$ 0.8822	170,030	170,030	$ 100	$ 116
Series C redeemable convertible preferred(1)	July 2020 – June 2022	$ 0.4797	2,479,712	2,479,712	1,093	1,263
Series D-2 redeemable convertible preferred	August 2027	$ 0.6596	–	682,230	–	329
Total					$ 1,193	$ 1,708

(1) 1,791,784 of the Series C redeemable convertible preferred warrants expire at the earlier of (i) the tenth anniversary of issuance; (ii) the consummation of certain change of control events; or (iii) upon the completion of an IPO of the Company's common stock.

The warrants were valued using the Option Pricing Method and were estimated using the following assumptions:

	Year Ended December 31, 2016	Year Ended December 31, 2017
Average expected life (in years)	2.5	2.5
Expected volatility	84.7%	85.3%
Risk-free interest rate	0.83%	1.55%
Expected dividend	–	–

Common Stock

Holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders of the Company.

As of December 31, 2017, the Company had reserved common stock, on an if-converted basis, for issuance as follows:

Redeemable convertible preferred stock	5,063,404
Common stock options issued and outstanding	835,320
Remaining shares reserved for issuance under 2004 equity Incentive Plan	91,149
Warrants to purchase redeemable convertible preferred stock	93,527
Warrants to purchase common stock	1,099
Total	6,084,499

11. Stock Options

Under the Company's 2004 Equity Incentive Plan (the "Plan") and associated amendments, 1,315,901 shares of common stock have been reserved for the issuance of incentive stock options

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("ISOs"), NSOs, stock bonuses, and rights to acquire restricted stock to employees, officers, directors, and consultants of the Company as of December 31, 2016 and 2017. ISOs granted under the Plan generally vest 25% after the completion of 12 months of service, with the balance vesting in equal monthly installments over the next 36 months of service, and expire ten years from the grant date. NSOs vest per the specific agreement and expire ten years from the date of grant.

The following table summarizes option activity under the Plan:

	Shares Available for Grant	Outstanding Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contract Term (Years)	Aggregate Intrinsic Value
Balances at December 31, 2015	361,385	614,135	$ 11.61	7.69	$ 3,935
Granted	(268,076)	268,076	$ 14.13		
Exercised	–	(35,552)	$ 5.18		
Canceled	49,752	(49,752)	$ 7.01		
Balances at December 31, 2016	143,061	796,907	$ 10.05	7.61	$ 2,685
Granted	(62,392)	62,392	$ 13.10		
Exercised	–	(13,499)	$ 7.06		
Canceled	10,480	(10,480)	$ 12.46		
Balances at December 31, 2017	91,149	835,320	$ 10.31	6.84	$ 3,813
Exercisable at December 31, 2017		714,757	$ 9.86	6.54	$ 3,589
Vested and expected to vest at December 31, 2017		806,255	$ 10.14	6.79	$ 3,761

The aggregate intrinsic value was calculated as the difference between the exercise prices of the underlying stock option awards and the estimated fair value of the Company's common stock on the date of exercise. For the years ended December 31, 2016 and 2017, the aggregate intrinsic value of stock options exercised was $316,000 and $91,000, respectively, determined at the date of the option exercise.

Employee Stock Options Valuation

The fair value of the shares of common stock underlying stock options was determined by the Company's Board of Directors. Because there was no public market for the Company's common stock, the Board of Directors determined fair value of the common stock at the time of grant of the option by considering a number of objective and subjective factors including important developments in the Company's operations, valuations performed by an independent third party, sales of redeemable convertible preferred stock, actual operating results and financial performance, the conditions in the biotechnology industry and the economy in general, the stock price performance and volatility of comparable public companies, and the lack of liquidity of the Company's common stock, among other factors.

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For determining stock-based compensation expense, the fair-value-based measurement of each employee stock option was estimated as of the date of grant using the Black-Scholes option-pricing model with assumptions as follows:

	Year Ended December 31,	
	2016	2017
Expected term (in years)	5.7-6.1	5.5-6.1
Expected volatility	58.00%-59.00%	56.52-58.55%
Risk-free interest rate	1.24%-2.09%	1.89-2.18%
Expected dividend	–	–

Expected Term—The expected term represents the period that the stock-based awards are expected to be outstanding. The Company used the "simplified" method to determine the expected term of options granted, which calculates the expected terms as the average of the weighted-average vesting term and the contractual term of the option.

Expected Volatility—Since the Company is not yet a public company and does not have any trading history for its common stock, the expected volatility was estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a period equal to the expected term of the stock option grants. The Company will continue to apply this process until a sufficient amount of historical information regarding the volatility of its own stock price becomes available.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero-coupon U.S. Treasury notes with maturities approximately equal to the expected term of the options.

Expected Dividend—The Company has never paid dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

Using the Black-Scholes option-valuation model, the weighted-average estimated grant-date fair value of employee stock options granted during the years ended December 31, 2016 and 2017 was $7.62 and $7.26 per share, respectively. The total fair value of options vested during the years ended December 31, 2016 and 2017 was $942,000 and $1.6 million, respectively.

Non-Employee Stock-Based Compensation Expense

The Company remeasures the estimated fair value of the unvested portion of the award each period, until the award is fully vested. The Company believes that the fair value of the stock options is more reliably measurable than the fair value of services received. The fair value of options granted to non-employees was estimated using the Black-Scholes method. The stock-based compensation expense related to non-employees for the years ended December 31, 2016 and 2017 was $49,000 and $69,000, respectively.

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Stock-Based Compensation Expense

Total stock-based compensation expense recognized was as follows:

	Year Ended December 31,	
	2016	2017
	(in thousands)	
Research and development	$ 104	$ 119
General and administrative	864	1,272
Total	$ 968	$ 1,391

As of December 31, 2017, there was approximately $1.7 million of total unrecognized compensation cost related to the unvested stock options granted under the Company's Plan. The remaining unrecognized compensation cost is expected to be recognized over a weighted-average period of 2.2 years.

Early Exercise of Options

Certain stock options granted under the Company's stock option Plan provide option holders the right to elect to exercise unvested options in exchange for restricted common stock. A summary of the restricted stock shares issued under the Company's Plan is as follows:

	Shares
Balance as of December 31, 2015	37,698
Vested	(20,558)
Balance as of December 31, 2016	17,140
Vested	(14,766)
Balance as of December 31, 2017	2,374

The shares are subject to repurchase by the Company at the original exercise price in the event the optionee's employment is terminated either voluntarily or involuntarily. The repurchase right to these shares generally lapses 25% after one year, and the remainder lapses ratably over three years thereafter. The Company treats cash received from the exercise of unvested options as a refundable deposit, shown as a liability in its balance sheets. As of December 31, 2016 and 2017, the Company included cash received for the early exercise of options of approximately $99,000 and $14,000, respectively, which is included in other noncurrent liabilities. Amounts are transferred from liabilities into common stock and additional paid-in-capital as the shares vest.

2017 Call Option Plan

In February 2017, the Company adopted a 2017 Call Option Plan to grant selected employees, officers, directors and consultants (collectively, the "Participants") options to purchase shares of the common stock of SutroVax, an unconsolidated investee of the Company (see Note 9). The Company has reserved 450,000 shares of SutroVax common stock as of December 31, 2017 for issuance under the program. The call options vest 25% on each of January 1, 2017, 2018, 2019, and 2010, and expire one year from the vesting date.

Using the Black-Scholes option-valuation model, the call options are measured at fair value on grant date and at each reporting period prior to their vesting, with cost recognized over the requisite

service period as compensation cost. Any changes in the fair value subsequent to the vesting date are recognized in other income (expense), net in the statement of operations. Call options covering 420,000 shares have been granted with an exercise price of $0.76 per share, with 105,000 shares vested and exercised during the year ended December 31, 2017. Call options covering 315,000 shares were outstanding and unvested as of December 31, 2017. The amounts recognized as compensation expense and other income (expense) related to the 2017 Call Option Plan were $79,000 and $109,000, respectively, for the year ended December 31, 2017.

12. Income Taxes

No provision for income taxes was recorded for the years ended December 31, 2016 and 2017. The Company has established a full valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets. All losses to date have been incurred domestically.

The effective tax rate of the Company's provision (benefit) for income taxes differs from the federal statutory rate as follows:

	Year Ended December 31,	
	2016	2017
Federal statutory rate	34.0%	34.0%
State tax	0.0	0.0
Change in valuation allowance	53.0	20.8
Tax credits	(21.6)	3.8
Remeasurement of federal tax rate change	0.0	(63.4)
Other	(65.4)	4.8
Total	0.0%	0.0%

The components of the Company's deferred tax assets consist of the following:

	December 31	
	2016	2017
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 21,649	$ 23,820
Research and development credits	8,314	11,244
Deferred revenue	12,457	3,004
Accruals and other	1,605	1,103
Total deferred tax assets	44,025	39,171
Valuation allowance	(43,175)	(39,135)
Net deferred tax assets	850	36
Deferred tax liability	(850)	(36)
Net deferred tax assets	$ –	$ –

Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Due to the Company's history of operating losses and future sources of taxable income, the Company believes that the recognition of the deferred tax assets

is currently not more likely than not to be realized and, accordingly, have provided a full valuation allowance against net deferred tax assets. For the year ended December 31, 2016, the net increase in the valuation allowance was $900,000, and for the year ended December 31, 2017, the net decrease in the valuation allowance was $4.0 million.

As of December 31, 2017, the Company had federal net operating loss carryforwards of $91.6 million and federal general business credits from research and development expenses totaling $7.4 million, as well as state net operating loss carryforwards of $65.2 million and state research and development credits of $7.8 million.

The federal net operating loss carryforwards will expire at various dates beginning in 2032, and the federal credits will expire at various dates beginning in 2023, if not utilized. The state net operating loss carryforwards will expire at various dates beginning in 2030, if not utilized. The state research and development tax credits can be carried forward indefinitely.

Under the Tax Reform Act, the amount of benefit from net operating loss carryforwards may be impaired or limited in certain circumstances. Events which cause limitations in the amount of net operating losses that the Company may utilize in any one year include, but are not limited to, a cumulative ownership change of more than 50%, as defined, over a three-year testing period. Such limitations may result in limitations upon the Company's ability to utilize the losses in future periods. The Company has performed a Section 382 study for the period of June 16, 2003 through December 31, 2016, and concluded that it is more likely than not that the Company experienced an ownership change on April 9, 2007. This change does not limit the Company's ability to use its existing net operating losses within the carryforward period provided by the Internal Revenue Code, subject to availability of taxable income. However, if there is subsequent event or further change in ownership, these losses may be subject to limitations, resulting in their expiration before they can be utilized.

The Company files U.S. federal and state tax returns with varying statutes of limitations. Due to net operating loss and credit carryforwards, all of the tax years since inception through the 2017 tax year remain subject to examination by the U.S. federal and some state authorities. The actual amount of any taxes due could vary significantly depending on the ultimate timing and nature of any settlement. The amount of unrecognized tax benefits, if recognized, that would affect the effective tax rate is $1.6 million and $2.3 million as of December 31, 2016 and 2017, respectively. One or more of these unrecognized tax benefits could be subject to a valuation allowance if and when recognized in a future period, which could impact the timing of any related effective tax rate benefit. The Company believes that the amount by which the unrecognized tax benefits may increase or decrease within the next 12 months is not estimable.

The Company has elected to recognize, if incurred, interest and penalties related to liabilities for uncertain tax positions as a part of income tax expense. No such interest and penalties have been incurred to date.

The Company determines its uncertain tax positions based on a determination of whether and how much of a tax benefit taken by the Company in its tax filings is more likely than not to be sustained upon examination by the relevant income tax authorities.

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A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

	December 31	
	2016	2017
	(in thousands)	
Gross unrecognized tax benefit at January 1	$ 1,205	$ 1,635
Additions for tax positions taken in the current year	430	670
Gross unrecognized tax benefit at December 31	$ 1,635	$ 2,305

Impact of The Tax Cuts and Jobs Act

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the "Tax Act") was signed into law. The Tax Act reduces the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%. The Tax Act also contains a number of provisions that may impact the Company in future years. Although the Tax Act is generally effective January 1, 2018, U.S. GAAP requires recognition of the tax effects of new legislation during the reporting period that includes the enactment date, which was December 22, 2017. On December 22, 2017, the Securities Exchange Committee staff issued Staff Accounting Bulletin No. 118 ("SAB 118") which provides guidance on accounting for the tax effects of the Tax Reform Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Reform Act enactment date for companies to complete the accounting under ASC 740, *Income Taxes*.

The primary impact of the Tax Act resulted from the re-measurement of deferred tax assets and liabilities due to the change in the corporate tax rate, reducing the Company's deferred tax assets by $12.3 million with a corresponding reduction in its valuation allowance, which had no effect on the Company's effective tax rate. This decrease in deferred tax assets and corresponding adjustment to the valuation allowance represent the Company's reasonable estimates based on the corporate tax rate reduction to 21% for tax years beginning after December 31, 2017 and are provisional amounts within the meaning of SAB 118.

Although the tax rate reduction is known, since the Tax Reform Act was recently finalized and ongoing guidance and accounting interpretation is expected over the next twelve months, the Company expects to collect and prepare necessary data, and interpret any additional guidance to complete a more detailed analysis of the effect of the Tax Reform Act on the underlying deferred taxes and as such, the amounts recorded as of December 31, 2017 are provisional. However, the Company anticipates that any adjustment to provisional amounts recorded would be fully offset by a corresponding change to the Company's valuation allowance.

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13. Net Income (Loss) Per Share Attributable to Common Stockholders

The following table sets forth the computation of the Company's basic and diluted net income (loss) per share attributable to common stockholders.

	Year Ended December 31,	
	2016	2017
	(in thousands, except share and per share amounts)	
Numerator:		
Net income (loss)	$ 1,702	$ (19,688)
Noncumulative dividends on redeemable convertible preferred stock	(1,702)	–
Net income (loss) attributable to common stockholders, basic and diluted	$ –	$ (19,688)
Denominator:		
Shares used in computing net income per share attributable to common stockholders, basic and diluted	407,735	447,946
Net income (loss) per share attributable to common stockholders:		
Basic	$ –	$ (43.95)
Diluted	$ –	$ (43.95)

The following common stock equivalents were excluded from the computation of diluted net income (loss) per share for the year ended December 31, 2016 as net income attributable to common stock holders was nil, and for the year ended December 31, 2017 because including them would have been antidilutive:

	Year Ended December 31,	
	2016	2017
Redeemable convertible preferred stock	5,063,404	5,063,404
Options to purchase common stock	796,907	835,320
Warrants to purchase redeemable convertible preferred stock	74,767	93,527
Warrants to purchase common stock	1,099	1,099
Early exercised shares of common stock	17,140	2,374
Total	5,953,317	5,995,724

Unaudited Pro Forma Net Loss Per Share

Pro forma basic and diluted net loss per share of common stock have been computed to give effect to the assumed conversion of the redeemable convertible preferred stock, the assumed net exercise of certain redeemable convertible preferred stock warrants and common stock warrants and the assumed conversion of the remaining redeemable convertible preferred stock warrants into common stock warrants upon the completion of a qualifying IPO of the Company's common stock. Also, the numerator in the pro forma basic and diluted net loss per share calculation has been adjusted to remove gains or losses resulting form the remeasurement of the redeemable convertible preferred stock warrant liability.

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The following table sets forth the computation of the Company's pro forma basic and diluted net loss per share of common stock.

	Year Ended December 31, 2017 (in thousands, except share and per share amounts): (unaudited)
Numerator:	
Net loss	$ (19,688)
Change in fair value of redeemable convertible preferred stock warrant liability	186
Pro forma net loss, basic and diluted	$ (19,502)
Denominator:	
Weighted-average common shares used in net loss per share, basic and diluted	447,946
Pro forma adjustment to reflect assumed conversion of redeemable convertible preferred stock	5,063,404
Pro forma weighted-average shares of common stock, basic and diluted	5,511,350
Pro forma net loss per share, basic and diluted	$ (3.54)

14. Subsequent Events

Management has reviewed and evaluated material subsequent events from the balance sheet date of December 31, 2017 through June 1, 2018, the date that the financial statements were originally issued, and management has further reviewed and evaluated material subsequent events for disclosure through September 17, 2018, the date that the financial statements were revised for the retroactive application of the reverse stock split described in the third paragraph of Note 1.

In May and June 2018, the Company raised an aggregate total of $33.4 million in funding through the sale and issuance of 124,840,500 shares of Series E redeemable convertible preferred stock, at $0.2674 per share (post-split). The Series E redeemable convertible preferred stock per share price was less than the conversion price per share in each of the Company's prior redeemable convertible preferred stock financings, and therefore, each prior conversion price was lowered by applying a broad-based weighted average adjustment. With certain senior rights, preferences and privileges provided for the Series E redeemable convertible preferred stock, all prior series (Series A through Series D-2) of issued redeemable convertible preferred stock will be hereafter referred to collectively as the "Junior Preferred."

In July 2018, the Company raised $52.0 million in funding through the sale and issuance of 194,465,218 shares of Series E redeemable convertible preferred stock, at $0.2674 per share. The Series E redeemable convertible preferred stock per share price and shares issued in the May and June 2018 closings of the Series E redeemable convertible preferred stock financing described above were adjusted by means of a stock split to reflect the lower price per share in the July 2018 closing of the Series E redeemable convertible preferred stock financing. Accordingly, with consideration of the May, June and July 2018 Series E redeemable convertible preferred stock combined funding, the Company raised a total of $85.4 million through the sale and issuance of 319,305,718 shares of Series E redeemable convertible preferred stock at $0.2674 per share. The Series E redeemable convertible

preferred stock per share price was less than the conversion price per share in each of the Company's prior Junior Preferred stock financings, and therefore, each prior conversion price was lowered by applying a broad-based weighted average adjustment. If the public offering price is within the range indicated on the cover page of this prospectus, immediately prior to the completion of this offering, each outstanding share of redeemable convertible preferred stock will automatically be converted into common stock at the current conversion ratios. The Series A redeemable convertible preferred stock will convert at a ratio of 1:0.0433, the Series B redeemable convertible preferred stock will convert at a ratio of 1:0.0578, the Series C redeemable convertible preferred stock will convert at a ratio of 1:0.0370, the Series C-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0405, the Series D redeemable convertible stock will convert at a ratio of 1:0.0405, the Series D-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0419 and the Series E redeemable convertible preferred stock will convert at a ratio of 1:0.0275. Additionally, in connection with the August 2017 Loan, the Company issued to each of Oxford and SVB a warrant to purchase 454,820 shares and 227,410 shares, respectively, of Series D-2 redeemable convertible preferred stock at an exercise price of $0.6596 per share (the "2017 Warrants"). Given that the price per share of the Series E redeemable convertible preferred stock was less than the price per share of the Series D-2 redeemable convertible preferred stock, the 2017 Warrants converted into warrants to purchase a total of 1,682,871 shares of Series E redeemable convertible preferred stock at an exercise price of $0.2674 per share.

In July 2018, the Company entered into an Exclusive Patent License and Research Collaboration Agreement (the "2018 Merck Agreement") with Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA ("Merck") to jointly develop up to three research programs focusing on cytokine derivatives for cancer and autoimmune disorders.

Under the 2018 Merck Agreement, the Company received from Merck an upfront payment of $60.0 million in August 2018 for the research and development of two target programs, with an option for a third program upon the payment of an additional amount. The Company is also eligible to receive aggregate milestone payments of up to $1.6 billion, assuming the development and sale of all therapeutic candidates and all possible indications identified under the collaboration. If one or more products from each of the target programs are developed for non-oncology or a single indication, we will be eligible for reduced aggregate milestone payments. In addition, the Company is eligible to receive tiered royalties ranging from mid-single digit to low teen percentages on the worldwide sales of any commercial products that may result from the collaboration. Additionally, Merck purchased $20.0 million in Series E redeemable convertible preferred stock from the Company and has agreed to purchase up to $10.0 million of common stock concurrently with the Company's planned IPO.

In August 2018, the promissory note due from the Company's chief executive officer was repaid. The Company received approximately $208,000 as payment for the principal balance and interest receivable.

Sutro Biopharma, Inc.

Condensed Balance Sheets
(In thousands, except share and per share amounts)

	December 31, 2017 (See Note 2)	June 30, 2018 (unaudited)	Pro Forma Stockholders' Equity as of June 30, 2018 (unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 22,020	$ 25,420	
Accounts receivable (including amounts from related parties of $784 and $1,936 (unaudited) as of December 31, 2017 and June 30, 2018, respectively	1,624	3,184	
Prepaid expenses and other current assets	1,985	1,619	
Total current assets	25,629	30,223	
Property and equipment, net	13,997	11,860	
Other long-term assets	1,128	3,083	
Restricted cash	15	15	
Total assets	$ 40,769	$ 45,181	
Liabilities, Redeemable Convertible Preferred Stock, and Stockholders' (Deficit) Equity			
Current liabilities:			
Accounts payable	$ 2,902	$ 2,688	
Accrued compensation	3,639	4,080	
Deferred revenue—current	10,709	10,360	
Debt—current	14,634	2,000	
Other current liabilities	72	98	
Total current liabilities	31,956	19,226	
Deferred revenue, non-current	13,159	8,186	
Deferred rent	428	465	
Redeemable convertible preferred stock warrant liability	1,708	801	$ —
Debt, non-current	—	12,802	
Other non-current liabilities	14	—	
Total liabilities	47,265	41,480	
Commitments and contingencies			
Redeemable convertible preferred stock, $0.001 par value—177,082,393 and 366,402,781 shares authorized as of December 31, 2017 and June 30, 2018 (unaudited), respectively; 173,750,421 and 298,590,921 shares issued and outstanding as of December 31, 2017 and June 30, 2018 (unaudited); aggregate liquidation preference of $136,370 as of June 30, 2018 (unaudited); no shares issued and outstanding as of June 30, 2018 pro forma (unaudited)	102,505	135,720	—
Stockholders' deficit:			
Common stock, $0.001 par value—271,000,000 and 540,000,000 shares authorized as of December 31, 2017 and June 30, 2018 (unaudited), respectively; 465,330 and 479,377 shares issued and outstanding as of December 31, 2017 and June 30, 2018 (unaudited), respectively; 16,487,125 shares issued and outstanding as of June 30, 2018, pro forma (unaudited)	—	—	16
Note receivable from stockholder	(208)	(208)	—
Additional paid-in capital	6,218	6,787	143,292
Accumulated deficit	(115,011)	(138,598)	(138,598)
Total stockholders' (deficit) equity	(109,001)	(132,019)	$ 4,710
Total liabilities, redeemable convertible preferred stock, and stockholders' deficit	$ 40,769	$ 45,181	

See accompanying notes to unaudited interim condensed financial statements.

Sutro Biopharma, Inc.

Condensed Statements of Operations
(Unaudited)
(In thousands, except share and per share amounts)

	Six Months Ended June 30,	
	2017	2018
Revenue:		
Collaboration revenue (including amounts from related parties of $26,538 and $3,355 during the six months ended June 30, 2017 and 2018, respectively)	$ 30,202	$ 7,031
Other revenue—related parties	–	4,466
Total revenue	30,202	11,497
Operating expenses:		
Research and development	25,830	26,833
General and administrative	7,411	8,455
Total operating expenses	33,241	35,288
Loss from operations	(3,039)	(23,791)
Interest income	130	80
Interest expense	—	(784)
Other income (expense), net	(17)	908
Net loss	$ (2,926)	$ (23,587)
Net loss per share, basic and diluted	$ (6.63)	$ (49.90)
Weighted-average shares used in computing net loss per share, basic and diluted	441,059	472,647
Pro forma net loss per share, basic and diluted		$ (3.50)
Weighted-average shares used in computing pro forma net loss per share, basic and diluted		6,997,394

See accompanying notes to unaudited interim condensed financial statements

Sutro Biopharma, Inc.

Condensed Statements of Comprehensive Loss
(Unaudited)
(In thousands)

	Six Months Ended June 30,	
	2017	2018
Net loss	$(2,926)	$(23,587)
Other comprehensive income:		
Unrealized gain on available-for-sale securities	11	—
Comprehensive loss	$(2,915)	$(23,587)

See accompanying notes to unaudited interim condensed financial statements.

Sutro Biopharma, Inc.

Condensed Statements of Cash Flows
(Unaudited)
(In thousands)

	Six Months Ended June 30,	
	2017	2018
Operating activities		
Net loss	$ (2,926)	$(23,587)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,600	2,285
Amortization of premium on marketable securities	88	—
Stock-based compensation expense	533	481
Revaluation of SutroVax option liability	66	26
Revaluation of redeemable convertible preferred stock warrant liability	—	(907)
Accretion of debt discount	—	78
Loss on disposal of property and equipment	90	35
Other revenue	—	(140)
Changes in operating assets and liabilities:		
Accounts receivable	(562)	(1,560)
Prepaid expenses and other assets	80	(261)
Accounts payable	(756)	(650)
Accrued compensation	(881)	440
Other liabilities	50	90
Deferred rent	20	37
Deferred revenue	(28,598)	(5,322)
Net cash used in operating activities	(30,196)	(28,955)
Investing activities		
Purchases of marketable securities	(5,036)	—
Maturities of marketable securities	27,850	—
Sales of marketable securities	3,800	—
Purchases of property and equipment	(1,798)	(400)
Net cash provided by (used in) investing activities	24,816	(400)
Financing activities		
Payment of deferred offering costs	—	(534)
Proceeds from issuances of common stock upon exercise of stock options	38	74
Proceeds from issuance of redeemable convertible preferred stock, net of issuance costs	—	33,215
Net cash provided by financing activities	38	32,755
Net (decrease) increase in cash, cash equivalents and restricted cash	(5,342)	3,400
Cash, cash equivalents and restricted cash at beginning of period	11,868	22,035
Cash, cash equivalents and restricted cash at end of period	$ 6,526	$ 25,435
Supplemental disclosure of cash flow information		
Cash paid for interest	$ —	$ 616
Supplemental Disclosures of Non-Cash Investing and Financing Information		
Vesting of early exercised shares	$ 21	$ 14
Purchase of property and equipment included in accounts payable	$ 218	$ 37
Deferred initial public offering costs included in accounts payable and accrued liabilities	$ —	$ 654

See accompanying notes to unaudited interim condensed financial statements.

Sutro Biopharma, Inc.

Notes to Unaudited Interim Condensed Financial Statements

1. Organization and Principal Activities

Description of Business

Sutro Biopharma, Inc. (the "Company") is a clinical stage drug discovery, development and manufacturing company focused on leveraging its integrated cell-free protein synthesis platform, XpressCF, to create a broad variety of optimally designed, next-generation protein therapeutics for cancer and autoimmune disorders. The Company was incorporated on April 21, 2003, and was formerly known as Fundamental Applied Biology, Inc. The Company is headquartered in South San Francisco, California.

The Company operates in one business segment, the development of biopharmaceutical products.

Series E Redeemable Convertible Preferred Stock Split

In July 2018, the Company's board of directors approved an amendment to the Company's amended and restated certificate of incorporation to effect a 1-for-1.1940912491 split ("Split") of shares of the Company's Series E redeemable convertible preferred stock, which was effected on July 26, 2018. The par value and authorized shares of redeemable convertible preferred stock and the other outstanding shares of redeemable convertible preferred stock were not adjusted as a result of the Split. All of the outstanding Series E redeemable convertible preferred shares and per share information included in the accompanying financial statements have been adjusted to reflect the Split.

Liquidity

The Company has incurred significant losses and has negative cash flows from operations. As of June 30, 2018, there was an accumulated deficit of $138.6 million. Management expects to continue to incur additional substantial losses in the foreseeable future as a result of the Company's research and development activities.

As of June 30, 2018, the Company had unrestricted cash and cash equivalents of $25.4 million, which is available to fund future operations. The Company will need to raise additional capital to support the completion of its research and development activities. The Company's activities are subject to significant risks and uncertainties, including failing to secure additional funding to continue to operationalize the Company's current technology and to advance the development of its product candidates.

In July 2018, the Company received $52.0 million in gross proceeds from the sale of 194,465,218 shares of Series E redeemable convertible preferred stock. Additionally, the Company received in August 2018 $60.0 million in an upfront payment under a collaboration agreement entered into with Merck in July 2018 (See Note 12). The Company believes that its cash and cash equivalents as of June 30, 2018, along with the proceeds received from the preferred stock financing and collaboration agreement, will be sufficient for the Company to continue as a going concern for at least one year from the issuance date of its unaudited interim condensed financial statements.

In August 2017, the Company entered into a loan and security agreement with Oxford Finance LLC and Silicon Valley Bank under which it borrowed $15.0 million (the "August 2017 Loan") (see Note 6). The August 2017 Loan provides that an event of default will occur if, among other triggers, there occurs any circumstances that could reasonably be expected to result in a material adverse effect on the Company's business, operations or condition, or on its ability to perform its obligations under the

Sutro Biopharma, Inc.

Notes to Unaudited Interim Condensed Financial Statements

loan. The Company disclosed in its audited financial statements as of December 31, 2017 that the Company believed that there was substantial doubt about its ability to continue as a going concern given its continuing operating losses and its then current available capital resources, which could be deemed to be an event of default if such condition was considered to have a material adverse effect on the Company's business, operations or condition. As a result, the Company classified the entire debt balance as a current liability as of December 31, 2017 given that a determination of such an event of default was outside of the Company's control. Based on the financing and collaboration proceeds described above, as of June 30, 2018, the Company has classified $2.0 million of the outstanding debt balance as current and the remainder as non-current, which reflects the scheduled repayments under the August 2017 Loan.

2. Summary of Significant Accounting Policies

Basis of Presentation and Use of Estimates

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("U.S. GAAP"). The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The Company bases its estimates on historical experience and market-specific or other relevant assumptions that it believes are reasonable under the circumstances. The amounts of assets and liabilities reported in the Company's balance sheets and the amount of expenses and income reported for each of the periods presented are affected by estimates and assumptions, which are used for, but are not limited to, determining research and development periods under multiple element arrangements, stock-based compensation expense, fair value of redeemable convertible preferred stock and warrant liabilities, fair value of common stock, income taxes and certain accrued liabilities. Actual results could differ from such estimates or assumptions.

Unaudited Interim Condensed Financial Statements

The interim condensed balance sheet as of June 30, 2018, and the condensed statements of operations, comprehensive loss and cash flows for the six months ended June 30, 2017 and 2018 are unaudited. The unaudited interim condensed financial statements have been prepared on the same basis as the annual financial statements and reflect, in the opinion of management, all adjustments of a normal and recurring nature that are necessary for the fair statement of the Company's financial position as of June 30, 2018 and its results of operations and cash flows for the six months ended June 30, 2017 and 2018. The financial data and the other financial information disclosed in these notes to the condensed financial statements related to the six-month periods are also unaudited. The results of operations for the six months ended June 30, 2018 are not necessarily indicative of the results to be expected for the year ending December 31, 2018 or for any other future annual or interim period. The balance sheet as of December 31, 2017 included herein was derived from the audited financial statements as of that date. These condensed financial statements should be read in conjunction with the Company's audited financial statements included elsewhere in this prospectus.

Unaudited Pro Forma Financial Information

Immediately prior to the completion of an initial public offering ("IPO") of the Company's common stock, all outstanding shares of redeemable convertible preferred stock will convert into common stock and certain redeemable convertible preferred stock warrants and common stock warrants will be net exercised into shares of common stock. Unaudited pro forma stockholders' equity information as of June 30, 2018 assumes the conversion of all outstanding redeemable convertible preferred stock into

shares of common stock. The shares of common stock issuable and the proceeds expected to be received in the IPO are excluded from such pro forma financial information. In addition, the unaudited pro forma stockholders' equity assumes the reclassification of the redeemable convertible preferred stock warrant liability to stockholders' equity upon completion of an IPO due to the automatic net exercise of certain redeemable preferred stock warrants and the conversion of the remaining redeemable preferred stock warrants into common stock warrants upon an IPO. Unaudited pro forma stockholders' equity information as of June 30, 2018 also assumes the repayment of principal and interest on a $0.2 million outstanding note issued to an executive officer.

Pro forma basic and diluted net loss per share has been computed to give effect to the conversion of all outstanding redeemable convertible preferred stock into shares of common stock. Also, the numerator in the pro forma basic and diluted net loss per share calculation has been adjusted to remove gains or losses resulting from the remeasurement of the redeemable convertible preferred stock warrant liability. The unaudited pro forma net loss per share does not include the shares expected to be sold and related proceeds to be received from the IPO. The unaudited pro forma net loss per share for the six months ended June 30, 2018 was computed using the weighted-average number of shares of common stock outstanding, including the pro forma effect of the conversion of all outstanding shares of redeemable convertible preferred stock into shares of common stock, as if such conversion had occurred at the beginning of the period, or their issuance dates if later.

Cash, Cash Equivalents, and Restricted Cash

The Company considers all highly liquid investments with original maturities of 90 days or less from the date of purchase to be cash equivalents.

Under certain lease and credit agreements, the Company has pledged cash and cash equivalents as collateral. Restricted cash related to such agreements was $15,000 as of December 31, 2017 and June 30, 2018, respectively.

The following table provides a reconciliation of cash and cash equivalents, and restricted cash reported within the balance sheets that sum to the total of the same amounts shown in the statements of cash flows.

	June 30,	
	2017	2018
	(in thousands)	
Cash and cash equivalents	$ 6,511	$ 25,420
Restricted cash	15	15
Total cash, cash equivalents, and restricted cash shown in the statements of cash flows	$ 6,526	$ 25,435

Fair Value Measurements

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability, or an exit price, in the principal or most advantageous market for that asset or liability in an orderly transaction between market participants on the measurement date, and establishes a fair value hierarchy that requires an entity to maximize the use of observable inputs, where available, and minimizes the use of unobservable inputs when measuring fair value. The Company determined the

fair value of financial assets and liabilities using the fair value hierarchy that describes three levels of inputs that may be used to measure fair value, as follows:

Level 1—Quoted prices in active markets for identical assets and liabilities;

Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The carrying amounts of accounts receivable, prepaid expenses, accounts payable, accrued liabilities and accrued compensation and benefits approximate fair value due to the short-term nature of these items.

The fair value of the Company's outstanding loan (See Note 6) is estimated using the net present value of the payments, discounted at an interest rate that is consistent with market interest rate, which is a Level 2 input. The estimated fair value of the Company's outstanding loan approximates the carrying amount, as the loan bears a floating rate that approximates the market interest rate.

Deferred Offering Costs

The Company has deferred offering costs consisting of legal, accounting and other fees and costs directly attributable to the Company's planned IPO. The deferred offering costs will be offset against the proceeds received upon the completion of the planned IPO. In the event the planned IPO is terminated, all of the deferred offering costs will be expensed within the Company's statements of operations. As of December 31, 2017 and June 30, 2018, $545,000 and $1.2 million, respectively, of deferred offering costs were recorded within other long-term assets on the balance sheet.

Redeemable Convertible Preferred Stock Warrants

The Company accounts for its redeemable convertible preferred stock warrants as a liability, and they are recorded at their estimated fair value, because the warrants may conditionally obligate the Company to transfer assets at some point in the future. At the end of each reporting period, changes in the estimated fair value during the period are recorded in other income (expense), net in the statement of operations. The Company will continue to adjust the liability for changes in estimated fair value until the earlier of the expiration of the warrants, exercise of the warrants, or conversion of the redeemable convertible preferred stock warrants into common stock warrants upon the completion of a liquidation event, including the completion of an IPO.

Revenue Recognition

Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

For multiple-element arrangements, each deliverable within a multiple-deliverable revenue arrangement is accounted for as a separate unit of accounting if both of the following criteria are met: the delivered item or items has value to the customer on a stand-alone basis; and (ii) for an arrangement that includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in management's control.

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Notes to Unaudited Interim Condensed Financial Statements

The Company recognizes revenue from milestone payments when: (i) the milestone event is substantive and its achievability has substantive uncertainty at the inception of the agreement, and the Company has completed its performance obligations related to the achievement of the milestone. Milestone payments are considered substantive if all of the following conditions are met: the milestone payment (a) is commensurate with either the Company's performance subsequent to the inception of the arrangement to achieve the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from the Company's performance subsequent to the inception of the arrangement to achieve the milestone, (b) relates solely to past performance, and (c) is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

Determining whether and when these revenue recognition criteria have been satisfied often involves assumptions and judgments that can have a significant impact on the timing and amount of reported revenue. Changes in assumptions or judgments or changes to the elements in an arrangement could cause a material increase or decrease in the amount of revenue that is reported in a particular period.

Under certain collaborative arrangements, the Company is entitled to payments for certain research and development activities and for providing product and other related materials. The Company's policy is to account for such payments by its collaboration partners as collaboration revenue.

Research and Development

Research and development costs are expensed as incurred. Research and development expenses consist of costs incurred in performing research and development activities: salaries, employee benefits, laboratory supplies, outsourced research and development expenses, professional services and allocated facilities-related costs. Amounts incurred in connection with collaboration arrangements are also included as a research and development expense.

Nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized and recognized as an expense as the goods are delivered or the related services are performed.

For outsourced research and development expenses, such as professional fees payable to third parties for preclinical studies, clinical trials and research services, and other consulting costs, the Company estimates the expenses based on the services performed, pursuant to contracts with research institutions that conduct and manage preclinical studies, clinical trials and research services on its behalf. The Company estimates these expenses based on discussions with internal management personnel and external service providers as to the progress or stage of completion of services and the contracted fees to be paid for such services. If the actual timing of the performance of services or the level of effort varies from the original estimates, the Company will adjust the accrual accordingly. Payments made to third parties under these arrangements in advance of the performance of the related services by the third parties are recorded as prepaid expenses until the services are rendered.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares of common stock outstanding for the period, without consideration for potential dilutive common shares. Basic net loss per share is the same as diluted net loss per share as the inclusion of all potential dilutive common shares would have been anti-dilutive.

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Notes to Unaudited Interim Condensed Financial Statements

Shares of common stock subject to repurchase are excluded from the computation of weighted-average shares as the continued vesting of such shares is contingent upon the holders' continued service to the Company. For the computation of net loss per share for the six months ended June 30, 2017 and 2018, 489,847 and zero shares subject to repurchase, respectively, were excluded from the computation of net loss per share.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB"), or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the impact of recently issued standards that are not yet effective will not have a material impact on the Company's financial statements upon adoption. Under the Jumpstart Our Business Startups Act of 2012, as amended (the "JOBS Act"), the Company meets the definition of an emerging growth company, and has elected the extended transition period for complying with new or revised accounting standards pursuant to Section 107(b) of the JOBS Act.

New Accounting Pronouncements Not Yet Adopted

In May 2014, the FASB issued ASU No. 2014-09 (Topic 606), Revenue from Contracts with Customers. In August 2015, the FASB issued ASU No. 2015-14 (Topic 606), Revenue from Contracts with Customers: Deferral of the Effective Date, which delayed the effective date of ASU 2014-09 by one year. ASU 2014-09, as amended, became effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. For entities other than public entities, the standard is effective for fiscal years beginning after December 15, 2018, and interim periods beginning after December 15, 2019. Early adoption is permitted. ASU 2014-09 also permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (the modified retrospective method). The Company will adopt the standard as of January 1, 2019 and is still in the process of evaluating the effect this guidance will have on revenue recognition for its collaboration and license agreements.

The core principle of ASU 2014-09 is that an entity should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. ASU 2014-09 defines a five-step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing U.S. generally accepted accounting pronouncements. All of the Company's revenue is currently generated from up- front payments, research and development services, and milestone and contingent payments under its collaboration arrangements. The Company is currently evaluating its collaboration agreements to determine the impact of adopting ASU 2014-09, inclusive of available transitional methods, on its financial statements and related disclosures.

In January 2016, the FASB issued ASU 2016-01 (Topic 825), Recognition and Measurement of Financial Assets and Financial Liabilities, which will change how to recognize, measure, present and make disclosures about certain financial assets and financial liabilities. Under ASU 2016-01, if an entity designates a financial liability under the fair value option ("FVO") in accordance with ASC 825, the entity shall measure the financial liability at fair value with qualifying changes in fair value recognized in net income. The entity shall present separately in other comprehensive income the portion of the total change in the fair value of the liability that results from a change in the instrument-specific credit risk.

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Notes to Unaudited Interim Condensed Financial Statements

For public business entities, ASU 2016-01 is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. For all other entities, the guidance is effective for fiscal years beginning after December 15, 2018, and interim periods within fiscal years beginning after December 15, 2019. All entities can early adopt the provision related to financial liabilities measured using the FVO in ASC 825 for financial statements of annual or interim periods that have not yet been issued or made available for issuance. The Company does not expect the adoption of this amendment will have a material impact on its financial statements.

In February 2016, the FASB issued ASU 2016-02 (Topic 842), Leases, which requires an entity to recognize assets and liabilities for the rights and obligations created by leased assets. ASU 2016-02 is effective for public entities for interim and annual periods beginning after December 15, 2018. For nonpublic entities, the amendments are effective for fiscal years beginning after December 15, 2019. Early adoption is permitted. The Company is currently evaluating how and to what extent ASU 2016-02 will affect the Company's financial position, results of operations, cash flows and related disclosures.

In August 2016, the FASB issued ASU 2016-15 (Topic 230), Classification of Certain Cash Receipts and Cash Payments. The new guidance clarifies the classification of certain cash receipts and cash payments in the statement of cash flows, including debt prepayment or extinguishment costs, settlement of contingent consideration arising from a business combination, insurance settlement proceeds, and distributions from certain equity method investees. ASU 2016-15 is effective for annual periods beginning after December 15, 2017. Early adoption is permitted. The Company has adopted this amendment as of January 1, 2018, which did not have a material impact on its financial statements.

3. Fair Value Measurements

The following table sets forth the fair value of the Company's financial assets and liabilities measured on a recurring basis by level within the fair value hierarchy:

	December 31, 2017			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Money market funds	$ 6,578	$ 6,578	$ –	$ –
Commercial paper	7,689	–	7,689	–
Corporate debt securities	800	–	800	–
U.S. government agency securities	3,893	–	3,893	–
Total	$ 18,960	$ 6,578	$ 12,382	$ –
Liabilities:				
Redeemable convertible preferred stock warrant liability	$ 1,708	$ –	$ –	$ 1,708
Total	$ 1,708	$ –	$ –	$ 1,708

Sutro Biopharma, Inc.

Notes to Unaudited Interim Condensed Financial Statements

	June 30, 2018			
	Total	Level 1	Level 2	Level 3
	(in thousands)			
Assets:				
Money market funds	$18,997	$18,997	$ –	$ –
Corporate debt securities	5,020	–	5,020	–
Total	$24,017	$18,997	$5,020	$ –
Liabilities:				
Redeemable convertible preferred stock warrant liability	$ 801	$ –	$ –	$ 801
Total	$ 801	$ –	$ –	$ 801

Where applicable, the Company uses quoted market prices in active markets for identical assets to determine fair value. This pricing methodology applies to Level 1 investments, which are composed of money market funds.

If quoted prices in active markets for identical assets are not available, then the Company uses quoted prices for similar assets or inputs other than quoted prices that are observable, either directly or indirectly. These investments are included in Level 2 and consist of commercial paper, corporate debt securities, and U.S. government agency securities. These assets are valued using market prices when available, adjusting for accretion of the purchase price to face value at maturity.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability.

In certain cases where there is limited activity or less transparency around inputs to valuation, securities are classified as Level 3 within the valuation hierarchy. Level 3 liabilities that are measured at estimated fair value on a recurring basis consist of the redeemable convertible preferred stock warrant liability. Refer to Note 8 for the valuation techniques used to measure fair value and a description of the inputs and the information used to develop the inputs to the valuation models.

Generally, increases or decreases in the fair value of the underlying redeemable convertible preferred stock would result in a directionally similar impact in the fair value measurement of the associated warrant liability. There were no transfers within the hierarchy during the six months ended June 30, 2017 and 2018.

The following table sets forth a summary of the changes in the estimated fair value of the Company's redeemable convertible preferred stock warrant liability:

	Redeemable Convertible Preferred Stock Warrant Liability
	(in thousands)
Balance as of December 31, 2017	$ 1,708
Gain due to change in fair value of warrant liability included in other income (expense), net	(907)
Balance as of June 30, 2018	$ 801

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Notes to Unaudited Interim Condensed Financial Statements

4. Cash Equivalents

Cash equivalents consisted of the following:

	December 31, 2017			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$ 6,578	$ –	$ –	$ 6,578
Commercial paper	7,689	–	–	7,689
Corporate debt securities	800	–	–	800
U.S. government agencies	3,893	–	–	3,893
Total	$ 18,960	$ –	$ –	$18,960

	June 30, 2018			
	Amortized Cost Basis	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Money market funds	$ 18,997	$ –	$ –	$18,997
Corporate debt securities	5,020	–	–	5,020
Total	$ 24,017	$ –	$ –	$24,017

5. Collaboration Agreements and Supply Agreements

The Company has recognized revenue as follows:

	Six months ended June 30,	
	2017	2018
	(in thousands)	
Collaboration revenue:		
Celgene Corporation ("Celgene")—related party:		
Amortization of up-front payments	$ 13,713	$ 3,257
Research and development services	–	98
Milestones and contingent payments	12,825	–
Total	26,538	3,355
Merck KGaA, Darmstadt, Germany (operating in the United States and Canada under the name "EMD Serono"):		
Amortization of up-front payment	2,060	2,066
Research and development services	1,604	1,610
Total	3,664	3,676
Total collaboration revenue	$ 30,202	$ 7,031
Other revenue—related parties:		
Celgene Corporation:		
Development and manufacturing services and clinical product supply	$ –	$ 3,564
SutroVax:		
Supply and other	–	902
Total other revenue—related parties	$ –	$ 4,466

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2014 Celgene Agreement

In September 2014, the Company signed a Collaboration and License Agreement with Celgene (the "2014 Celgene Agreement") to discover and develop bispecific antibodies and/or antibody-drug conjugates ("ADCs"), focused primarily on the field of immuno-oncology, using the Company's proprietary integrated cell-free protein synthesis platform, XpressCF.

Upon signing the 2014 Celgene Agreement, the Company received an up-front, nonrefundable payment totaling $83.1 million. Celgene had the option to extend the collaboration beyond the initial three-year research term in exchange for an additional payment. The Company was recognizing revenues from the up-front payment ratably over an approximate three-year period starting in September 2014.

In March 2015, the Company received a $15.0 million contingent payment ("March 2015 payment") from Celgene under the 2014 Celgene Agreement that provided Celgene a right to access certain of the Company's technology for use in conjunction with certain Celgene intellectual property. In June 2016, the Company received a $25.0 million milestone ("June 2016 payment") upon completion of certain preclinical activities. The March 2015 and June 2016 payments are being recognized as revenue over the remaining portion of the estimated period of the research term.

2017 Celgene Agreement

In August 2017, the Company entered into the 2017 Celgene Agreement to refocus its 2014 Celgene Agreement on four programs that are advancing throughout preclinical development, including an ADC program targeting B cell maturation antigen.

Upon signing of the 2017 Celgene Agreement, the Company received an option fee payment of $12.5 million in August 2017 and is eligible to receive a second option fee payment of $12.5 million following the first investigational new drug ("IND") clearance, if any, for one of the four programs, if Celgene desires to maintain its option to acquire the U.S. rights to develop and commercialize a second collaboration program to reach IND status. If Celgene exercises its option to acquire from the Company U.S. rights to a second collaboration program, it will make an option exercise fee payment to the Company, the amount of which depends on which program reaches IND status. The Company determined that the initial $12.5 million payment should be deferred and recognized over the entire potential period during which Celgene has an option to acquire worldwide rights to a second collaboration program. Consequently, the Company is recognizing revenue from such payment ratably over an approximate three-year period starting in August 2017 and ending in September 2020.

The Company evaluated the terms of the 2017 Celgene Agreement, relative to the 2014 Celgene Agreement, and determined the 2017 Celgene Agreement to be a material modification to the 2014 Celgene Agreement for financial reporting purposes. As a result, the Company determined that the remaining deferred revenue balance of $8.2 million as of the date of entering into the 2017 Celgene Agreement, related to Celgene payments to the Company under the 2014 Celgene Agreement, will also be recognized ratably over an approximate three-year period starting in August 2017 and ending in September 2020. The Company has received and will be eligible to receive financial support for research and development services assigned to the Company by Celgene, based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate, which will be recognized as revenue as the related reimbursable activities approved by Celgene and the Company are performed by the Company.

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Under the terms of the 2017 Celgene Agreement, the Company is entitled to earn development and regulatory contingent payments for each of the four programs under the collaboration, and royalties on sales of any commercial products that may result from the 2017 Celgene Agreement. As of June 30, 2018, the Company is eligible to receive a potential future payment for manufacturing activities of $10.0 million, which is considered to be a substantive milestone for which the related payment will be recognized as revenue upon achievement. In addition, for licensed products for which Celgene holds worldwide rights, the Company is eligible to receive aggregate milestone and option fee payments of up to $295.0 million for certain licensed products and up to $393.7 million for certain other licensed products under the collaboration, if approved in multiple indications, and, depending on the licensed product, tiered royalties ranging from single digits to low teen percentages on worldwide sales of any commercial products that may result from the 2017 Celgene Agreement. Additionally, for licensed products for which Celgene holds ex-U.S. rights, the Company will also be eligible to receive pre-commercial contingent payments and tiered royalties ranging from mid to high single digit percentages. The contingent payments under the 2017 Celgene Agreement are not considered to be substantive milestones because the receipt of such payments is based solely on the performance of Celgene.

Celgene may terminate the 2017 Celgene Agreement at any time with 120 days' prior written notice. Either the Company or Celgene has the right to terminate the 2017 Celgene Agreement based on the other party's uncured material breach, challenge of the validity and enforceability of intellectual property, or bankruptcy.

In addition, the Company granted Celgene the right to purchase shares of Company's stock in certain future financings by the Company.

As of December 31, 2017 and June 30, 2018, there was $18.0 million and $14.8 million, respectively, of deferred revenue related to payments received by the Company under the 2017 Celgene Agreement.

As of December 31, 2017 and June 30, 2018, the Company had $750,000 and $1.3 million respectively, of receivables from Celgene related to the 2017 Celgene Agreement, which is included in accounts receivable on the balance sheet.

2018 Master Services Agreement

In March 2018, the Company entered into a Master Development and Clinical Manufacturing Services Agreement (the "Master Services Agreement") with Celgene, wherein Celgene requested the Company to provide development, manufacturing and supply chain management services, including clinical product supply. The consideration for the services is based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate in addition to agreed-upon pricing for the clinical product supply. For the six months ended June 30, 2018, the Company earned $3.6 million in other revenue-related parties under the Master Services Agreement.

EMD Serono Agreement

The Company signed a Collaboration Agreement and a License Agreement with EMD Serono in May 2014 and September 2014, respectively, which were entered into in contemplation of each other and therefore treated as a single agreement for accounting purposes. The Collaboration Agreement was terminated upon execution of the License Agreement (the "MDA Agreement"), which agreement is to develop ADCs for multiple cancer targets.

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Upon signing the Collaboration Agreement, the Company received an up-front, nonrefundable, non-creditable payment totaling $10.0 million. Upon signing the MDA Agreement, the Company received an additional up-front, nonrefundable payment totaling $10.0 million and will receive financial support for research and development services to be provided by the Company, based on an agreed-upon level of full-time equivalent personnel effort and related reimbursement rate.

The Company is recognizing revenues from the up-front payments ratably over an estimated five-year period starting in June 2014. Revenue for research and development services under the MDA Agreement will be recognized as revenue as the related reimbursable activities approved by EMD Serono and the Company are performed by the Company.

The Company is eligible to receive up to $52.5 million for each product developed under the MDA Agreement, primarily from pre-commercial contingent payments. In addition, the Company is eligible to receive tiered royalties ranging from low-to-mid single digit percentages, along with certain additional one-time royalties, on worldwide sales of any commercial products that may result from the MDA Agreement. The MDA Agreement term expires on a product-by-product and country-by-country basis. Upon expiration, EMD Serono will have a fully paid-up, royalty-free, perpetual, and irrevocable non-exclusive license, with the right to grant sublicenses, under certain Company intellectual property rights. As of December 31, 2017 and June 30, 2018, there was $5.9 million and $3.8 million, respectively, of deferred revenue related to payments received by the Company under the MDA Agreement.

EMD Serono may terminate the MDA Agreement at any time with 90 days' prior written notice or upon the inability of the Company to provide EMD Serono access to a specified number of cancer drug targets. Either the Company or EMD Serono has the right to terminate the MDA Agreement based on the other party's uncured material breach or bankruptcy.

SutroVax, Inc. Supply Agreement – Related Party Transaction

In May 2018, the Company entered into a Supply Agreement (the "Supply Agreement") with SutroVax, Inc., ("SutroVax"), wherein SutroVax engaged the Company to supply extracts and custom reagents, as requested by SutroVax. The pricing is based on an agreed upon cost plus arrangement. For the six months ended June 30, 2018, the Company recognized $762,000 in other revenue-related parties under the Supply Agreement.

6. Loan and Security Agreement

In August 2017, the Company entered into a loan and security agreement with Oxford Finance LLC ("Oxford") and Silicon Valley Bank ("SVB") under which it borrowed $15.0 million (the "August 2017 Loan"). The loan is due in 30 monthly installments from March 2019 through its repayment in August 2021, with interest-only monthly payments until March 2019. If certain qualified funding events occur, the loan will be due in 24 monthly installments from September 2019 through its repayment in August 2021, with interest-only payments until September 2019.

The August 2017 Loan is secured by all assets of the Company, excluding intellectual property and certain other assets. The August 2017 Loan contains customary affirmative and restrictive covenants, including with respect to fundamental transactions, the incurrence of additional indebtedness, grant liens, pay any dividend or make any distributions to the Company's holders, make investments, merge or consolidate with any other person, or engage in transactions with its affiliates, but does not include any financial covenants. The loan agreement provides that an event of default will occur if, among

other triggers, there occurs any circumstances that could reasonably be expected to result in a material adverse effect on the Company's business, operations or condition, or on its ability to perform its obligations under the loan. The loan agreement also includes customary representations and warranties, other events of default and termination provisions.

The Company disclosed in its audited financial statements as of December 31, 2017 that there was substantial doubt about its ability to continue as a going concern given its continuing operating losses and its current available capital resources, which could be deemed to be an event of default if such condition was considered to have a material adverse effect on the Company's business, operations or condition. As a result, the Company classified the entire debt balance as a current liability as of December 31, 2017 given that a determination of such an event of default is outside of the Company's control. As of June 30, 2018, the Company has classified $2.0 million of the outstanding debt balance as current and $12.8 million as non-current, which reflects the scheduled repayment terms under the August 2017 Loan.

The interest charges on the loan will be based on a floating rate that equals the greater of 7.39% or the sum of the 30-day U.S. Dollar London Interbank Offered Rate ("LIBOR") plus 6.40%. In addition, the Company will make a final payment equal to 3.83% of the original principal amount of the loan, or $574,500, which will be accrued over the term of the loan using the effective-interest method.

In connection with the August 2017 Loan, the Company issued to Oxford and SVB a warrant to purchase 454,820 shares and 227,410 shares, respectively, of Series D-2 redeemable convertible preferred stock at an exercise price of $0.6596 per share (the "2017 Warrant"). If there is a subsequent convertible preferred stock or other senior equity securities financing with a per share price less than the Series D-2 redeemable convertible preferred per share price, then the warrant shall instead be to purchase such class of shares, based on the per share price of such (see Note 12). In May 2018, the Company raised a total of $33.4 million in funding through the sale and issuance of 124,840,500 shares of a newly authorized series of preferred stock, Series E redeemable convertible preferred stock, at $0.2674 per share. Given that the price per share of the Series E redeemable convertible preferred stock was less than the Series D-2 redeemable convertible preferred per share price, the 2017 Warrant converted into a warrant to purchase a total of 1,409,332 shares of Series E redeemable convertible preferred stock at an exercise price of $0.3193 per share. The warrants were exercisable from the date of issuance and have a 10-year term. The estimated fair value upon issuance of the 2017 Warrant based on Series D-2 convertible preferred stock was $329,000, which was recorded as redeemable convertible preferred stock warrant liability. The fair value of the warrant at the date of issuance was determined using an Option Pricing Method and was recorded a redeemable convertible preferred stock warrant liability with an offset to debt discount on the associated borrowings on the Company's balance sheet. The debt discount is being amortized to interest expense over the repayment period of the loan using the effective-interest method.

During the six months ended June 30, 2018, the Company recorded interest expense related to this loan and accretion of debt discount of $784,000.

7. Related-Party Transactions

Related party transactions with Celgene, which owned 15.4% and 15.1% of the Company's outstanding equity interest as of December 31, 2017 and June 30, 2018, respectively, are described in Note 5.

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Notes to Unaudited Interim Condensed Financial Statements

Three directors of the Company are performing consulting services for the Company. Subsequent to his appointment to the Company's Board of Directors, the Company paid $30,000 to one of the directors in each of the six months ended June 30, 2017 and 2018. Additionally, such director was granted options to purchase 9,805 shares of the Company's common stock from 2009 to 2015, at the then-current fair values of the common stock ranging from $4.36 to $11.98 per share, related to his consulting services, which vest ratably over four years. As of June 30, 2018, all of such shares were vested. There were not any transaction advisory fees during the six months ended June 30, 2017 and 2018, respectively, paid to a firm of which such director is a managing executive, related to the Celgene agreements. Additional payments, based on a single digit percentage of any future payments, will be made to such transaction advisory firm upon receipt of future payments under the 2017 Celgene Agreement (see Note 5).

The Company paid $15,000 to the second director performing consulting services for the Company in each of the six months ended June 30, 2017 and 2018. Additionally, such director was granted an option to purchase 3,269 shares of the Company's common stock in September 2015 at the then-current fair value of the common stock, related to his consulting services, which vest ratably over four years.

The Company paid $10,000 and $15,000 to the third director performing consulting services for the Company in each of the six months ended June 30, 2017 and 2018, respectively.

On August 30, 2010, the Company received a promissory note with recourse from its chief executive officer, which was used to purchase common stock. The principal amount of the note was approximately $200,000, which accrues interest at 0.53%, compounding semiannually. The note can be prepaid without penalty and is due on August 30, 2019. The note and related interest receivable have been recorded as a component of stockholders' deficit. As of December 31, 2017 and June 30, 2018, the outstanding balance is approximately $208,000.

Investment in SutroVax, Inc. ("SutroVax")

In December 2013, the Company and Johnson & Johnson Innovation, through the Johnson & Johnson Development Corporation, provided initial co-funding for a new company, SutroVax. SutroVax leverages the Company's proprietary integrated cell-free protein synthesis platform, XpressCF, to develop novel vaccines for a broad range of disease targets. The Company had a $34,000 and $657,000 receivable due from SutroVax as of December 31, 2017 and June 30, 2018, respectively, which was included in accounts receivable on the balance sheet.

As of December 31, 2017 and June 30, 2018, the Company held a 7.8% and 5.6%, respectively, common stock ownership interest in SutroVax on a fully-diluted basis, with a carrying value of $0 and was accounted for under the cost method.

SutroVax qualifies as a variable interest entity. However, the Company maintains only shared power to direct the activities that most significantly impact the performance of SutroVax. Therefore, the Company is not considered the primary beneficiary and consolidation is not required.

See Note 5, SutroVax, Inc. Supply Agreement for discussion of the supply arrangement entered into with SutroVax in May 2018 and related revenue recognized for the six months ended June 30, 2018.

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In May 2018, the Company entered into amendments to the license agreement with SutroVax, which primarily clarified under certain limited future circumstances SutroVax's ability to manufacture extract pursuant to the license agreement. The Company received a warrant for the purchase of 100,000 shares of SutroVax preferred stock which was valued at $140,000. The value of warrants received has been recognized as other revenue-related parties during the six months ended June 30, 2018 as there are no remaining deliverables under the license agreement.

8. Redeemable Convertible Preferred Stock and Stockholder's Deficit

Redeemable Convertible Preferred Stock

In May and June 2018, the Company raised an aggregate total of $33.4 million in funding through the sale and issuance of 124,840,500 shares of Series E redeemable convertible preferred stock, at $0.2674 per share (post-split). The Series E redeemable convertible preferred stock per share price was less than the conversion price per share in each of the Company's prior redeemable convertible preferred stock financings, and therefore, each prior conversion price was lowered by applying a broad-based weighted average adjustment. With certain senior rights, preferences and privileges provided for the Series E redeemable convertible preferred stock, all prior series (Series A through Series D-2) of issued redeemable convertible preferred stock will be hereafter referred to collectively as the "Junior Preferred."

Redeemable convertible preferred stock, $0.001 par value, as of December 31, 2017 consisted of:

	Shares Authorized	Shares Issued and Outstanding	Original Issue Price Per Share	Carrying Value	Liquidation Preference
	(in thousands, except for share and per share amounts)				
Series A	3,503,692	3,503,692	$ 0.5900	$ 1,992	$ 2,067
Series B	24,515,966	24,345,936	0.8822	19,865	21,478
Series C	78,582,049	76,102,337	0.4797	38,035	36,506
Series C-2	8,338,892	8,338,892	0.5996	4,845	5,000
Series D	43,362,233	43,362,233	0.5996	25,900	26,000
Series D-2	18,779,561	18,097,331	0.6596	11,868	11,937
Balance at December 31, 2017	177,082,393	173,750,421		$ 102,505	$ 102,988

Redeemable convertible preferred stock, $0.001 par value, as of June 30, 2018 consisted of:

	Shares Authorized	Shares Issued and Outstanding	Original Issue Price Per Share	Carrying Value	Liquidation Preference
	(in thousands, except for share and per share amounts)				
Series A	3,503,692	3,503,692	$ 0.5900	$ 1,992	$ 2,067
Series B	24,515,966	24,345,936	0.8822	19,865	21,478
Series C	78,582,049	76,102,337	0.4797	38,035	36,506
Series C-2	8,338,892	8,338,892	0.5996	4,845	5,000
Series D	43,362,233	43,362,233	0.5996	25,900	26,000
Series D-2	18,779,561	18,097,331	0.6596	11,868	11,937
Series E	189,320,388	124,840,500	0.2674	33,215	33,382
Balance at June 30, 2018	366,402,781	298,590,921		$ 135,720	$ 136,370

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The significant rights, preferences and privileges of the redeemable convertible preferred stock are as follows:

Redemption

At the election of the holders of a majority of the then-outstanding shares of preferred stock, voting together as a single class on an as-converted to common stock basis, the Company will redeem all outstanding shares of preferred stock in three equal annual installments commencing May 18, 2023, by paying in cash an amount per share equal to the original issuance prices of $0.59 per share of Series A redeemable convertible preferred stock, $0.8822 per share of Series B redeemable convertible preferred stock, $0.4797 per share of Series C redeemable convertible preferred stock, $0.5996 per share of Series C-2 redeemable convertible preferred stock, $0.5996 per share of Series D redeemable convertible preferred stock, $0.6596 per share of Series D-2 redeemable convertible preferred stock, and $0.2674 per share of Series E redeemable convertible preferred stock, plus 8% of the applicable original issuance prices per annum calculated from the original issuance date of each share of preferred stock. If funds legally available for redemption of the preferred stock are insufficient to pay such holders the full redemption prices, the Company will effect such redemption first to the holders of Series E redeemable convertible preferred stock, until the related redemption price has been paid in full, and second to the Junior Preferred holders, pro rata among such holders, based on a formula.

Additionally, all shares of preferred stock are redeemable in the event of a change in control or sale of substantially all of the assets of the Company. As certain redemption events are outside the control of the Company, all preferred stock amounts have been presented outside of stockholders' deficit.

The carrying value of the redeemable convertible preferred stock has not been accredited up to its redemption value as no redemption events are considered probable as of June 30, 2018.

Dividends

The holders of preferred stock are entitled to receive, when and as declared by the Board of Directors, dividends at the per annum rate of $0.0472 per share of Series A redeemable convertible preferred stock, $0.07056 per share of Series B redeemable convertible preferred stock, $0.03838 per share of Series C redeemable convertible preferred stock, $0.048 per share of Series C-2 redeemable convertible preferred stock, $0.048 per share of Series D redeemable convertible preferred stock, $0.0528 per share of Series D-2 redeemable convertible preferred stock, and $0.0214 per share of Series E redeemable convertible preferred stock, prior and in preference to any declaration or payment of a dividend to the common stockholders. Additionally, the holders of Series E redeemable convertible preferred stock are entitled to receive dividends prior and in preference to Junior Preferred holders and holders of common stock of the Company. Payment of any dividends to the Junior Preferred holders shall be on a pro rata, pari passu basis in proportion to the dividend rates set forth above for each series of Junior Preferred stock. Such dividends are not cumulative, and no right to such dividends shall accrue to holders of the preferred stock unless declared by the Board of Directors. Following payment of these dividends to the preferred stockholders, any additional dividends will be payable to the holders of the Company's common and preferred stock on an as-if-converted-to-common-stock basis. No dividends have been declared to date.

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Liquidation

In the event of any liquidation, dissolution, or winding up of the Company, either voluntary or involuntary, the holders of Series E redeemable convertible preferred stock are entitled to receive any distribution of assets or surplus funds in an amount equal to the original issuance price of the Series E redeemable convertible preferred stock (as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events) and all declared but unpaid dividends, if any, prior and in preference to Junior Preferred holders and holders of common stock of the Company. Junior Preferred holders shall be entitled to receive pro rata, prior and in preference to any distribution to the holders of the common stock, an amount equal to the original issuance prices of each series (in each case, as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events) and all declared but unpaid dividends, if any.

After giving effect to the liquidation preferences noted above, all of the remaining assets of the Company shall be distributed to the holders of preferred stock and common stock pro rata based on the number of shares of common stock held by each such holder, treating, for this purpose, all such securities as if they had been converted to common stock immediately prior to the liquidation event. However, if the aggregate amount that the holders of preferred stock are entitled to receive exceeds two times the applicable original issuance prices per share for such series of preferred stock plus any dividends declared but unpaid thereon (the “Maximum Participation Amount”), each holder of preferred stock shall be entitled to receive upon such liquidation the greater of (i) the Maximum Participation Amount and (ii) the amount such holder would have received if all shares of such series of preferred stock had been converted into common stock immediately prior to the liquidation event.

Unless the holders of a majority of the then-outstanding shares of preferred stock, voting together as a single class on an as-converted to common stock basis, elect otherwise, any of the following events shall be treated as a liquidation: (i) any consolidation, merger, acquisition, or any other corporate reorganization in which the stockholders of the Company immediately prior to such event own less than 50% of the voting power of the surviving or successor entity or its parent immediately after such event; (ii) any transaction or series of related transactions in which in excess of 50% of the Company’s voting power is transferred; or (iii) any sale, lease, transfer, exclusive license, or other disposition of all or substantially all of the assets of the Company.

Voting

Each share of redeemable convertible preferred stock is entitled to voting rights equivalent to the number of shares of common stock into which each share can be converted.

The holders of Series E redeemable convertible preferred stock are entitled to elect one director of the Company, the holders of Series C redeemable convertible preferred stock are entitled to elect two directors of the Company, and the holders of Series A redeemable convertible preferred stock and Series B redeemable convertible preferred stock are each entitled to elect one director of the Company. Additionally, holders of common stock are entitled to elect one director of the Company, and all stockholders can elect the balance of the total number of directors of the Company.

Conversion

The conversion price as of June 30, 2018 of each series of redeemable convertible preferred stock listed below is subject to adjustment upon certain dilutive events, including in the event the Company issues certain additional equity securities at a purchase price less than the current conversion price.

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Each share of Series E redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.2674 by the Series E redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series E redeemable convertible preferred stock conversion price as of June 30, 2018 is $0.2674 per share of common stock. The Series E redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events. As of June 30, 2018, each share of Series E redeemable convertible preferred stock will convert into common stock on a 1-for-0.0275 basis.

Each share of Series D-2 redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.6596 by the Series D-2 redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series D-2 redeemable convertible preferred stock conversion price as of June 30, 2018 is $0.5550 per share of common stock. The Series D-2 redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events. As of June 30, 2018, each share of Series D-2 redeemable convertible preferred stock will convert into common stock on a 1-for-0.0327 basis.

Each share of Series D redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.5996 by the Series D redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series D redeemable convertible preferred stock conversion price as of June 30, 2018 is $0.5134 per share of common stock. The Series D redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events. As of June 30, 2018, each share of Series D redeemable convertible preferred stock will convert into common stock on a 1-for-0.0322 basis.

Each share of Series C-2 redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.5996 by the Series C-2 redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series C-2 redeemable convertible preferred stock conversion price as of June 30, 2018 is $0.5134 per share of common stock. The Series C-2 redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events. As of June 30, 2018, each share of Series C-2 redeemable convertible preferred stock will convert into common stock on a 1-for-0.0322 basis.

Each share of Series C redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.4797 by the Series C redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series C redeemable convertible preferred stock conversion price as of June 30, 2018 is $0.4304 per share of common stock. The Series C redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events. As of June 30, 2018, each share of Series C redeemable convertible preferred stock will convert into common stock on a 1-for-0.0307 basis.

Each share of Series B redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.8822 by the Series B redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series B redeemable convertible preferred stock

conversion price as of June 30, 2018 is $0.5333 per share of common stock. The Series B redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events. As of June 30, 2018, each share of Series B redeemable convertible preferred stock will convert into common stock on a 1-for-0.0456 basis.

Each share of Series A redeemable convertible preferred stock shall be convertible, at the option of the holder thereof, into such number of fully paid and nonassessable shares of common stock as is determined by dividing $0.59 by the Series A redeemable convertible preferred stock conversion price in effect at the time of conversion. The Series A redeemable convertible preferred stock conversion price as of June 30, 2018 is $0.4602 per share of common stock. The Series A redeemable convertible preferred stock conversion price is subject to adjustment upon certain dilutive events. As of June 30, 2018, each share of Series A redeemable convertible preferred stock will convert into common stock on a 1-for-0.0353 basis.

As discussed in Note 12, in July 2018 the Company issued additional shares of Series E redeemable convertible preferred stock at a price per share that is less than the conversion price of each of the prior issued shares of redeemable convertible preferred stock. Therefore, each prior conversion price was lowered, and the previously issued Series E redeemable convertible preferred stock was split, by the applicable adjustment.

Each share of redeemable convertible preferred stock shall automatically be converted into shares of common stock at the then-effective rate applicable to voluntary conversion as described above, upon either (i) the completion of an underwritten public offering at a price of not less than $14.5599 per share (as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events) that results in at least $50.0 million in net cash proceeds. In addition, each share of Junior Preferred shall automatically be converted into shares of common stock at the then-effective conversion rate for such series upon the written election of the holders of a majority of the then-outstanding Junior Preferred, voting or consenting together as a single class on an as-converted to common stock basis; and each share of Series E redeemable convertible preferred stock shall automatically be converted into shares of common stock at the then-effective conversion rate for such series upon the written election of the holders of a majority of the then-outstanding Series E redeemable convertible preferred stock, voting separately as a single class.

Warrants

During the period from 2008 to 2012, the Company issued various warrants for the purchase of redeemable convertible preferred stock in connection with debt financings and the issuance of redeemable convertible preferred stock.

In August 2017, the Company issued warrants to Oxford and SVB to purchase an aggregate of 682,230 shares of Series D-2 redeemable convertible preferred stock at an exercise price of $0.6596 per share in connection with the issuance of August 2017 Loan (see Note 6). If there is a subsequent convertible preferred stock or other senior equity securities financing with a per share price less than the Series D-2 redeemable convertible preferred per share price, then the warrant shall automatically convert to a warrant to purchase such class of shares, based on the per share price of such equity (see Note 12). Given that the price per share of the Series E redeemable convertible preferred stock described above was less than the price per share of the Series D-2 redeemable convertible preferred stock, the 2017 Warrant converted into a warrant to purchase a total of 1,409,332 shares of Series E redeemable convertible preferred stock at an exercise price of $0.3193 per share. The warrant is exercisable from the original date of issuance and has a 10-year term.

Sutro Biopharma, Inc.

Notes to Unaudited Interim Condensed Financial Statements

As of December 31, 2017 and June 30, 2018, the warrants outstanding and exercisable were as follows:

Stock	Expiration Date	Exercise Price Per Share	Shares as of December 31, 2017	Shares as of June 30, 2018	Estimated Fair Value as of December 31, 2017	Estimated Fair Value as of June 30, 2018
			(in thousands, except for share and per share amounts)			
Series B redeemable convertible preferred	June 2018	$ 0.8822	170,030	—	$ 116	$ —
Series C redeemable convertible preferred(1)	July 2020 – June 2022	$ 0.4797	2,479,712	2,479,712	1,263	523
Series D-2 redeemable convertible preferred	August 2027	$ 0.6596	682,230	—	329	—
Series E redeemable convertible preferred	August 2027	$ 0.3193	—	1,409,332	—	278
Total					$ 1,708	$ 801

(1) 1,791,784 of the Series C redeemable convertible preferred warrants expire at the earlier of (i) the tenth anniversary of issuance; (ii) the consummation of certain change of control events; or (iii) upon the completion of an IPO of the Company's common stock.

The warrants were valued using the Option Pricing Method and were estimated using the following assumptions:

	Six Months Ended June 30, 2017	Six Months Ended June 30, 2018
Average expected life (in years)	2.5	2.0
Expected volatility	84.7%	63.00%
Risk-free interest rate	0.83%	2.4%
Expected dividend	—	—

Common Stock

Holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders of the Company.

As of June 30, 2018, the Company had reserved common stock, on an if-converted basis, for issuance as follows:

Redeemable convertible preferred stock	9,259,852
Common stock options issued and outstanding	820,875
Remaining shares reserved for issuance under 2004 equity incentive plan	1,691,759
Warrants to purchase redeemable convertible preferred stock	114,876
Warrants to purchase common stock	1,099
Total	11,888,461

Sutro Biopharma, Inc.

Notes to Unaudited Interim Condensed Financial Statements

9. Stock Options

The following table summarizes option activity under the Company's 2004 Equity Incentive Plan (the "Plan"):

	Shares Available for Grant	Outstanding Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contract Term (Years)	Aggregate Intrinsic Value
Balances at December 31, 2017	91,149	835,320	$ 10.31	6.84	$ 3,813
Increase in authorized shares	1,600,212	—	—		
Granted	(1,925)	1,925	$ 14.88		
Exercised	—	(14,047)	$ 5.28		
Canceled	2,323	(2,323)	$ 13.52		
Balances at June 30, 2018	1,691,759	820,875	$ 10.41	6.43	$ 3,674
Exercisable at June 30, 2018		617,448		5.94	$ 3,370
Vested and expected to vest at June 30, 2018		798,385		6.39	$ 3,639

The aggregate intrinsic value was calculated as the difference between the exercise prices of the underlying stock option awards and the estimated fair value of the Company's common stock on the date of exercise. For the six months ended June 30, 2017 and 2018, the aggregate intrinsic value of stock options exercised was $43,000 and $135,000, respectively, determined at the date of the option exercise.

Employee Stock Options Valuation

For determining stock-based compensation expense, the fair-value-based measurement of each employee stock option was estimated as of the date of grant using the Black-Scholes option-pricing model with assumptions as follows:

	Six Months Ended June 30,	
	2017	2018
Expected term (in years)	5.5 - 6.0	6.0
Expected volatility	57.71% - 58.55%	56.34% - 56.44%
Risk-free interest rate	1.94% - 2.10%	2.72 - 2.73%
Expected dividend	—	—

Using the Black-Scholes option-valuation model, the weighted-average estimated grant-date fair value of employee stock options granted during the six months ended June 30, 2017 and 2018, was $7.08 and $8.21 per share, respectively. The total fair value of options vested during the six months ended June 30, 2017 and 2018, was $776,000 and $455,000, respectively.

Non-Employee Stock-Based Compensation Expense

The Company remeasures the estimated fair value of the unvested portion of the award each period, until the award is fully vested. The Company believes that the fair value of the stock options is more reliably measurable than the fair value of services received. The fair value of options granted to

non-employees was estimated using the Black-Scholes method. The stock-based compensation expense related to non-employees for the six months ended June 30, 2017 and 2018, was $39,000 and $20,000, respectively.

Stock-Based Compensation Expense

Total stock-based compensation expense recognized was as follows:

	Six Months Ended June 30,	
	2017	2018
	(in thousands)	
Research and development	$ 72	$ 95
General and administrative	461	386
Total	$ 533	$ 481

As of June 30, 2018, there was approximately $1.3 million of total unrecognized compensation cost related to the unvested stock options granted under the Company's Plan. The remaining unrecognized compensation cost is expected to be recognized over a weighted-average period of 1.9 years.

Early Exercise of Options

Certain stock options granted under the Company's stock option Plan provide option holders the right to elect to exercise unvested options in exchange for restricted common stock. A summary of the restricted stock shares issued under the Company's Plan is as follows:

	Shares
Balance as of December 31, 2017	2,374
Vested	(2,374)
Balance as of June 30, 2018	—

The shares are subject to repurchase by the Company at the original exercise price in the event the optionee's employment is terminated either voluntarily or involuntarily. The repurchase right to these shares generally lapses 25% after one year, and the remainder lapses ratably over three years thereafter. The Company treats cash received from the exercise of unvested options as a refundable deposit, shown as a liability in its balance sheets. As of December 31, 2017 and June 30, 2018, the Company included cash received for the early exercise of options of approximately $14,000 and zero, respectively, which is included in other noncurrent liabilities. Amounts are transferred from liabilities into common stock and additional paid-in-capital as the shares vest.

2017 Call Option Plan

In February 2017, the Company adopted a 2017 Call Option Plan to grant selected employees, officers, directors and consultants (collectively, the "Participants") options to purchase shares of the common stock of SutroVax, an unconsolidated investee of the Company (see Note 7). The Company has reserved 450,000 shares of SutroVax common stock as of June 30, 2018 for issuance under the program. The call options vest 25% on each of January 1, 2017, 2018, 2019, and 2020, and expire one year from the vesting date.

Using the Black-Scholes option-valuation model, the call options are measured at fair value on grant date and at each reporting period prior to their vesting, with cost recognized over the requisite

service period as compensation cost. Any changes in the fair value subsequent to the vesting date are recognized in other income (expense), net in the statement of operations. Call options covering 420,000 shares have been granted with an exercise price of $0.76 per share, with 105,000 shares vested and exercised during the year ended December 31, 2017. Call options covering 315,000 shares were outstanding and 210,000 shares were unvested as of June 30, 2018. The amounts recognized as compensation expense and other income (expense) related to the 2017 Call Option Plan were $50,000 and ($16,000), respectively, for the six months ended June 30, 2017 and $31,000 and $4,000, respectively, for the six months ended June 30, 2018.

10. Net Loss Per Share

The following table sets forth the computation of the Company's basic and diluted net loss per share.

	Six Months Ended June 30,	
	2017	2018
	(in thousands, except share and per share amounts)	
Numerator:		
Net loss, basic and diluted	$ (2,926)	$ (23,587)
Denominator:		
Shares used in computing net loss per share , basic and diluted	441,059	472,647
Net loss per share, basic and diluted	$ (6.63)	$ (49.90)

The following common stock equivalents were excluded from the computation of diluted net loss per share for the periods ended June 30, 2017 and 2018, because including them would have been antidilutive:

	As of June 30,	
	2017	2018
Redeemable convertible preferred stock (as converted)	5,063,404	9,259,852
Options to purchase common stock	813,048	820,875
Warrants to purchase redeemable convertible preferred stock (as converted)	74,767	114,876
Warrants to purchase common stock	1,099	1,099
Early exercised shares of common stock	9,454	—
Total	5,961,772	10,196,702

Unaudited Pro Forma Net Loss Per Share

Pro forma basic and diluted net loss per share of common stock have been computed to give effect to the assumed conversion of the redeemable convertible preferred stock, the assumed net exercise of certain redeemable convertible preferred stock warrants and common stock warrants and the assumed conversion of the remaining redeemable convertible preferred stock warrants into common stock warrants upon the completion of a qualifying IPO of the Company's common stock. Also, the numerator in the pro forma basic and diluted net loss per share calculation has been adjusted

to remove gains or losses resulting from the remeasurement of the redeemable convertible preferred stock warrant liability.

The following table sets forth the computation of the Company's pro forma basic and diluted net loss per share of common stock.

	Six Months Ended June 30, 2018
Numerator:	
Net loss	$ (23,587)
Change in fair value of redeemable convertible preferred stock warrant liability	(907)
Pro forma net loss, basic and diluted	$ (24,494)
Denominator:	
Weighted-average common shares used in net loss per share, basic and diluted	472,647
Pro forma adjustment to reflect assumed conversion of redeemable convertible preferred stock	6,524,747
Pro forma weighted-average shares of common stock, basic and diluted	6,997,394
Pro forma net loss per share, basic and diluted	$ (3.50)

11. Income Taxes

For the six months ended June 30, 2017 and 2018, the Company did not record an income tax provision. The U.S. federal deferred tax assets generated from the Company's net operating losses have been fully reserved, as the Company believes it is not more likely than not that the benefit will be realized. In December 2017, the 2017 Tax Cuts and Jobs Act (2017 Tax Act) was enacted and includes a broad range of provisions, many of which differ significantly from those contained in previous U.S. tax law. Changes in tax law are accounted for in the period of enactment. As such, the Company's financial statements reflect the impact of this 2017 Tax Act, which primarily consisted of measuring the Company's deferred tax assets and valuation allowance using the newly enacted U.S. corporate tax rate.

The SEC issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act, which allows companies to record provisional amounts during a measurement period not to extend more than one year beyond the Act enactment date. Since the 2017 Tax Act was passed late in the fourth quarter of 2017, and ongoing guidance and accounting interpretation are expected during the year, the Company considers the accounting for deferred tax remeasurements and other provisions to be incomplete. There have been no material changes to the provisional adjustments disclosed in the Company's 2017 financials. The Company is continuing to evaluate the estimates used to record and disclose the effects of the 2017 Tax Act.

12. Subsequent Events

In July 2018, the Company raised $52.0 million in funding through the sale and issuance of 194,465,218 shares of Series E redeemable convertible preferred stock, at $0.2674 per share. The Series E redeemable convertible preferred stock per share price and shares issued in the May and June 2018 closings of the Series E redeemable convertible preferred stock financing described in Note 8 were adjusted by means of a stock split to reflect the lower price per share in the July 2018

closing of the Series E redeemable convertible preferred stock financing. Accordingly, with consideration of the May, June and July 2018 Series E redeemable convertible preferred stock combined funding, the Company raised a total of $85.4 million through the sale and issuance of 319,305,718 shares of Series E redeemable convertible preferred stock at $0.2674 per share. The Series E redeemable convertible preferred stock per share price was less than the conversion price per share in each of the Company's prior Junior Preferred stock financings, and therefore, each prior conversion price was lowered by applying a broad-based weighted average adjustment. The Series A redeemable convertible preferred stock will convert at a ratio of 1:0.0433, the Series B redeemable convertible preferred stock will convert at a ratio of 1:0.0578, the Series C redeemable convertible preferred stock will convert at a ratio of 1:0.0370, the Series C-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0405, the Series D redeemable convertible stock will convert at a ratio of 1:0.0405, the Series D-2 redeemable convertible preferred stock will convert at a ratio of 1:0.0419 and the Series E redeemable convertible preferred stock will convert at a ratio of 1:0.0275. Additionally, in connection with the August 2017 Loan, the Company issued to each of Oxford and SVB a warrant to purchase 454,820 shares and 227,410 shares, respectively, of Series D-2 redeemable convertible preferred stock at an exercise price of $0.6596 per share (the "2017 Warrants"). Given that the price per share of the Series E redeemable convertible preferred stock was less than the price per share of the Series D-2 redeemable convertible preferred stock, the 2017 Warrants converted into warrants to purchase a total of 1,682,871 shares of Series E redeemable convertible preferred stock at an exercise price of $0.2674 per share.

In July 2018, the Company entered into an Exclusive Patent License and Research Collaboration Agreement (the "2018 Merck Agreement") with Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA ("Merck") to jointly develop up to three research programs focusing on cytokine derivatives for cancer and autoimmune disorders.

Under the 2018 Merck Agreement, the Company received from Merck an upfront payment of $60.0 million in August 2018 for the research and development of two target programs, with an option for a third program upon the payment of an additional amount. The Company is also eligible to receive aggregate milestone payments of up to $1.6 billion, assuming the development and sale of all therapeutic candidates and all possible indications identified under the collaboration. If one or more products from each of the target programs are developed for non-oncology or a single indication, we will be eligible for reduced aggregate milestone payments. In addition, the Company is eligible to receive tiered royalties ranging from mid-single digit to low teen percentages on the worldwide sales of any commercial products that may result from the collaboration. Additionally, Merck purchased $20.0 million in Series E redeemable convertible preferred stock from the Company and has agreed to purchase up to $10.0 million of common stock concurrently with the Company's planned IPO.

In August 2018, the promissory note due from the Company's chief executive officer was repaid. The Company received approximately $208,000 as payment for the principal balance and interest receivable.

In September 2018, the Company effected a 36.3-for-1 reverse split of its common stock. Upon the effectiveness of the reverse stock split, (i) every 36.3 shares of outstanding common stock were combined into one share of common stock, (ii) the number of shares of common stock for which each outstanding option to purchase common stock is exercisable was proportionally decreased on a 36.3-for-1 basis, (iii) the exercise price of each outstanding option to purchase common stock was proportionately increased on a 1-for-36.3 basis, (iv) the conversion ratio for each share of outstanding

redeemable convertible preferred stock which is convertible into the Company's common stock was proportionately decreased on a 36.3-for-1 basis, (v) the number of shares of common stock for which each outstanding warrant to purchase common stock is exercisable was proportionally decreased on a 36.3-for-1 basis, (vi) the conversion ratio for each outstanding warrant to purchase redeemable convertible preferred stock which is convertible into warrants to purchase the Company's common stock after the offering was proportionally decreased on a 36.3-for-1 basis and (vii) the exercise price of each outstanding warrant was proportionally increased on a 1-for-36.3 basis. All of the outstanding common stock share numbers (including shares of common stock subject to the Company's options, as converted for the outstanding redeemable convertible preferred stock shares and warrants), share prices, exercise prices and per share amounts have been adjusted in this prospectus, on a retroactive basis, to reflect this 36.3-for-1 reverse stock split for all periods presented. The par value per share and the authorized number of shares of common stock and redeemable convertible preferred stock were not adjusted as a result of the reverse stock split.

5,000,000 Shares

Common Stock

PROSPECTUS

Joint Book-running Managers

Cowen **Piper Jaffray**

Co-managers

JMP Securities **Wedbush PacGrow**

, 2018

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, paid or payable by the Registrant in connection with the sale of the common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission, or SEC, registration fee, the Financial Industry Regulatory Approval, or FINRA, filing fee and the Nasdaq Global Market listing fee:

	Amount Paid or To Be Paid
SEC registration fee	$ 11,454
FINRA filing fee	14,300
The Nasdaq Global Market listing fee	125,000
Printing and engraving expenses	382,000
Legal fees and expenses	1,800,000
Accounting fees and expenses	1,400,000
Blue Sky, qualification fees and expenses	10,000
Transfer agent and registrar fees and expenses	10,000
Miscellaneous expenses	147,246
Total	$ 3,900,000

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 145 of the Delaware General Corporation Law, or DGCL, authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the DGCL are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933, as amended, or the Securities Act.

As permitted by the DGCL, the Registrant's restated certificate of incorporation to be effective in connection with the completion of this offering contains provisions that eliminate the personal liability of its directors for monetary damages for any breach of fiduciary duties as a director, except liability for the following:

- any breach of the director's duty of loyalty to the Registrant or its stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- under Section 174 of the DGCL (regarding unlawful dividends and stock purchases); or
- any transaction from which the director derived an improper personal benefit.

As permitted by the DGCL, the Registrant's restated bylaws to be effective in connection with the completion of this offering, provide that:

- the Registrant is required to indemnify its directors and executive officers to the fullest extent permitted by the DGCL, subject to limited exceptions;
- the Registrant may indemnify its other employees and agents as set forth in the DGCL;

- the Registrant is required to advance expenses, as incurred, to its directors and executive officers in connection with a legal proceeding to the fullest extent permitted by the DGCL, subject to limited exceptions; and
- the rights conferred in the restated bylaws are not exclusive.

Prior to the completion of this offering, the Registrant intends to enter into indemnification agreements with each of its current directors and executive officers to provide these directors and executive officers additional contractual assurances regarding the scope of the indemnification set forth in the Registrant's restated certificate of incorporation and restated bylaws and to provide additional procedural protections. There is no pending litigation or proceeding involving a director or executive officer of the Registrant for which indemnification is sought. Reference is also made to the underwriting agreement to be filed as Exhibit 1.1 to this registration statement, which provides for the indemnification of executive officers, directors and controlling persons of the Registrant against certain liabilities. The indemnification provisions in the Registrant's restated certificate of incorporation, restated bylaws and the indemnification agreements entered into or to be entered into between the Registrant and each of its directors and executive officers may be sufficiently broad to permit indemnification of the Registrant's directors and executive officers for liabilities arising under the Securities Act.

The Registrant has directors' and officers' liability insurance for securities matters.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

The following lists set forth information regarding all securities sold or granted by the Registrant from September 11, 2015 through September 11, 2018 that were not registered under the Securities Act, and the consideration, if any, received by the Registrant for such securities:

(a) Stock Option Grants

From September 11, 2015 through September 11, 2018, the Registrant has granted to its employees, directors, consultants and other service providers options to purchase an aggregate of 518,489 shares of common stock under its 2004 Stock Plan, or 2004 Plan, with exercise prices ranging from $11.98 to $14.89 per share.

From September 11, 2015 through September 11, 2018, employees, directors, consultants and other service providers of the Registrant exercised options granted under the 2004 Plan for an aggregate of 68,504 shares of common stock with exercise prices ranging from $1.82 to $14.89 per share for an aggregate exercise price of $401,574.53.

(b) Warrants to Purchase Preferred Stock

In August 2017, the Registrant issued to two accredited investors warrants to purchase an aggregate of 682,230 shares of the Registrant's Series D-2 redeemable convertible preferred stock at a per share exercise price of $0.6596, for an aggregate consideration of approximately $450,000. In connection with the July 2018 closing of the Series E redeemable convertible preferred stock financing, these warrants converted into warrants to purchase a total of 1,682,871 shares of Series E redeemable convertible preferred stock at an exercise price of $0.2674 per share. These warrants will convert into warrants to receive shares of the Registrant's common stock upon the completion of this offering.

(c) Preferred Stock

In May and June 2018, the Registrant issued and sold to eight accredited investors an aggregate of 104,548,547 shares of Series E redeemable convertible preferred stock, which converted into 124,840,500 shares of Series E redeemable convertible preferred stock following the 1-for-1.1940912491

forward stock split of Series E redeemable convertible preferred stock effected on July 26, 2018, at a purchase price of $0.3193 per share ($0.2674 post-split), for aggregate consideration of approximately $33,382,351. In July 2018, the Registrant issued and sold to six accredited investors an aggregate of 194,465,218 shares of Series E redeemable convertible preferred stock, at a purchase price of $0.2674 per share, for aggregate consideration of approximately $51,999,999. In connection with the completion of this offering, these shares of Series E redeemable convertible preferred stock will convert into 319,305,718 shares of the Registrant's common stock.

Unless otherwise stated, the sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act (or Regulation D or Regulation S promulgated thereunder), or Rule 701 promulgated under Section 3(b) of the Securities Act, as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed on the stock certificates issued in each of the foregoing transactions.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions or any public offering, and the Registrant believes each transaction was exempt from the registration requirements of the Securities Act as stated above. All recipients of the foregoing transactions either received adequate information about the Registrant or had access, through their relationships with the Registrant, to such information. Furthermore, the Registrant affixed appropriate legends to the share certificates and instruments issued in each foregoing transaction setting forth that the securities had not been registered and the applicable restrictions on transfer.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) Exhibits.

Exhibit Number	Description of Document
1.1	Form of Underwriting Agreement.
3.1	Eighth Amended and Restated Certificate of Incorporation, as amended to date, as currently in effect.
3.2	Form of Restated Certificate of Incorporation to be effective upon the completion of this offering.
3.3*	Amended and Restated Bylaws, as amended to date, as currently in effect.
3.4	Form of Restated Bylaws to be effective upon the completion of this offering.
4.1*	Form of Common Stock Certificate.
4.2a*	Third Amended and Restated Investors' Rights Agreement, dated May 24, 2018, by and among the Registrant and certain of its stockholders.
4.2b*	Omnibus Amendment Agreement, dated July 26, 2018, by and among the Registrant and certain of its stockholders.
4.3*	Form of Warrant to Purchase Shares of Common Stock.
4.4*	Forms of Warrant to Purchase Series C Redeemable Convertible Preferred Stock.
4.5*	Form of Warrant to Purchase Series D-2 Redeemable Convertible Preferred Stock.

Exhibit Number	Description of Document
5.1	Opinion of Fenwick & West LLP.
10.1	Form of Indemnity Agreement.
10.2*	2004 Stock Plan, as amended, and forms of award agreements.
10.3*	2017 Call Option Plan and forms of award agreements.
10.4	2018 Equity Incentive Plan, to become effective on the date immediately prior to the date the registration statement is declared effective, and forms of award agreements.
10.5	2018 Employee Stock Purchase Plan, to become effective on the date the registration statement is declared effective, and forms of award agreements.
10.6*	Offer Letter, dated December 29, 2008, by and between the Registrant and William J. Newell, as amended.
10.7*	Offer Letter, dated December 11, 2015, by and between the Registrant and Arturo Molina, as amended.
10.8*	Offer Letter, dated November 12, 2010, by and between the Registrant and Trevor Hallam, as amended.
10.9*	Edgewater Business Park Lease, dated May 18, 2016, by and between the Registrant and HCP, Inc.
10.10*	Standard Industrial/Commercial Multi-Tenant Lease-Net, dated May 18, 2011, by and between the Registrant and Lydia Tseng and/or Alemany Plaza LLC, as amended.
10.11†	Amended and Restated Collaboration and License Agreement, dated August 2, 2017, by and among Celgene Corporation, Celgene Alpine Investment Company II, LLC, and the Registrant, as amended.
10.12*†	License Agreement, dated September 16, 2014, by and between Merck KGaA, Darmstadt, Germany (operating in the United States and Canada under the name "EMD Serono") and the Registrant, as amended.
10.13†	Amended and Restated Exclusive Agreement, dated October 3, 2007, between The Board of Trustees of The Leland Stanford Junior University and Fundamental Applied Biology, Inc., as amended.
10.14*	Loan and Security Agreement, dated August 4, 2017, among Oxford Finance LLC, Silicon Valley Bank, and the Registrant.
10.15†	Exclusive Patent License and Research Collaboration Agreement, dated July 23, 2018, by and between the Registrant and Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ.
10.16*	Common Stock Purchase Agreement, dated July 23, 2018, by and between the Registrant and Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ.
21.1*	Subsidiaries of the Registrant.
23.1	Consent of Ernst & Young LLP, an independent registered public accounting firm.
23.2	Consent of Fenwick & West LLP (included in Exhibit 5.1).
24.1*	Power of Attorney.

* Previously filed.

† Registrant has omitted and filed separately with the SEC portions of the exhibit pursuant to a confidential treatment request under Rule 406 promulgated under the Securities Act.

(b) Financial Statement Schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or notes.

ITEM 17. UNDERTAKINGS.

The undersigned Registrant hereby undertakes to provide to the underwriters at the completion specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California, on the 17th day of September, 2018.

SUTRO BIOPHARMA, INC.

By: /s/ William J. Newell
William J. Newell
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ William J. Newell William J. Newell	Chief Executive Officer (Principal Executive Officer)	September 17, 2018
/s/ Edward Albini Edward Albini	Chief Financial Officer (Principal Accounting and Financial Officer)	September 17, 2018
* Michael Dybbs, Ph.D.	Director	September 17, 2018
* John G. Freund, M.D.	Director	September 17, 2018
* Daniel Janney	Director	September 17, 2018
* V. Bryan Lawlis, Ph.D.	Director	September 17, 2018
* Joseph M. Lobacki	Director	September 17, 2018
* Daniel H. Petree	Director	September 17, 2018
* Michael Ross, Ph.D.	Director	September 17, 2018
* Armen B. Shanafelt, Ph.D.	Director	September 17, 2018

* By Attorney-in-Fact

/s/ Edward Albini
Edward Albini

Exhibit 1.1

[•] Shares

SUTRO BIOPHARMA, INC.

Common Stock

UNDERWRITING AGREEMENT

[•], 2018

COWEN AND COMPANY, LLC

PIPER JAFFRAY & CO.
As Representatives of the several Underwriters

c/o Cowen and Company, LLC
599 Lexington Avenue
New York, New York 10022

c/o Piper Jaffray & Co.
800 Nicollet Mall, Suite 1000
Minneapolis, MN 55402

Dear Sirs:

1. *INTRODUCTORY*. Sutro Biopharma, Inc., a Delaware corporation (the "***Company***"), proposes to sell, pursuant to the terms of this Agreement, to the several underwriters named in Schedule A hereto (the "***Underwriters***," or, each, an "***Underwriter***"), an aggregate of [•] shares of common stock, $0.001 par value (the "***Common Stock***") of the Company. The aggregate of [•] shares so proposed to be sold is hereinafter referred to as the "***Firm Stock***". The Company also proposes to sell to the Underwriters, upon the terms and conditions set forth in Section 3 hereof, up to an additional [•] shares of Common Stock (the "***Optional Stock***"). The Firm Stock and the Optional Stock are hereinafter collectively referred to as the "***Stock***". Cowen and Company, LLC and Piper Jaffray & Co. are acting as representatives of the several Underwriters and in such capacity are hereinafter referred to as the "***Representatives***."

As part of the offering contemplated by this Agreement, Cowen and Company, LLC (the "***Designated Underwriter***") has agreed to reserve out of the Firm Stock purchased by it under this Agreement up to [•] shares for sale to the Company's officers, directors, employees, customers [and business partners] and friends and family members of the Company's officers, directors and employees (collectively, "***Participants***"), as set forth in the Prospectus (as defined below) under the heading "Underwriting" (the "***Directed Share Program***"). The Firm Stock to be sold by the Designated Underwriter pursuant to the Directed Share Program (the "***Directed Shares***") will be sold by the Designated Underwriter pursuant to this Agreement at the Offering Price set forth in Schedule C hereto. Any Directed Shares not subscribed for by the end of the business day on which this Agreement is executed will be offered to the public by the Underwriters as set forth in the Prospectus.

2. *REPRESENTATIONS AND WARRANTIES*

(i) REPRESENTATIONS AND WARRANTIES OF THE COMPANY. The Company represents and warrants to the several Underwriters and the Designated Underwriter, as of the date hereof and as of each Closing Date (as defined below), and agrees with the several Underwriters and the Designated Underwriter, that:

(a) Registration Statement. A registration statement of the Company on Form S-1 (File No. 333-[•]) (including all amendments thereto, the "***Initial Registration Statement***") in respect of the Stock has been filed with the Securities and Exchange Commission (the "***Commission***"). The Initial Registration Statement and any post-effective amendment thereto, each in the form heretofore delivered to you, and, excluding exhibits thereto, to you for each of the other Underwriters, have been declared effective by the Commission in such form and meet the requirements of the Securities Act of 1933, as amended (the "***Securities Act***"), and the rules and regulations of the Commission thereunder (the "***Rules and Regulations***"). Other than (i) the Initial Registration Statement, (ii) a registration statement, if any, increasing the size of the offering filed pursuant to Rule 462(b) under the Securities Act and the Rules and Regulations (a "***Rule 462(b) Registration Statement***"), (iii) any Preliminary Prospectus (as defined below), (iv) the Prospectus (as defined below) contemplated by this Agreement to be filed pursuant to Rule 424(b) of the Rules and Regulations in accordance with Section 4(a) hereof and (v) any Issuer Free Writing Prospectus (as defined below), no other document with respect to the offer and sale of the Stock has heretofore been filed with the Commission. No stop order suspending the effectiveness of the Initial Registration Statement, any post-effective amendment thereto or the Rule 462(b) Registration Statement, if any, has been issued and no proceeding for that purpose or pursuant to Section 8A of the Securities Act has been initiated or, to the Company's knowledge, threatened by the Commission (any preliminary prospectus included in the Initial Registration Statement or filed with the Commission pursuant to Rule 424 of the Rules and Regulations is hereinafter called a "***Preliminary Prospectus***"). The Initial Registration Statement including all exhibits thereto and including the information contained in the Prospectus filed with the Commission pursuant to Rule 424(b) of the Rules and Regulations and deemed by virtue of Rule 430A under the Securities Act to be part of the Initial Registration Statement at the time it became effective is hereinafter collectively called the "***Registration Statement***." If the Company has filed a Rule 462(b) Registration Statement, then any reference herein to the term "Registration Statement" shall be deemed to include such Rule 462 Registration Statement. The final prospectus, in the form filed pursuant to and within the time limits described in Rule 424(b) under the Rules and Regulations, is hereinafter called the "***Prospectus***."

(b) General Disclosure Package. As of the Applicable Time (as defined below) and as of the Closing Date or the Option Closing Date (as defined below), as the case may be, neither (i) the General Use Free Writing Prospectus(es) (as defined below) issued at or prior to the Applicable Time, the Pricing Prospectus (as defined below) and the information included on Schedule C hereto, all considered together (collectively, the "***General Disclosure Package***"), (ii) any individual Limited Use Free Writing Prospectus (as defined below), (iii) the bona fide electronic roadshow (as defined in Rule 433(h)(5) of the Rules and Regulations), nor (iv) any individual Written Testing-the-Waters Communication, when considered together with the General Disclosure Package, included or will include any untrue statement of a material fact or omitted or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided, however*, that the Company makes no representations or warranties as to information contained in or omitted from the Pricing Prospectus, any individual Written Testing-the-Waters Communication or any Issuer Free Writing Prospectus (as defined below), in reliance upon, and in conformity with, written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriter's Information (as defined in Section 17). As used in this paragraph (b) and elsewhere in this Agreement:

"***Applicable Time***" means [•] P.M., New York time, on the date of this Agreement or such other time as agreed to by the Company and the Representatives.

"***Pricing Prospectus***" means the Preliminary Prospectus relating to the Stock that is included in the Registration Statement immediately prior to the Applicable Time.

"***Issuer Free Writing Prospectus***" means any "issuer free writing prospectus," as defined in Rule 433 of the Rules and Regulations relating to the Stock in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g) of the Rules and Regulations.

"***General Use Free Writing Prospectus***" means any Issuer Free Writing Prospectus that is identified on Schedule B to this Agreement.

"***Limited Use Free Writing Prospectuses***" means any Issuer Free Writing Prospectus that is not a General Use Free Writing Prospectus.

"***Written Testing-the-Waters Communication***" means any Testing-the-Waters Communication (as defined below) that is a written communication within the meaning of Rule 405 of the Rules and Regulations.

(c) No Stop Orders; No Material Misstatements. No order preventing or suspending the use of any Preliminary Prospectus, any Issuer Free Writing Prospectus or the Prospectus relating to the proposed offering of the Stock has been issued by the Commission, and no proceeding for that purpose or pursuant to Section 8A of the Securities Act has been instituted or, to the Company's knowledge, threatened by the Commission, and each Preliminary Prospectus, at the time of filing thereof, conformed in all material respects to the requirements of the Securities Act and the Rules and Regulations, and did not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided, however*, that the Company makes no representations or warranties as to information contained in or omitted from any Preliminary Prospectus, in reliance upon, and in conformity with, written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriter's Information.

(d) Registration Statement and Prospectus Contents. At the respective times the Registration Statement and any amendments thereto became or become effective and at each Closing Date, the Registration Statement and any amendments thereto conformed and will conform in all material respects to the requirements of the Securities Act and the Rules and Regulations and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Prospectus and any amendments or supplements thereto, at the time the Prospectus or any amendment or supplement thereto was issued and at each Closing Date, conformed and will conform in all material respects to the requirements of the Securities Act and the Rules and Regulations and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; *provided*, *however*, that the foregoing representations and warranties in this paragraph (d) shall not apply to information contained in or omitted from the Registration Statement or the Prospectus, or any amendment or supplement thereto, in reliance upon, and in conformity with, written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriter's Information.

(e) Issuer Free Writing Prospectus. Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Stock or until any earlier date that the Company notified or notifies the Representatives as described in Section 4(g), did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Pricing Prospectus or the Prospectus, or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading *provided*, *however*, that the foregoing representations and warranties in this paragraph (e) shall not apply to information contained in or omitted from each such Issuer Free Writing Prospectus, or any amendment or supplement thereto, in reliance upon, and in conformity with, written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriter's Information.

(f) Distribution of Offering Materials. The Company has not, directly or indirectly, distributed and will not distribute any offering material in connection with the offering and sale of the Stock other than any Preliminary Prospectus, the Prospectus and other materials, if any, permitted under the Securities Act and consistent with Section 4(b) below. The Company will file with the Commission all Issuer Free Writing Prospectuses (other than a "road show" as described in Rule 433(d)(8) of the Rules and Regulations) in the time and manner required under Rules 163(b)(2) and 433(d) of the Rules and Regulations.

(g) Emerging Growth Company. From the time of the initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any person authorized to act on its behalf in any Testing-the-Waters Communications) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "***Emerging Growth Company***"). "***Testing-the-Waters Communication***" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act.

(h) Not an Ineligible Issuer. At the time of filing the Initial Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendments thereto, and at the date hereof, the Company was not, and the Company currently is not, an "ineligible issuer," as defined in Rule 405 of the Rules and Regulations.

(i) Testing-the-Waters Communications. The Company (a) has not alone engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representatives with entities that are qualified institutional buyers within the meaning of Rule 144A under the Securities Act or institutions that are accredited investors within the meaning of Rule 501 under the Securities Act and (b) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule D hereto.

(j) Organization and Good Standing. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of Delaware. The Company is duly qualified to do business and is in good standing as a foreign corporation in each jurisdiction in which its ownership or lease of property or the conduct of its business requires such qualification and has all power and authority (corporate or other) necessary to own or hold its properties and to conduct the business in which it is engaged, except where the failure to so qualify or have such power or authority would not (i) reasonably be likely to have a material adverse effect on the business, properties, management, financial position, stockholders' equity, results of operations or prospects of the Company, or (ii) impair in any material respect the ability of the Company to issue and sell the Stock under this Agreement (any such effect as described in clauses (i) or (ii), a "***Material Adverse Effect***"). The Company has no subsidiaries.

(k) Underwriting Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(l) The Stock. The Stock to be issued and sold by the Company to the Underwriters hereunder has been duly and validly authorized and, when issued and delivered against payment therefor as provided herein, will be duly and validly issued, fully paid, non-assessable and free and clear of any preemptive or other similar rights, and will conform to the description thereof in the Registration Statement, the General Disclosure Package and the Prospectus; and the issuance of the Stock is not subject to any preemptive or similar rights.

(m) Capitalization. The Company has an authorized capitalization as set forth under the heading "Capitalization" in the Pricing Prospectus, and all of the issued shares of capital stock of the Company, have been duly and validly authorized and issued, are fully paid, non-assessable and free and clear of any preemptive or other similar rights, have been issued in compliance with federal and state securities laws, and (assuming conversion of all outstanding shares of convertible preferred stock of the Company in connection with the transactions contemplated hereby) conform to the description thereof contained in the General Disclosure Package and the Prospectus. All of the Company's options, warrants and other rights to purchase or exchange any securities for shares of the Company's capital stock have been duly authorized and validly issued and were issued in compliance with federal and state securities laws other than those which have been waived or satisfied. None of the outstanding shares of Common Stock was issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. As of the date set forth in the General Disclosure Package, there were no authorized or outstanding shares of capital stock, options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its subsidiaries other than those described above or accurately described in the General Disclosure Package. Since such date, the Company has not issued any securities other than Common Stock issued pursuant to the exercise of warrants or upon the exercise of stock options or other awards outstanding under the Company's stock option plans, options or other securities granted or issued pursuant to the Company's existing equity compensation plans or other plans, and the issuance of Common Stock pursuant to employee stock purchase plans. The description of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, as described in the General Disclosure Package and the Prospectus, accurately and fairly present in all material respects the information required to be shown with respect to such plans, arrangements, options and rights.

(n) No Conflicts. The execution, delivery and performance of this Agreement by the Company, the issue and sale of the Stock by the Company and the consummation of the transactions contemplated hereby will not (with or without notice or lapse of time or both) (i) conflict with or result in a breach or violation of any of the terms or provisions of, constitute a default or a Debt Repayment Triggering Event (as defined below) under, or result in the creation or imposition of any lien, encumbrance, security interest, claim or charge upon any property or assets of the

Company pursuant to, any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject, (ii) result in any violation of the provisions of the charter or by-laws (or analogous governing instruments, as applicable) of the Company or (iii) result in the violation of any law, statute, rule, regulation, judgment, order or decree of any court or governmental or regulatory agency or body, domestic or foreign, having jurisdiction over the Company or any of their properties or assets except, in the case of clauses (i) and (iii) above, for any such conflict, breach, violation or default that would not have a Material Adverse Effect. A "***Debt Repayment Triggering Event***" means any event or condition that gives, or with the giving of notice or lapse of time would give the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company.

(o) No Consents Required. Except for the registration of the Stock under the Securities Act, the Exchange Act and applicable state securities laws, and such consents, approvals, authorizations, orders and registrations or qualifications as may be required by the Financial Industry Regulatory Authority, Inc. ("***FINRA***") and the Nasdaq Global Market in connection with the purchase and distribution of the Stock by the Underwriters and the listing of the Stock on the Nasdaq Global Market, no consent, approval, authorization or order of, or filing, qualification or registration (each an "***Authorization***") with, any court, governmental or regulatory agency or body, foreign or domestic, which has not been made, obtained or taken and is not in full force and effect, is required for the execution, delivery and performance of this Agreement by the Company, the issuance and sale of the Stock or the consummation of the transactions contemplated hereby; and no event has occurred that allows or results in, or after notice or lapse of time or both would allow or result in, revocation, suspension, termination or invalidation of any such Authorization or any other impairment of the rights of the holder or maker of any such Authorization. All corporate approvals (including those of stockholders) necessary for the Company to consummate the transactions contemplated by this Agreement have been obtained and are in effect.

(p) Independent Auditors. Ernst & Young LLP, who have certified certain financial statements of the Company included in the Registration Statement, the General Disclosure Package and the Prospectus, is an independent registered public accounting firm with respect to the Company within the meaning of Article 2-01 of Regulation S-X and the Public Company Accounting Oversight Board (United States) (the "***PCAOB***").

(q) Financial Statements. The financial statements, together with the related notes, included in the General Disclosure Package, the Prospectus and in the Registration Statement fairly present the financial position and the results of operations and changes in financial position of the Company at the respective dates or for the respective periods therein specified. Such statements and related notes have been prepared in accordance with the generally accepted accounting principles in the United States ("***GAAP***") applied on a consistent basis throughout the periods involved except as may be set forth in the related notes included in the General Disclosure Package and provided, that unaudited interim financial statements, which are subject to normal year-end adjustments, may not contain certain footnotes, as permitted by the rules of the Commission. The financial statements, together with the related notes, included in the General Disclosure Package and the Prospectus comply in all material respects with Regulation S-X. No other financial statements or supporting schedules or exhibits are required by Regulation S-X to be described or included in the Registration Statement, the General Disclosure Package or the Prospectus. The summary and selected financial data included in the General Disclosure Package, the Prospectus and the Registration Statement fairly present in all material respects the information shown therein as at the respective dates and for the respective periods specified and are derived from the consolidated financial statements set forth in the Registration Statement, the Pricing Prospectus and the Prospectus and other financial information.

(r) No Material Adverse Change. The Company has not sustained, since the date of the latest audited financial statements included in the General Disclosure Package, (i) any material loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or action, order or decree of any court or governmental or regulatory authority, otherwise than as set forth or contemplated in the General Disclosure Package; (ii) any change in the capital stock (other than the issuance of shares of Common Stock upon exercise of stock options and warrants described as outstanding in, and the grant of options and awards under existing equity incentive plans described in, the Registration statement, the General Disclosure Package and the Prospectus) or long-term debt of the Company, or any dividend or distribution of any kind declared, set aside for payment, paid or made by the Company on any class of capital stock, or any material adverse changes, or any development involving a prospective material adverse change, in or affecting the business, properties, assets, general affairs, management, financial position, prospects, stockholders' equity or results of operations of the Company, otherwise than as set forth or contemplated in the General Disclosure Package.

(s) Legal Proceedings. There is no legal or governmental proceeding to which the Company is a party or of which any property or assets of the Company is the subject, including any proceeding before the United States Food and Drug Administration of the U.S. Department of Health and Human Services ("FDA") or comparable federal, state, local or foreign governmental bodies (it being understood that the interaction between the Company and the FDA and such comparable governmental bodies relating to the clinical development and product approval process shall not be deemed proceedings for purposes of this representation), which is required to be described in the Registration Statement, the General Disclosure Package or the Prospectus and is not described therein, or which, singularly or in the aggregate, if determined adversely to the Company, could reasonably be expected to have a Material Adverse Effect; and no such proceedings are threatened or, to the Company's knowledge, contemplated by governmental or regulatory authorities or threatened by others. The Company is in compliance with all applicable federal, state, local and foreign laws, regulations, orders and decrees governing its business as prescribed by the FDA, or any other federal, state or foreign agencies or bodies engaged in the regulation of pharmaceuticals or biohazardous substances or materials, except where noncompliance would not, singly or in the aggregate, have a Material Adverse Effect. All preclinical studies and clinical trials conducted by or on behalf of the Company to support approval for commercialization of the Company's products have been conducted by the Company, or to the Company's knowledge by third parties, in compliance with all applicable federal, state or foreign laws, rules, orders and regulations, except for such failure or failures to be in compliance as could not reasonably be expected to have, singly or in the aggregate, a Material Adverse Effect.

(t) No Violation or Default. The Company is not (i) in violation of its charter or by-laws (or analogous governing instrument, as applicable), (ii) in default in any respect, and no event has occurred which, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which it is a party or by which it is bound or to which any of its property or assets is subject or (iii) in violation of any law, ordinance, governmental rule, regulation or court order, decree or judgment to which it or its property or assets may be subject (including, without limitation, those administered by the FDA or by any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA) except, in the case of clauses (ii) and (iii) above, for any such violation or default that would not, singularly or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(u) Licenses or Permits. The Company possesses all licenses, certificates, authorizations and permits issued by, and have made all declarations and filings with, the appropriate local, state, federal or foreign governmental or regulatory agencies or bodies (including, without limitation, those administered by the FDA or by any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA) that are necessary for the ownership or lease of their respective properties or the conduct of its business as described in the Registration Statement, the General Disclosure Package and the Prospectus (collectively, the "***Governmental Permits***") except where any failures to possess or make the same would not, singularly or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company is in compliance with all such Governmental Permits except where any noncompliance would not have a Material Adverse Effect; all such Governmental Permits are valid and in full force and effect, except where the invalidity or failure to be in full force and effect would not reasonably be expected to have a Material Adverse Effect. The Company has not received notification of any revocation, modification, suspension, termination or invalidation (or proceedings related thereto) of any such Governmental Permit and the Company has no reason to believe that any such Governmental Permit will not be renewed.

(v) Preclinical Studies and Clinical Trials. The preclinical studies or clinical trials conducted by or on behalf of the Company that are described in the General Disclosure Package and the Prospectus (the "***Company Studies and Trials***") were and, if still pending, are being, conducted in all material respects in accordance with the protocols submitted to the FDA and any comparable foreign regulatory authority; the descriptions of the results of the Company Studies and Trials contained in the General Disclosure Package and Prospectus are accurate in all material respects; the Company has no knowledge of any other studies or trials not described in the Registration Statement, the General Disclosure Package and the Prospectus, the results of which are inconsistent with or call in question the results described or referred to in the General Disclosure Package and the Prospectus; and the Company has not received any written notices or correspondence with the FDA or any foreign, state or local governmental body exercising comparable authority, requiring the termination, suspension or material modification of any Company Studies or Trials that termination, suspension or material modification would reasonably be expected to have a Material Adverse Effect and, to the Company's knowledge, there are no reasonable grounds for the same. The Company has obtained (or caused to be obtained) informed consent by or on behalf of each human subject who participated in the Company Studies and Trials. In using or disclosing patient information received by the Company in connection with the Company Studies and Trials, the Company has complied in all material respects with all applicable laws and regulatory rules or requirements, including, without limitation, the Health Insurance Portability and Accountability Act of 1996 ("***HIPAA***") and the rules and regulations thereunder. To the Company's knowledge, none of the Company Studies and Trials involved any investigator who has been disqualified as a clinical investigator or debarred by the FDA. To the Company's knowledge, the manufacturing facilities and operations of its suppliers are operated in compliance in all material respects with all applicable statutes, rules, and regulations of the FDA and comparable regulatory agencies outside of the United States to which the Company is subject.

(w) Regulatory Matters. The Company and its subsidiaries, and its and their respective directors, officers and employees, and, to the Company's knowledge, its and their respective agents, affiliates and representatives, are, and at all times: (i) have operated and currently operate its business in compliance in all material respects with applicable provisions of the Health Care Laws (as defined below) of the FDA, the Department of Health and Human Services ("***HHS***") and any comparable foreign or other regulatory authority to which they are subject (collectively, the "***Applicable Regulatory Authorities***") applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any of the Company's product candidates or any product manufactured or distributed by the Company; (ii)

has not received any FDA Form 483, written notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any court or arbitrator or governmental or regulatory authority alleging or asserting non-compliance with (A) any Health Care Laws or (B) or any licenses, certificates, approvals, clearances, exemptions, authorizations, permits and supplements or amendments thereto required by any such Health Care Laws ("***Regulatory Authorizations***"); (iii) possesses all Regulatory Authorizations required to conduct its business as currently conducted and such Regulatory Authorizations are valid and in full force and effect and neither the Company nor any of its subsidiaries are in violation, in any material respect, of any term of any such Regulatory Authorizations; (iv) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from the Applicable Regulatory Authorities alleging that any product operation or activity is in material violation of any Health Care Laws or Regulatory Authorizations and has no knowledge that the Applicable Regulatory Authorities is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (v) has not received notice that any of the Applicable Regulatory Authorities has taken, is taking or intends to take action to limit, suspend, modify or revoke any material Regulatory Authorizations and has no knowledge that any of the Applicable Regulatory Authorities is considering such action; (vi) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws or Regulatory Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); (vii) is not a party to or have any ongoing reporting obligations pursuant to any corporate integrity agreements, deferred prosecution agreements, monitoring agreements, consent decrees, settlement orders, plans of correction or similar agreements with or imposed by any Applicable Regulatory Authority; and (viii) has not been excluded, suspended or debarred from participation in any government health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion. The term "***Health Care Laws***" means Title XVIII of the Social Security Act, 42 U.S.C. §§ 1395-1395hhh (the Medicare statute); Title XIX of the Social Security Act, 42 U.S.C. §§ 1396-1396v (the Medicaid statute); the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b); the civil False Claims Act, 31 U.S.C. §§ 3729 et seq.; the criminal False Claims Act 42 U.S.C. 1320a-7b(a); any criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287 and the health care fraud criminal provisions under HIPAA, 42 U.S.C. §§ 1320d et seq.; the Civil Monetary Penalties Law, 42 U.S.C. §§ 1320a-7a; the Physician Payments Sunshine Act, 42 U.S.C. § 1320a-7h; the exclusion law, 42 U.S.C. § 1320a-7; HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, 42 U.S.C. §§ 17921 et seq.; the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 et seq.; the Public Health Service Act, 42 U.S.C. §§ 201 et seq.; the regulations promulgated pursuant to such laws; and any similar federal, state and local laws and regulations.

(x) Investment Company Act. The Company is not or, after giving effect to the offering of the Stock and the application of the proceeds thereof as described in the General Disclosure Package and the Prospectus, will be required to register as an "investment company" or an entity "controlled" by an "investment company" within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission thereunder.

(y) No Stabilization. Neither the Company nor, to the Company's knowledge, any of its officers, directors or affiliates has taken or will take, directly or indirectly, any action designed or intended to stabilize or manipulate the price of any security of the Company, or which caused or resulted in, or which might in the future reasonably be expected to cause or result in, stabilization or manipulation of the price of any security of the Company.

(z) Intellectual Property. The Company owns or possesses, or, to the knowledge of the Company, can acquire on reasonable terms, all patents, patent rights, licenses, inventions, copyrights, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks, trade names or other intellectual property (collectively, "***Intellectual Property***") necessary to carry on the business as now operated by it, and as proposed to be operated in the future (including upon the commercialization of products or services described in the Registration Statement, the General Disclosure Package or the Prospectus as under development), and the conduct of its business does not and will not infringe, misappropriate or otherwise conflict in any material respect with any such rights of others. The Intellectual Property of the Company has not been adjudged by a court of competent jurisdiction to be invalid or unenforceable, in whole or in part, and the Company is unaware of any facts which would form a reasonable basis for any such adjudication. The Company has not received any notice of any claim, and is not otherwise aware, of any infringement, misappropriation, or conflict with any intellectual property rights of another and the Company is unaware of any facts which would form a reasonable basis for any such notice or claim. The Company has not received any notice of any claim, and is not otherwise aware, of any facts or circumstances which would render any Intellectual Property of the Company invalid or inadequate to protect the interest of the Company, in each case that would cause a Material Adverse Effect. To the Company's knowledge: (i) there are no third parties who have rights to any Intellectual Property of the Company, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus ("***Disclosure Documents***") as owned by or licensed to the Company; and (ii) there is no infringement by third parties of any such Intellectual Property owned by or licensed to the Company. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company's rights in or to any Intellectual Property of the Company, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property of the Company, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company infringes, misappropriates, or otherwise violates, or would, upon the commercialization of any product or service described in the Disclosure Documents as under development, infringe, misappropriate, or otherwise violate, any Intellectual Property rights of another, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company has complied in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company, and all such agreements are in full force and effect. To the Company's knowledge, there are no material defects in any of the patents or patent applications included in the Intellectual Property disclosed in the Disclosure Documents as owned by or licensed to the Company. The Company has taken all reasonable steps to protect, maintain and safeguard its Intellectual Property, including the execution of appropriate nondisclosure, confidentiality agreements and invention assignment agreements and invention assignments with its employees, and no employee of the Company is in or has been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement, or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company, except as such violation would not result in a Material Adverse Effect. The duty of candor and good faith as required by the United States Patent and Trademark Office during the prosecution of the United States patents and patent applications included in the Intellectual Property owned by or licensed to the Company has been complied with; and in all foreign offices having similar requirements, all such requirements have been complied with. To the Company's knowledge, none of the Company owned Intellectual Property or technology (including information technology and outsourced

arrangements) employed by the Company has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or any of its respective officers, directors or employees or otherwise in violation of the rights of any persons. The product candidates described in the Disclosure Documents as under development by the Company fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company. The consummation of the transactions contemplated by this Agreement will not result in the loss or impairment of or payment of any additional amounts with respect to, nor require the consent of any other person in respect of, the Company's right to own, use, or hold for use any of the Intellectual Property Rights as owned, used or held for use in the conduct of the business as currently conducted. With respect to the use of the software in the Company's business as it is currently conducted, the Company has not experienced any material defects in such software including any material error or omission in the processing of any transactions other than defects which have been corrected, and to the Company's knowledge, no such software contains any device or feature designed to disrupt, disable, or otherwise impair the functioning of any software or is subject to the terms of any "open source" or other similar license that provides for the source code of the software to be publicly distributed or dedicated to the public. The Company has at all times complied in all material respects with all applicable laws relating to privacy, data protection, and the collection and use of personal information collected, used, or held for use by the Company in the conduct of the Company's business. To the Company's knowledge, no claims have been asserted or threatened against the Company alleging a violation of any person's privacy or personal information or data rights and the consummation of the transactions contemplated hereby will not breach or otherwise cause any violation of any law related to privacy, data protection, or the collection and use of personal information collected, used, or held for use by the Company in the conduct of the Company's business, except where any such breach or violation would not result in a Material Adverse Effect. The Company takes reasonable measures to ensure that such information is protected against unauthorized access, use, modification, or other misuse. The Company has taken all necessary actions to obtain ownership of all works of authorship and inventions made by its employees, consultants and contractors during the time they were employed by or under contract with the Company and which are material to the Company's business. All founders and key employees have signed confidentiality and invention assignment agreements with the Company.

(aa) Title to Real and Personal Property. The Company has good and marketable title in fee simple (in the case of real property) to, or have valid rights to lease or otherwise use, all items of real or personal property (provided that, for the avoidance of doubt, rights to Intellectual Property rights are addressed exclusively in Section 2(z) above) which are material to the business of the Company, free and clear of all liens, encumbrances, security interests, claims and defects that (i) do not, singularly or in the aggregate, materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company or (ii) could not reasonably be expected, singularly or in the aggregate to have a Material Adverse Effect.

(bb) No Labor Dispute. There is (A) no significant unfair labor practice complaint pending against the Company, nor to the Company's knowledge, threatened against it, before the National Labor Relations Board, any state or local labor relation board or any foreign labor relations board, and no significant grievance or significant arbitration proceeding arising out of or under any collective bargaining agreement is so pending against the Company, or, to the Company's knowledge, threatened against it and (B) no labor disturbance by or dispute with, employees of the Company exists or, to the Company's knowledge, is contemplated or threatened, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers, customers or contractors, that could reasonably be expected, singularly or in the aggregate, to have a Material Adverse Effect. The Company is not aware that any key employee or significant group of employees of the Company plans to terminate employment with the Company.

(cc) Compliance with ERISA. No "prohibited transaction" (as defined in Section 406 of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("***ERISA***"), or Section 4975 of the Internal Revenue Code of 1986, as amended from time to time (the "***Code***")) or "accumulated funding deficiency" (as defined in Section 302 of ERISA) or any of the events set forth in Section 4043(b) of ERISA (other than events with respect to which the thirty (30)-day notice requirement under Section 4043 of ERISA has been waived) has occurred or could reasonably be expected to occur with respect to any employee benefit plan of the Company which could, singularly or in the aggregate, reasonably be expected to have a Material Adverse Effect. Each employee benefit plan of the Company is in compliance in all material respects with applicable law, including ERISA and the Code. The Company have not incurred and could not reasonably be expected to incur material liability under Title IV of ERISA with respect to the termination of, or withdrawal from, any pension plan (as defined in ERISA). Each pension plan for which the Company or any of its subsidiaries would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified, and to the Company's knowledge, nothing has occurred, whether by action or by failure to act, which could, singularly or in the aggregate, reasonably be expected to cause the loss of such qualification.

(dd) Environmental Laws and Hazardous Materials. The Company is in compliance in all material respects with all foreign, federal, state and local rules, laws and regulations relating to the use, treatment, storage and disposal of hazardous or toxic substances or waste and protection of health and safety or the environment which are applicable to its business ("***Environmental Laws***"). There has been no storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of toxic or other wastes or other hazardous substances by, due to, or caused by the Company (or, to the Company's knowledge, any other entity for whose acts or omissions the Company is or may otherwise be liable) upon any of the property now or previously owned or leased by the Company, or upon any other property, in violation of any law, statute, ordinance, rule, regulation, order, judgment, decree or permit or which would, under any law, statute, ordinance, rule (including rule of common law), regulation, order, judgment, decree or permit, give rise to any liability that reasonably be expected to have a Material Adverse Effect; and, to the Company's knowledge, there has been no disposal, discharge, emission or other release of any kind onto such property or into the environment surrounding such property of any toxic or other wastes or other hazardous substances.

(ee) Taxes. The Company (i) has timely filed all necessary federal, state, local and foreign tax returns (or filed timely extensions with respect to such returns), and all such returns were true, complete and correct in all material respects, (ii) has paid all federal, state, local and foreign taxes, for which it is liable, including, without limitation, all sales and use taxes and all taxes which the Company is obligated to withhold from amounts owing to employees, creditors and third parties, other than such amounts being disputed in good faith and for which appropriate reserves, if required, have been established, and (iii) does not have any tax deficiency or claims outstanding or assessed or, to its knowledge, proposed against any of them, except those, in each of the cases described in clauses (i), (ii) and (iii) above, that would not reasonably be expected to, singularly or in the aggregate, have a Material Adverse Effect.

(ff) Insurance. The Company carries, or is covered by, insurance in such amounts and covering such risks as the Company reasonably believes is adequate for the conduct of its business and the value of its properties. The Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect. The Company has not received written notice from any insurer, agent of such insurer or the broker of the Company that any material capital improvements or any other material expenditures (other than premium payments) are required or necessary to be made in order to continue such insurance.

(gg) Accounting Controls. The Company maintains a system of "internal control over financial reporting" (as such term is defined in Rule13a-15(f) of the General Rules and Regulations under the Exchange Act (the "***Exchange Act Rules***")) that has been designed to comply with the requirements of the Exchange Act and has been designed by its principal executive and principal financial officers, or under their supervision, to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as described in the General Disclosure Package, since the end of the Company's most recent audited fiscal year, there has been (A) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (B) no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(hh) Disclosure Controls. The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) of the Exchange Act Rules) designed to comply with the requirements of the Exchange Act; such disclosure controls and procedures have been reasonably designed to ensure that information required to be disclosed by the Company is accumulated and communicated to the Company's management, including the Company's principal executive officer and principal financial officer.

(ii) Minute Books. The minute books of the Company have been made available to the Underwriters and counsel for the Underwriters, and such books (i) contain a complete summary of all meetings and actions of the board of directors (including each board committee) and stockholders of the Company (or analogous governing bodies and interest holders, as applicable), since the time of its respective incorporation or organization through the date of the latest meeting and action, and (ii) accurately in all material respects reflect all transactions referred to in such minutes.

(jj) No Undisclosed Relationships. No relationship, direct or indirect, exists between or among the Company on the one hand, and the directors, officers, stockholders (or analogous interest holders), customers or suppliers of the Company or any of its affiliates on the other hand, which is required to be described by the Securities Act in the General Disclosure Package and the Prospectus and which is not so described.

(kk) No Registration Rights. No person or entity has the right to require registration of shares of Common Stock or other securities of the Company within 180 days of the date hereof because of the filing or effectiveness of the Registration Statement or otherwise, except for persons and entities who have expressly waived such right in writing or who have been given timely and proper written notice and have failed to exercise such right within the time or times required under the terms and conditions of such right. Except as described in the General Disclosure Package, there are no persons with registration rights or similar rights to have any securities registered by the Company under the Securities Act.

(ll) Margin Rules. The application of the proceeds received by the Company from the issuance, sale and delivery of the Stock as described in the General Disclosure Package and the Prospectus will not violate Regulation T, U or X of the Board of Governors of the Federal Reserve system or any other regulation of such Board of Governors.

(mm) No Broker's Fees. Except for this Agreement, the Company is not a party to any contract, agreement or understanding with any person (other than this Agreement) that would give rise to a valid claim against the Company or the Underwriters for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Stock or any transaction contemplated by this Agreement, the Registration Statement, the General Disclosure Package or the Prospectus.

(nn) PFIC. The Company is not a Passive Foreign Investment Company ("***PFIC***") within the meaning of Section 1296 of the United States Internal Revenue Code of 1966, and the Company is not likely to become a PFIC.

(oo) Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in either the General Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(pp) Listing. The Stock has been approved for listing subject to notice of issuance on the Nasdaq Global Market (the "***Exchange***"). A registration statement has been filed on Form 8-A pursuant to Section 12 of the Exchange Act, which registration statement complies in all material respects with the Exchange Act.

(qq) Sarbanes-Oxley Act. The Company has taken all actions reasonably necessary to ensure that upon the effectiveness of the Registration Statement, it will be in compliance in all material respects with applicable provisions of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (the "***Sarbanes-Oxley Act***") that are then in effect.

(rr) No Unlawful Payments. Neither the Company nor any of its directors or officers nor, to the Company's knowledge, any employee thereof, or any agent, affiliate or other person acting on behalf of the Company, has (i) used any corporate funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity, (ii) made any direct or indirect unlawful payment to foreign or domestic government officials or employees, political parties or campaigns, political party officials, or candidates for political office from corporate funds, (iii) violated any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended, or any other applicable anti-corruption laws, or (iv) made any other unlawful bribe, rebate, payoff, influence payment, kickback, or other unlawful payment.

(ss) Loans. There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees of indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of their respective family members.

(tt) Statistical and Market Data. The statistical and market related data included in the Registration Statement, the General Disclosure Package and the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate, and such data agree with the sources from which they are derived.

(uu) Compliance with Money Laundering Laws. The operations of the Company are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements, including those of the U.S. Bank Secrecy Act, as amended by Title III of the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct

Terrorism Act of 2001 (USA PATRIOT Act), and the applicable anti-money laundering statutes of jurisdictions where the Company conducts business and the applicable rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "***Anti-Money Laundering Laws***"), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Anti-Money Laundering Laws is pending or, to the Company's knowledge, threatened.

(vv) Compliance with OFAC Regulations.

(A) Neither the Company nor any of its directors or officers nor, to the Company's knowledge, any employee agent, affiliate, representative or other person acting on behalf of the Company, is an individual or entity ("***Person***") that is, or is owned or controlled by a Person that is: (i) the subject of any sanctions administered or enforced by the U.S. Department of Treasury's Office of Foreign Assets Control ("***OFAC***"), the United Nations Security Council ("***UNSC***"), the European Union ("***EU***"), Her Majesty's Treasury ("***HMT***"), or other relevant sanctions authority (collectively, "***Sanctions***"), nor (ii) located, organized or resident in a country or territory that is the subject of a U.S. government embargo (including, without limitation, Cuba, Iran, North Korea, Syria and the Crimea).

(B) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person: (i) to fund or facilitate any activities or business of or with any Person that, at the time of such funding or facilitation, is the subject of Sanctions, or in any country or territory that, at the time of such funding or facilitation, is the subject of a U.S. government embargo; or (ii) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(C) For the past five (5) years, the Company has not knowingly engaged in and is not now knowingly engaged in any dealings or transactions with any Person that at the time of the dealing or transaction is or was the subject of Sanctions or any country or territory that, at the time of the dealing or transaction is or was the subject of a U.S. government embargo.

(ww) Directed Share Program. The Registration Statement, the General Disclosure Package, the Prospectus and the Preliminary Prospectus comply, and any further amendments or supplements thereto will comply, with any applicable laws or regulations of foreign jurisdictions in which they are distributed in connection with the Directed Share Program. No authorization, approval, consent, license, order, registration or qualification of or with any government, governmental instrumentality, or court, other than such as have been obtained, is necessary under the securities laws or regulations of any foreign jurisdiction in which the Directed Shares are offered outside the United States.

(xx) No Associated Persons; FINRA Matters. The Company does not directly or indirectly control, is not controlled by, or is not under common control with, or is not an associated person (within the meaning of Article I, Section 1(ee) of the By-laws of FINRA) of, any member firm of FINRA.

(yy) FinCEN Matters. To the Company's knowledge, all of the beneficial ownership information provided to the Underwriters or to counsel for the Underwriters by the Company or its counsel in certification of the beneficial ownership of holders of 25% or more of the Company's securities in connection with the offering of the Stock is true, complete, correct.

(zz) Cybersecurity; Data Protection. Except as could not be expected to have a Material Adverse Effect, the Company's information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "***IT Systems***") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. Except as could not be expected to have a Material Adverse Effect, the Company has implemented and maintained commercially reasonable controls, policies, procedures, and safeguards to maintain and protect its material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data (including all personal, personally identifiable, sensitive, confidential or regulated data ("***Personal Data***")) used in connection with its business, and there have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability or the duty to notify any other person, nor any incidents under internal review or investigations relating to the same. Except as could not be expected to have a Material Adverse Effect, the Company is presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification.

(aaa) No Rated Securities. The Company does not have any debt securities or preferred stock that are rated by any "nationally recognized statistical rating organization" (as defined in Section 3(a)(62) of the Exchange Act).

(bbb) Compliance with Occupational Laws. The Company (A) is in compliance, in all material respects, with applicable federal and state laws, rules, regulations, treaties, statutes and codes promulgated by governmental authorities (including pursuant to the Occupational Health and Safety Act) relating to the protection of human health and safety in the workplace ("***Occupational Laws***"); (B) has received all material permits, licenses or other approvals required of it under applicable Occupational Laws to conduct its business as currently conducted; and (C) is in compliance, in all material respects, with all terms and conditions of such permit, license or approval. No action, proceeding, revocation proceeding, writ, injunction or claim is pending or, to the Company's knowledge, threatened against the Company relating to Occupational Laws.

(ccc) No Shutdowns or Prohibitions. The Company has not had any product, clinical laboratory or manufacturing site (whether Company-owned or that of a third party manufacturer for the Company's products) subject to a governmental authority (including FDA) shutdown or import or export prohibition, nor received any FDA Form 483 or other governmental authority notice of inspectional observations, "warning letters," "untitled letters," requests to make changes to the Company's products, processes or operations, or similar correspondence or notice from the FDA or other governmental authority alleging or asserting material noncompliance with any applicable Health Care Laws. To the Company's knowledge, neither the FDA nor any other governmental authority is considering such action.

Any certificate signed by or on behalf of the Company and delivered to the Representatives or to counsel for the Underwriters shall be deemed to be a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

3. *PURCHASE, SALE AND DELIVERY OF OFFERED SECURITIES.* On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to sell to the Underwriters, and the Underwriters agree, severally and not jointly, to purchase from the Company the respective number of shares of Firm Stock set forth opposite the names of the Underwriters in Schedule A hereto.

The purchase price per share to be paid by the Underwriters to the Company for the Stock will be $[•] per share (the "***Purchase Price***").

The Company will deliver the Firm Stock to the Representatives for the respective accounts of the several Underwriters, through the facilities of The Depository Trust Company, issued in such names and in such denominations as the Representatives may direct by notice in writing to the Company given at or prior to 12:00 Noon, New York time, on the second (2nd) full business day preceding the Closing Date against payment of the aggregate Purchase Price therefor by wire transfer in federal (same day) funds to an account at a bank specified by the Company payable to the order of the Company for the Firm Stock sold by them all at the offices of Cooley LLP, 101 California Street, 5th Floor, San Francisco, California 94111. Time shall be of the essence, and delivery at the time and place specified pursuant to this Agreement is a further condition of the obligations of each Underwriter hereunder. The time and date of the delivery and closing shall be at 10:00 A.M., New York time, on [•], 2018, in accordance with Rule 15c6-1 of the Exchange Act. The time and date of such payment and delivery are herein referred to as the "***Closing Date***". The Closing Date and the location of delivery of, and the form of payment for, the Firm Stock may be varied by agreement between the Company and the Representatives.

For the purpose of covering any over-allotments in connection with the distribution and sale of the Firm Stock as contemplated by the Prospectus, the Underwriters may purchase all or less than all of the Optional Stock. The price per share to be paid for the Optional Stock shall be the Purchase Price. The Company agrees to sell to the Underwriters the number of shares of Optional Stock specified in the written notice delivered by the Representatives to the Company described below and the Underwriters agree, severally and not jointly, to purchase such shares of Optional Stock. Such shares of Optional Stock shall be purchased from the Company for the account of each Underwriter in the same proportion as the number of shares of Firm Stock set forth opposite such Underwriter's name on Schedule A bears to the total number of shares of Firm Stock (subject to adjustment by the Representatives to eliminate fractions). The option granted hereby may be exercised as to all or any part of the Optional Stock at any time, and from time to time, *provided however*, that notice of such exercise must be delivered not more than thirty (30) days subsequent to the date of this Agreement. No Optional Stock shall be sold and delivered unless the Firm Stock previously has been, or simultaneously is, sold and delivered. The right to purchase the Optional Stock or any portion thereof may be surrendered and terminated at any time upon notice by Representatives to the Company.

The option granted hereby shall be exercised by written notice being given to the Company by the Representatives setting forth the number of shares of the Optional Stock to be purchased by the Underwriters and the date and time for delivery of and payment for the Optional Stock. Each date and time for delivery of and payment for the Optional Stock (which may be the Closing Date, but not earlier) is herein called the "***Option Closing Date***" and shall in no event be earlier than two (2) business days nor later than five (5) business days after written notice is given. The Option Closing Date and the Closing Date are herein called the "***Closing Dates***."

The Company will deliver the Optional Stock to the Representatives for the respective accounts of the several Underwriters through the facilities of The Depository Trust Company issued in such names and in such denominations as the Representatives may direct by notice in writing to the Company given at or prior to 12:00 Noon, New York time, on the second (2nd) full business day preceding the Option Closing Date against payment of the aggregate Purchase Price therefor by wire transfer in federal (same day) funds

to an account at a bank acceptable to the Representatives payable to the order of the Company, all at the offices of Cooley LLP, 101 California Street, #5, San Francisco, California 94111. Time shall be of the essence, and delivery at the time and place specified pursuant to this Agreement is a further condition of the obligations of each Underwriter hereunder. The Option Closing Date and the location of delivery of, and the form of payment for, the Optional Stock may be varied by agreement between the Company and the Representatives.

The several Underwriters propose to offer the Stock for sale upon the terms and conditions set forth in the Prospectus.

4. Further Agreements. *FURTHER AGREEMENTS OF THE COMPANY*. The Company agrees with the several Underwriters:

(a) Required Filings; Amendments or Supplements; Notice to the Representative. To prepare the Rule 462(b) Registration Statement, if necessary, in a form approved by the Representatives and file such Rule 462(b) Registration Statement with the Commission by 10:00 P.M., New York time, on the date hereof, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462(b) Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Rules and Regulations; to prepare the Prospectus in a form approved by the Representatives containing information previously omitted at the time of effectiveness of the Registration Statement in reliance on Rules 430A, 430B or 430C of the Rules and Regulations and to file such Prospectus pursuant to Rule 424(b) of the Rules and Regulations not later than the second business (2nd) day following the execution and delivery of this Agreement or, if applicable, such earlier time as may be required by the Securities Act; to notify the Representatives immediately of the Company's intention to file or prepare any supplement or amendment to the Registration Statement or to the Prospectus and to make no amendment or supplement to the Registration Statement, the General Disclosure Package or to the Prospectus to which the Representatives shall reasonably object in a timely manner by notice to the Company after a reasonable period to review; to advise the Representatives, promptly after it receives notice thereof, of the time when any amendment to the Registration Statement has been filed or becomes effective or any supplement to the General Disclosure Package or the Prospectus or any amended Prospectus or any Issuer Free Writing Prospectus or any Written Testing-the -Waters Communication has been filed and to furnish the Underwriters with copies thereof; to file promptly all material required to be filed by the Company with the Commission pursuant to Rules 433(d) or 163(b)(2) of the Rules and Regulations, as the case may be; to advise the Representatives, promptly after it receives notice thereof, of the issuance by the Commission of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus, any Issuer Free Writing Prospectus, the Prospectus or any Written Testing-the-Waters Communication, of the suspension of the qualification of the Stock for offering or sale in any jurisdiction, of the initiation or, to the Company's knowledge, the threatening of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement, the General Disclosure Package or the Prospectus or for additional information including, but not limited to, any request for information concerning any Testing-the-Waters Communication; and, in the event of the issuance of any stop order or of any order preventing or suspending the use of any Preliminary Prospectus, any Issuer Free Writing Prospectus or the Prospectus or suspending any such qualification, and promptly to use its reasonable efforts to obtain the withdrawal of such order.

(b) Emerging Growth Company. The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (a) the completion of the distribution of the Firm Stock within the meaning of the Securities Act and (b) completion of the Lock-Up Period (as defined below).

(c) If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

(d) Permitted Free Writing Prospectus. The Company represents and agrees that, unless it obtains the prior consent of the Representatives, and each Underwriter represents and agrees that, unless it obtains the prior consent of the Company and the Representatives, it has not made and will not, other than the final term sheet prepared and filed pursuant to Section 4(e) hereof, make any offer relating to the Stock that would constitute a "free writing prospectus" as defined in Rule 405 of the Rules and Regulations unless the prior written consent of the Representatives has been received (each, a "***Permitted Free Writing Prospectus***"); *provided* that the prior written consent of the Representatives hereto shall be deemed to have been given in respect of the Issuer Free Writing Prospectuses included in Schedule B hereto. The Company represents that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, comply with the requirements of Rules 164 and 433 of the Rules and Regulations applicable to any Issuer Free Writing Prospectus, including the requirements relating to timely filing with the Commission, legending and record keeping and will not take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) of the Rules and Regulations a free writing prospectus prepared by or on behalf of such Underwriter that such Underwriter otherwise would not have been required to file thereunder. The Company will satisfy the condition in Rule 433 of the Rules and Regulations to avoid a requirement to file with the Commission any electronic road show.

(e) Ongoing Compliance. If at any time prior to the date when a prospectus relating to the Stock is required to be delivered (or in lieu thereof, the notice referred to in Rule 173(a) under the Securities Act) any event occurs or condition exists as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact, or omit to state any material fact necessary to make the statements therein, in light of the circumstances under which they were made when the Prospectus is delivered (or in lieu thereof, the notice referred to in Rule 173(a) of the Rules and Regulations), not misleading, or if it is necessary at any time to amend or supplement the Registration Statement or the Prospectus to comply with the Securities Act or the Exchange Act, that the Company will promptly notify the Representatives thereof and upon their request will prepare an appropriate amendment or supplement or upon their request make an appropriate filing pursuant to Section 13 or 14 of the Exchange Act in form and substance reasonably satisfactory to the Representatives which will correct such statement or omission or effect such compliance and will use its reasonable efforts to have any amendment to the Registration Statement declared effective as soon as possible. The Company will furnish without charge to each Underwriter and to any dealer in securities as many copies as the Representatives may from time to time reasonably request of such amendment or supplement. In case any Underwriter is required to deliver a prospectus (or in lieu thereof, the notice referred to in Rule 173(a) of the Rules and Regulations) relating to the Stock, the Company upon the request of the Representatives will prepare promptly an amended or supplemented Prospectus as may be necessary to permit compliance with the requirements of Section 10(a)(3) of the Securities Act and deliver to such Underwriter as many copies as such Underwriter may reasonably request of such amended or supplemented Prospectus complying with Section 10(a)(3) of the Securities Act.

(f) Amendment to General Disclosure Package. If the General Disclosure Package is being used to solicit offers to buy the Stock at a time when the Prospectus is not yet available to prospective purchasers and any event shall occur as a result of which, in the judgment of the Company or in the reasonable opinion of the Representatives, it becomes necessary to amend or supplement the General Disclosure Package in order to make the statements therein, in the light of the circumstances then prevailing, not misleading, or to make the statements therein not conflict with the information contained in the Registration Statement then on file and not superseded or modified, or if it is necessary at any time to amend or supplement the General Disclosure Package to comply with any law, the Company promptly will either (i) prepare, file with the Commission (if required) and furnish to the Underwriters and any dealers an appropriate amendment or supplement to the General Disclosure Package or (ii) prepare and file with the Commission an appropriate filing under the Exchange Act which shall be incorporated by reference in the General Disclosure Package so that the General Disclosure Package as so amended or supplemented will not, in the light of the circumstances then prevailing, be misleading or conflict with the Registration Statement then on file, or so that the General Disclosure Package will comply with law.

(g) Amendment to Issuer Free Writing Prospectus. If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or will conflict with the information contained in the Registration Statement, Pricing Prospectus or Prospectus and not superseded or modified or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances prevailing at the subsequent time, not misleading, the Company has promptly notified or will promptly notify the Representatives so that any use of the Issuer Free Writing Prospectus may cease until it is amended or supplemented and has promptly amended or will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus in reliance upon, and in conformity with, written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for inclusion therein, which information the parties hereto agree is limited to the Underwriter's Information.

(h) Delivery of Registration Statement. To the extent not available on the Commission's Electronic Data Gathering, Analysis and Retrieval system or any successor system ("***EDGAR***"), upon the request of the Representatives, to furnish promptly to the Representatives and to counsel for the Underwriters a signed copy of the Registration Statement as originally filed with the Commission, and of each amendment thereto filed with the Commission, including all consents and exhibits filed therewith.

(i) Delivery of Copies. Upon request of the Representatives, to the extent not available on EDGAR, to deliver promptly to the Representatives in New York City such number of the following documents as the Representatives shall reasonably request: (i) conformed copies of the Registration Statement as originally filed with the Commission (in each case excluding exhibits), (ii) each Preliminary Prospectus, (iii) any Issuer Free Writing Prospectus, (iv) the Prospectus (the delivery of the documents referred to in clauses (i), (ii), (iii) and (iv) of this paragraph (i) to be made not later than 10:00 A.M., New York time, on the business day following the execution and delivery of this Agreement), (v) conformed copies of any amendment to the Registration Statement (excluding exhibits), and (vi) any amendment or supplement to the General Disclosure Package or the Prospectus (the delivery of the documents referred to in clauses (v) and (vi) of this paragraph (i) to be made not later than 10:00 A.M., New York City time, on the business day following the date of such amendment or supplement).

(j) Earnings Statement. To make generally available to its stockholders as soon as practicable, but in any event not later than sixteen (16) months after the effective date of the Registration Statement (as defined in Rule 158(c) of the Rules and Regulations), an earnings statement of the Company, to the extent applicable (which need not be audited), complying with Section 11(a) of the Securities Act (including, at the option of the Company, Rule 158); and to furnish to its stockholders as soon as practicable after the end of each fiscal year an annual report (including a balance sheet and statements of income, stockholders' equity and cash flows of the Company certified by independent public accountants) and as soon as possible after each of the first three fiscal quarters of each fiscal year (beginning with the first fiscal quarter after the effective date of such Registration Statement), consolidated summary financial information of the Company for such quarter in reasonable detail, provided, that so long as the Company is subject to the reporting requirements of Section 13 or Section 15(d) of the Exchange Act and is timely filing reports with the Commission on EDGAR, it shall be deemed to be in compliance with the foregoing requirement to furnish such annual reports and quarterly financial information to its stockholders.

(k) Blue Sky Compliance. To take promptly from time to time such actions as the Representatives may reasonably request to qualify the Stock for offering and sale under the securities or Blue Sky laws of such jurisdictions (domestic or foreign) as the Representatives may reasonably designate and to continue such qualifications in effect, and to comply with such laws, for so long as required to permit the offer and sale of Stock in such jurisdictions; *provided* that the Company shall not be obligated to (i) qualify as a foreign corporation or other entity or as a dealer in securities in any jurisdiction in which it is not so qualified, (ii) file a general consent to service of process in any jurisdiction or (iii) subject itself to taxation in any such jurisdiction if it is not otherwise so subject.

(l) Reports. Upon request, during the period of three (3) years from the date hereof, to deliver to each of the Underwriters, (i) as soon as they are available, copies of all reports or other communications (financial or other) furnished to stockholders of the Company, and (ii) as soon as they are available, copies of any reports and financial statements furnished or filed with the Commission or any national securities exchange on which the Stock is listed. However, so long as the Company is subject to the reporting requirements of either Section 13 or Section 15(d) of the Exchange Act and is timely filing reports with the Commission on its EDGAR system, it is not required to furnish such reports or statements or other communications to the Underwriters.

(m) Lock-Up. During the period commencing on and including the date hereof and ending on and including the 180th day following the date of this Agreement, (the "***Lock-Up Period***") the Company will not, without the prior written consent of the Representatives (which consent may be withheld at the sole discretion of the Representatives), directly or indirectly offer, sell (including, without limitation, any short sale), assign, transfer, pledge, contract to sell, establish an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Exchange Act, or otherwise dispose of, or announce the offering of, or submit or file any registration statement under the Securities Act in respect of, any Common Stock, options, rights or warrants to acquire Common Stock or securities exchangeable or exercisable for or convertible into Common Stock (other than is contemplated by this Agreement with respect to the Stock) or publicly announce any intention to do any of the foregoing; *provided, however*, that the Company may (i) issue the Shares to be sold hereunder; (ii) issue and sell Common Stock, options to purchase Common Stock, restricted stock units, other equity awards, shares of Common Stock underlying options, restricted stock units, equity awards and other securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock, each pursuant to any director or employee equity incentive plan, stock ownership plan or dividend reinvestment plan of the Company in effect on the date hereof and described in the General Disclosure Package; (iii) issue Common Stock pursuant to the exercise (including net exercise) of an option or warrant or the exercise, conversion or exchange of securities, or upon the vesting of restricted stock units, in each case as described in the General

Disclosure Package; (iv) adopt a new equity incentive plan, and file a registration statement on Form S-8 or a successor form thereto under the Securities Act to register the offer and sale of securities to be issued pursuant to such new equity incentive plan, and issue securities pursuant to such new equity incentive plan (including, without limitation, the issuance of shares of Common Stock upon the exercise of options or other securities issued pursuant to such new equity incentive plan), provided that (1) such new equity incentive plan satisfies the transaction requirements of General Instruction A.1 of Form S-8 under the Securities Act and (2) this clause (iv) shall not be available unless each recipient of shares of Common Stock, or securities exchangeable or exercisable for or convertible into Common Stock, pursuant to such new equity incentive plan shall be prohibited from selling, offering, disposing of or otherwise transferring any such shares or securities during the remainder of the Lock-Up Period; (v) enter into an agreement providing for the issuance of Common Stock or securities convertible into or exercisable for shares of Common Stock in connection with any acquisition, joint venture, collaboration, licensing, commercial relationship or other strategic transaction or any debt financing transaction, and the issuance of any such securities pursuant to any such agreement, provided that the aggregate number of shares of Common Stock, or any securities convertible into or exercisable or exchangeable for Common Stock, that the Company may issue or agree to issue pursuant to this clause (v) shall not exceed 5% of the total outstanding shares of Common Stock immediately following the issuance of the Stock pursuant hereto; and (vi) offer, issue and sell any shares of Common Stock issued pursuant to the concurrent private placement described in the General Disclosure Package; provided, that the recipient of any such shares of Common Stock or securities issued pursuant to clause (v) during the 180-day restricted period described above shall enter into an agreement substantially in the form of Exhibit I hereto; and provided, that the recipient, to the extent they're an officer or director of the Company, of any such shares of Common Stock or securities issued pursuant to clauses (ii) and (iii) during the 180-day restricted period described above shall enter into an agreement substantially in the form of Exhibit I hereto. The Company will cause each officer, director and substantially all securityholders of the Company to furnish to the Representative, prior to the Closing Date, a "lock-up" agreement, substantially in the form of Exhibit I hereto. In addition, the Company will direct the transfer agent to place stop transfer restrictions upon any such securities of the Company that are bound by such "lock-up" agreements.

(n) Release of Lock-Up. If the Representatives, in their sole discretion, agree to release or waive the restrictions set forth in a lock-up letter described in Section 6(m) hereof for an officer or director of the Company and provides the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Exhibit II hereto through a major news service at least two business days before the effective date of the release or waiver.

(o) Delivery of SEC Correspondence. Upon the request of the Representatives, to supply the Representatives with copies of all written formal correspondence to and from, and all documents issued to and by, the Commission in connection with the registration of the Stock under the Securities Act or any of the Registration Statement, any Preliminary Prospectus or the Prospectus, or any amendment or supplement thereto.

(p) Press Releases. Prior to the Closing Date, not to issue any press release or other communication directly or indirectly or hold any press conference with respect to the Company, its financial condition, financial or otherwise, or earnings, business affairs or business prospects (except for routine oral marketing communications in the ordinary course of business and consistent with the past practices of the Company and of which the Representatives is notified), without the prior consent of the Representatives (which consent shall not be unreasonably withheld or delayed), unless in the judgment of the Company and its counsel, and after notification to the Representatives, such press release or communication is required by law.

(q) Compliance with Regulation M. Until the Representatives shall have notified the Company of the completion of the resale of the Stock, that the Company will not, and will use its reasonable best efforts to cause its affiliated purchasers (as defined in Regulation M under the Exchange Act) not to, either alone or with one or more other persons, bid for or purchase, for any account in which it or any of its affiliated purchasers has a beneficial interest, any Stock, or attempt to induce any person to purchase any Stock; and not to, and to use its reasonable best efforts to cause its affiliated purchasers not to, make bids or purchase for the purpose of creating actual, or apparent, active trading in or of raising the price of the Stock.

(r) To at all times through the Closing Date, to comply in all material respects with all applicable provisions of the Sarbanes-Oxley Act in effect from time to time and to file with the Commission such information on Form 10-Q or Form 10-K as may be required by Rule 463 of the Rules and Regulations.

(s) Registrar and Transfer Agent. To maintain, at its expense, a registrar and transfer agent for the Stock.

(t) Use of Proceeds. To apply the net proceeds from the sale of the Stock as set forth in the Registration Statement, the General Disclosure Package and the Prospectus under the heading "Use of Proceeds," and except as disclosed in the General Disclosure Package, the Company does not intend to use any of the proceeds from the sale of the Stock hereunder to repay any outstanding debt owed to any affiliate of any Underwriter.

(u) Exchange Listing. To use its reasonable efforts to list for quotation the Stock on the Exchange.

(v) Performance of Covenants and Satisfaction of Conditions. To use its reasonable efforts to do and perform all things required to be done or performed under this Agreement by the Company prior to each Closing Date and to satisfy all conditions precedent to the delivery of the Firm Stock and the Optional Stock.

5. *PAYMENT OF EXPENSES.* The Company agrees to pay, or reimburse if paid by any Underwriter, whether or not the transactions contemplated hereby are consummated or this Agreement is terminated: (a) the costs incident to the authorization, issuance, sale, preparation and delivery of the Stock and any taxes payable in that connection; (b) the costs incident to the registration of the Stock under the Securities Act and the Exchange Act; (c) the costs incident to the preparation, printing and distribution of the Registration Statement, any Preliminary Prospectus, any Issuer Free Writing Prospectus, the General Disclosure Package, the Prospectus, any amendments, supplements and exhibits thereto, this Agreement and any closing documents by mail, telex or other means of communications; (d) the fees and expenses (including reasonable related fees and expenses of counsel for the Underwriters) incurred in connection with securing any required review by FINRA of the terms of the sale of the Stock and any filings made with FINRA; (e) any applicable listing or other fees; (f) the fees and expenses (including reasonable related fees and expenses of counsel to the Underwriters) of qualifying the Stock under the securities laws of the several jurisdictions as provided in Section 4(k)) and of preparing, printing and distributing wrappers, Blue Sky Memoranda and Legal Investment Surveys (provided, that, the amount payable by the Company with respect to fees and disbursements of counsel to the Underwriters pursuant to subsections (d) and (f) shall not exceed $35,000 in the aggregate); (g) the cost of preparing and printing stock certificates; (h) all fees and expenses of the registrar and transfer agent of the Stock; (i) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Stock, including, without limitation, expenses associated with the preparation or dissemination of any electronic

road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the officers of the Company and such consultants and fifty (50) percent of the cost of any aircraft chartered in connection with the road show with the prior consent of the Company, (k) all fees and expenses of the Designated Underwriter incurred in connection with the Directed Share Program, including all fees and disbursements of its counsel, stamp duties, similar taxes or duties or other taxes incurred in connection with the Directed Share Program, and (l) all other costs and expenses of the Company incident to the offering of the Stock or the performance of the obligations of the Company under this Agreement (including, without limitation, the fees and expenses of the Company's counsel and the Company's independent accountants); *provided* that, except to the extent otherwise provided in this Section 5 and in Sections 10 and 11, the Underwriters shall pay their own costs and expenses, including the fees and expenses of their counsel not contemplated herein, any transfer taxes on the resale of any Stock by them, the expenses of advertising any offering of the Stock made by the Underwriters and travel and lodging expenses of the Representatives of the Underwriters and fifty (50) percent of the cost of any aircraft and other transportation chartered in connection with the road show.

6. *CONDITIONS OF UNDERWRITERS' OBLIGATIONS.* The respective obligations of the several Underwriters hereunder are subject to the accuracy, when made and as of the Applicable Time and on the Closing Date or the Option Closing Date, as the case may be, of the representations and warranties of the Company contained herein, to the accuracy of the statements of the Company made in any certificates pursuant to the provisions hereof, to the performance by the Company of its obligations hereunder, and to each of the following additional terms and conditions:

(a) Registration Compliance; No Stop Orders. The Registration Statement has become effective under the Securities Act, and no stop order suspending the effectiveness of the Registration Statement or any part thereof, preventing or suspending the use of any Preliminary Prospectus, the Prospectus or any Permitted Free Writing Prospectus or any part thereof shall have been issued and no proceedings for that purpose or pursuant to Section 8A under the Securities Act shall have been initiated or threatened by the Commission, and all requests for additional information on the part of the Commission (to be included in the Registration Statement or the Prospectus or otherwise) shall have been complied with to the reasonable satisfaction of the Representatives; the Rule 462(b) Registration Statement, if any, each Issuer Free Writing Prospectus and the Prospectus shall have been filed with, the Commission within the applicable time period prescribed for such filing by, and in compliance with, the Rules and Regulations and in accordance with Section 4(a), and the Rule 462(b) Registration Statement, if any, shall have become effective immediately upon its filing with the Commission; and FINRA shall have raised no unresolved objection to the fairness and reasonableness of the terms of this Agreement or the transactions contemplated hereby.

(b) No Material Misstatements. None of the Underwriters shall have discovered and disclosed to the Company on or prior to the Closing Date or the Option Closing Date, as the case may be, that the Registration Statement or any amendment or supplement thereto contains an untrue statement of a fact which, in the reasonable opinion of counsel for the Underwriters, is material or omits to state any fact which, in the reasonable opinion of such counsel, is material and is required to be stated therein or is necessary to make the statements therein not misleading, or that the General Disclosure Package, any Issuer Free Writing Prospectus or the Prospectus or any amendment or supplement thereto contains an untrue statement of fact which, in the reasonable opinion of such counsel, is material or omits to state any fact which, in the reasonable opinion of such counsel, is material and is necessary in order to make the statements, in the light of the circumstances in which they were made, not misleading.

(c) Opinion and 10b-5 Statement of Counsel for the Company. Fenwick & West LLP shall have furnished to the Representatives such counsel's written opinion and 10b-5 Statement, as counsel to the Company, addressed to the Underwriters and dated the Closing Date or the Option Closing Date, as the case may be, in form and substance reasonably satisfactory to the Representatives.

(d) Opinion and 10b-5 Statement of Intellectual Property Counsel for the Company. Each of Squire Patton Boggs and Kilpatrick Townsend and Stockton LLP shall have furnished to the Representatives such counsel's written opinion, as intellectual property counsel to the Company, addressed to the Underwriters and dated the Closing Date or the Option Closing Date, as the case may be, in form and substance reasonably satisfactory to the Representatives.

(e) Opinion and 10b-5 Statement of Regulatory Counsel for the Company. Hyman, Phelps & McNamara, P.C. shall have furnished to the Representatives such counsel's written opinion, as counsel to the Selling stockholders, addressed to the Underwriters and dated the Closing Date or the Option Closing Date, as the case may be, in form and substance reasonably satisfactory to the Representatives,.

(f) Opinion and 10b-5 Statement of Counsel for the Underwriters. The Representatives shall have received from Cooley LLP, counsel for the Underwriters, such opinion or opinions and 10b-5 Statement, dated the Closing Date or the Option Closing Date, as the case may be, with respect to such matters as the Underwriters may reasonably require, and the Company shall have furnished to such counsel such documents as they request for enabling them to pass upon such matters.

(g) Comfort Letter. At the time of the execution of this Agreement, the Representatives shall have received from Ernst & Young LLP a letter, addressed to the Underwriters, executed and dated such date, in form and substance satisfactory to the Representatives (i) confirming that they are an independent registered accounting firm with respect to the Company within the meaning of the Securities Act and the Rules and Regulations and PCAOB and (ii) stating the conclusions and findings of such firm, of the type ordinarily included in accountants' "comfort letters" to underwriters, with respect to the financial statements and certain financial information contained or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus.

(h) Bring Down Comfort. On the effective date of any post-effective amendment to the Registration Statement and on the Closing Date or the Option Closing Date, as the case may be, the Representatives shall have received a letter (the "***bring-down letter***") from Ernst & Young LLP addressed to the Underwriters and dated the Closing Date or the Option Closing Date, as the case may be, confirming, as of the date of the bring-down letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the General Disclosure Package and the Prospectus, as the case may be, as of a date not more than three (3) business days prior to the date of the bring-down letter), the conclusions and findings of such firm, of the type ordinarily included in accountants' "comfort letters" to underwriters, with respect to the financial information and other matters covered by its letter delivered to the Representatives concurrently with the execution of this Agreement pursuant to paragraph (g) of this Section 6.

(i) Officer's Certificate. The Company shall have furnished to the Representatives a certificate, dated the Closing Date or the Option Closing Date, as the case may be, of its Chief Executive Officer and its Chief Financial Officer stating in their respective capacities as officers of the Company on behalf of the Company that (i) no stop order suspending the effectiveness of the Registration Statement (including, for avoidance of doubt, any Rule 462(b) Registration Statement), or any post-effective amendment thereto, shall be in effect and no proceedings for such

purpose shall have been instituted or, to their knowledge, threatened by the Commission, (ii) for the period from and including the date of this Agreement through and including the Closing Date or the Option Closing Date, as the case may be, there has not occurred any Material Adverse Effect the effect of which makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Option Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, (iii) to their knowledge, after reasonable investigation, as of the Closing Date or the Option Closing Date, as the case may be, the representations and warranties of the Company in this Agreement are true and correct and the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date or the Option Closing Date, as the case may be, and (iv) there has not been, subsequent to the date of the most recent audited financial statements included or incorporated by reference in the General Disclosure Package, any Material Adverse Effect in the financial position or results of operations of the Company, or any change or development that, singularly or in the aggregate, would reasonably be expected to involve a Material Adverse Effect, except as set forth in the General Disclosure Package and the Prospectus.

(j) No Material Adverse Effect. Since the date of the latest audited financial statements included in the General Disclosure Package, (i) the Company shall not have sustained any loss or interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, otherwise than as set forth in the General Disclosure Package, and (ii) there shall not have been any change in the capital stock or long-term debt of the Company, or any change, or any development involving a prospective change, in or affecting the business, general affairs, management, financial position, stockholders' equity or results of operations of the Company, otherwise than as set forth in the General Disclosure Package, the effect of which, in any such case described in clause (i) or (ii) of this paragraph (j), is, in the reasonable judgment of the Representatives, so material and adverse as to make it impracticable or inadvisable to proceed with the sale or delivery of the Stock on the terms and in the manner contemplated in the General Disclosure Package.

(k) No Legal Impediment to Issuance. No action shall have been taken and no law, statute, rule, regulation or order shall have been enacted, adopted or issued by any governmental or regulatory agency or body which would prevent the issuance or sale of the Stock; and no injunction, restraining order or order of any other nature by any federal or state court of competent jurisdiction shall have been issued which would prevent the issuance or sale of the Stock or materially and adversely affect or potentially materially and adversely affect the business or operations of the Company.

(l) [Reserved]

(m) Market Conditions. Subsequent to the execution and delivery of this Agreement there shall not have occurred any of the following: (i) trading in any of the Company's securities shall have been suspended or materially limited by the Commission or the Exchange, or trading in securities generally on the New York Stock Exchange, Nasdaq Global Select Market, Nasdaq Global Market, Nasdaq Capital Market or the NYSE MKT LLC or in the over-the-counter market, or trading in any securities of the Company on any exchange or in theover-the-counter market, shall have been suspended or materially limited, or minimum or maximum prices or maximum range for prices shall have been established on any such exchange or such market by the Commission, by such exchange or market or by any other regulatory body or governmental authority having jurisdiction, (ii) a banking moratorium shall have been declared by Federal or state authorities or a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States, (iii) the United States shall have become engaged in hostilities, or the subject of an act of terrorism, or there shall have been an outbreak of or escalation in hostilities involving the United States, or there shall have been a declaration of a national emergency or war by the United

States that makes it impracticable or inadvisable to proceed with the offering or (iv) there shall have occurred such a material adverse change in general economic, political or financial conditions (or the effect of international conditions on the financial markets in the United States shall be such) as to make it, in the reasonable judgment of the Representatives, impracticable or inadvisable to proceed with the sale or delivery of the Stock on the terms and in the manner contemplated in the General Disclosure Package and the Prospectus.

(n) Exchange Listing. The Exchange shall have approved the Stock for listing therein, subject only to official notice of issuance and evidence of satisfactory distribution.

(o) Good Standing. The Representatives shall have received on and as of the Closing Date or the Option Closing Date, as the case may be, reasonably satisfactory evidence of the good standing of the Company in the State of Delaware and its good standing as a foreign entity in such other jurisdictions as the Representatives may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions.

(p) Lock Up Agreements. The Representatives shall have received the written agreements, substantially in the form ofExhibit I hereto, of the officers, directors and substantially all securityholders of the Company.

(q) Secretary's Certificate. The Company shall have furnished to the Representatives a Secretary's Certificate of the Company, in form and substance reasonably satisfactory to counsel for the Underwriters and customary for the type of offering contemplated by this Agreement.

(r) Additional Documents. On or prior to the Closing Date or the Option Closing Date, as the case may be, the Company shall have furnished to the Representatives such further certificates and documents as the Representatives may reasonably request.

All opinions, letters, evidence and certificates mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Underwriters.

7. *INDEMNIFICATION AND CONTRIBUTION.*

(a) Indemnification of Underwriters by the Company. The Company shall indemnify and hold harmless:

(1) Each Underwriter, its affiliates, directors, officers, managers, members, employees, representatives and agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the "***Underwriter Indemnified Parties***," and each an "***Underwriter Indemnified Party***") against any loss, claim, damage, expense or liability whatsoever (or any action or proceeding (including any governmental or regulatory investigation) in respect thereof), joint or several, to which such Underwriter Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action or proceeding arises out of or is based upon (A) any untrue statement or alleged untrue statement of a material fact contained in any Written Testing-the-Waters Communication, any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, the Registration Statement (or any amendment thereto), the Prospectus, or in any amendment or supplement thereto or in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Common Stock, including any roadshow or investor presentations made to

investors by the Company (whether in person or electronically) ("***Marketing Materials***"), or (B) the omission or alleged omission to state in any Written Testing-the-Waters Communication, any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, the Prospectus, or in any amendment or supplement thereto or in any Marketing Materials, a material fact required to be stated therein or necessary to make the statements therein not misleading, and shall reimburse each Underwriter Indemnified Party promptly upon demand for any documented legal fees or other expenses reasonably incurred by that Underwriter Indemnified Party in connection with investigating, or preparing to defend, or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action or proceeding, as such fees and expenses are incurred; *provided*, *however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, expense or liability arises out of or is based upon an untrue statement or alleged untrue statement in, or omission or alleged omission from any Preliminary Prospectus, the Registration Statement or the Prospectus, or any such amendment or supplement thereto, any Issuer Free Writing Prospectus or any Marketing Materials made in reliance upon and in conformity with written information furnished to the Company through the Representatives by or on behalf of any Underwriter specifically for use therein, which information the parties hereto agree is limited to the Underwriter's Information.

(2) The Designated Underwriter and its directors, officers, managers, members, employees, representatives and agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the "***Designated Underwriter Indemnified Parties***," and each a "***Designated Underwriter Indemnified Party***") against any loss, claim, damage, expense or liability whatsoever (or any action or proceeding in respect thereof), joint or several, to which that Designated Underwriter Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action or proceeding arises out of or is based upon (A) any untrue statement or alleged untrue statement of a material fact contained in any material prepared by or with the consent of the Company for distribution to Participants in connection with the Directed Share Program, (B) the omission or alleged omission to state in any material prepared by or with the consent of the Company for distribution to Participants in connection with the Directed Share Program of a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, (C) the failure of any Participant to pay for and accept delivery of Directed Shares that the Participant agreed to purchase; or (D) any other loss, claim, damage, expense, liability, action or proceeding related to, in respect of, arising out of, or in connection with the Directed Share Program, and shall reimburse each Designated Underwriter Indemnified Party promptly upon demand for any legal fees or other expenses reasonably incurred by that Designated Underwriter Indemnified Party in connection with investigating, or preparing to defend, or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action or proceeding, as such fees and expenses are incurred.

The indemnity agreement in this Section 7(a) is not exclusive and is in addition to each other liability which the Company might have under this Agreement or otherwise, and shall not limit any rights or remedies which may otherwise be available under this Agreement, at law or in equity to any Underwriter Indemnified Party.

(b) Indemnification of Company by the Underwriters. Each Underwriter, severally and not jointly, shall indemnify and hold harmless the Company and its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the "***Company Indemnified Parties***" and each a "***Company Indemnified Party***") against any loss, claim, damage, expense or liability whatsoever (or any action or proceeding (including any governmental or regulatory investigation) in respect thereof), joint or several, to which such Company Indemnified Party may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage, expense, liability, action or proceeding arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, the Registration Statement or the Prospectus, or in any amendment or supplement thereto, or (ii) the omission or alleged omission to state in any Preliminary Prospectus, any Issuer Free Writing Prospectus, any "issuer information" filed or required to be filed pursuant to Rule 433(d) of the Rules and Regulations, the Registration Statement or the Prospectus, or in any amendment or supplement thereto, a material fact required to be stated therein or necessary to make the statements therein not misleading, but in each case only to the extent that the untrue statement or alleged untrue statement or omission or alleged omission was made in reliance upon and in conformity with written information furnished to the Company through the Representatives by or on behalf of that Underwriter specifically for use therein, which information the parties hereto agree is limited to the Underwriter's Information, and shall reimburse the Company Indemnified Parties for any legal or other expenses reasonably incurred by such party in connection with investigating or preparing to defend or defending against or appearing as third party witness in connection with any such loss, claim, damage, liability, action or proceeding, as such fees and expenses are incurred. This indemnity agreement in this Section 7(b) is not exclusive and will be in addition to any liability which the Underwriters might otherwise have and shall not limit any rights or remedies which may otherwise be available under this Agreement, at law or in equity to the Company Indemnified Parties.

(c) Promptly after receipt by an indemnified party under this Section 7 of notice of the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against an indemnifying party under this Section 7, notify such indemnifying party in writing of the commencement of that action; *provided, however,* that the failure to notify the indemnifying party shall not relieve it from any liability which it may have under this Section 7 except to the extent it has been materially prejudiced by such failure; and, *provided, further,* that the failure to notify an indemnifying party shall not relieve it from any liability which it may have to an indemnified party otherwise than under this Section 7. If any such action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense of such action with counsel reasonably satisfactory to the indemnified party (which counsel shall not, except with the written consent of the indemnified party, be counsel to the indemnifying party). After notice from the indemnifying party to the indemnified party of its election to assume the defense of such action, except as provided herein, the indemnifying party shall not be liable to the indemnified party under Section 7 for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense of such action other than reasonable costs of investigation; *provided, however,* that any indemnified party shall have the right to employ separate counsel in any such action and to participate in the defense of such action but the fees and expenses of such counsel (other than reasonable costs of investigation) shall be at the expense of such indemnified party unless (i) the employment thereof has been specifically authorized in writing by the Company in the case of a claim for indemnification under Section 7(a) or the Representatives in the case of a claim for indemnification under Section 7(b), (ii) such indemnified party shall have been advised by its counsel that there may be one or more legal defenses available to it which are different from or additional to those available to the indemnifying party, or (iii) the indemnifying party has failed to assume the defense of such action and employ counsel reasonably satisfactory to the indemnified party within

a reasonable period of time after notice of the commencement of the action or the indemnifying party does not diligently defend the action after assumption of the defense, in which case, if such indemnified party notifies the indemnifying party in writing that it elects to employ separate counsel at the expense of the indemnifying party, the indemnifying party shall not have the right to assume the defense of (or, in the case of a failure to diligently defend the action after assumption of the defense, to continue to defend) such action on behalf of such indemnified party and the indemnifying party shall be responsible for legal or other expenses subsequently incurred by such indemnified party in connection with the defense of such action; *provided*, *however*, the indemnifying party shall not, in connection with any one such action or separate but substantially similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances, be liable for the reasonable fees and expenses of more than one separate firm of attorneys at any time for all such indemnified parties (in addition to one local counsel), which firm shall be designated in writing by the Representatives if the indemnified parties under this Section 7 consist of any Underwriter Indemnified Party or by the Company if the indemnified parties under this Section 7 consist of any Company Indemnified Parties. Subject to this Section 7(c), the amount payable by an indemnifying party under Section 7 shall include, but not be limited to, (x) reasonable legal fees and expenses of counsel to the indemnified party and any other expenses in investigating, or preparing to defend or defending against, or appearing as a third party witness in respect of, or otherwise incurred in connection with, any action , proceeding or claim, and (y) all amounts paid in settlement of any of the foregoing. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of judgment with respect to any pending or threatened action or any claim whatsoever, in respect of which indemnification or contribution could be sought under this Section 7 (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party in form and substance reasonably satisfactory to such indemnified party from all liability arising out of such action or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party. Subject to the provisions of the following sentence, no indemnifying party shall be liable for settlement of any pending or threatened action or any claim whatsoever that is effected without its written consent (which consent shall not be unreasonably withheld or delayed), but if settled with its written consent, if its consent has been unreasonably withheld or delayed or if there be a judgment for the plaintiff in any such matter, the indemnifying party agrees to indemnify and hold harmless any indemnified party from and against any loss or liability by reason of such settlement or judgment. In addition, if at any time an indemnified party shall have requested that an indemnifying party reimburse the indemnified party for reasonable fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 7(a) effected without its written consent if (i) such settlement is entered into more than forty-five (45) days after receipt by such indemnifying party of the request for reimbursement, (ii) such indemnifying party shall have received notice of the terms of such settlement at least thirty (30) days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement. Notwithstanding anything contained herein to the contrary, if indemnity may be sought pursuant to Section 7 hereof in respect of such action or proceeding, then, in addition to the foregoing, the indemnifying party shall be liable for the reasonable fees and expenses of not more than one separate firm (in addition to any local counsel) for the Designated Underwriter (and the directors, officers, managers, member, employees, representatives and agents of, and all persons, if any, who control the Designated Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act) for the defense of any losses, claims, damages and liabilities arising out of the Directed Share Program.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under Section 7(a) or 7(b), then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid, payable or otherwise incurred by such indemnified party as a result of such loss, claim, damage, expense or liability (or any action or proceeding in respect thereof), as incurred, (i) in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Stock, or (ii) if the allocation provided by clause (i) of this Section 7(d) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) of this Section 7(d) but also the relative fault of the Company on the one hand and the Underwriters on the other with respect to the statements, omissions, acts or failures to act which resulted in such loss, claim, damage, expense or liability (or any action or proceeding in respect thereof) as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other with respect to such offering shall be deemed to be in the same proportion as the total net proceeds from the offering of the Stock purchased under this Agreement (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters with respect to the Stock purchased under this Agreement, in each case as set forth in the table on the cover page of the Prospectus. The relative fault of the Company on the one hand and the Underwriters on the other shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such untrue statement, omission, act or failure to act; *provided* that the parties hereto agree that the written information furnished to the Company through the Representatives by or on behalf of the Underwriters for use in the Preliminary Prospectus, the Registration Statement or the Prospectus, or in any amendment or supplement thereto, consists solely of the Underwriter's Information.

(e) The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to Section 7(d) above were to be determined by pro rata allocation or by any other method of allocation which does not take into account the equitable considerations referred to Section 7(d) above. The amount paid or payable by an indemnified party as a result of the loss, claim, damage, expense, liability, action or proceeding referred to in Section 7(d) above shall be deemed to include, subject to the limitations set forth above, any documented legal or other expenses reasonably incurred and documented by such indemnified party in connection with investigating, preparing to defend or defending against or appearing as a third party witness in respect of, or otherwise incurred in connection with, any such loss, claim, damage, expense, liability, action, investigation or proceeding. Notwithstanding the provisions of this Section 7, no Underwriters shall be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Stock exceeds the amount of any damages which the Underwriter has otherwise paid or become liable to pay by reason of any untrue or alleged untrue statement, omission or alleged omission, act or alleged act or failure to act or alleged failure to act. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute as provided in this Section 7 are several in proportion to their respective underwriting obligations and not joint.

8. *TERMINATION*. The obligations of the Underwriters hereunder may be terminated by the Representatives, in their absolute discretion by notice given to the Company prior to delivery of and payment for the Firm Stock if, prior to that time, any of the events described in Sections 6(j), 6(k) or 6(m) have occurred or if the Underwriters shall decline to purchase the Stock for any reason permitted under this Agreement.

9. *REIMBURSEMENT OF UNDERWRITERS' EXPENSES.* Notwithstanding anything to the contrary in this Agreement, if (a) this Agreement shall have been terminated pursuant to Section 8 or 10, (b) the Company shall fail to tender the Stock for delivery to the Underwriters for any reason not permitted under this Agreement, (c) the Underwriters shall decline to purchase the Stock for any reason permitted under this Agreement or (d) the sale of the Stock is not consummated because any condition to the obligations of the Underwriters set forth herein is not satisfied or because of the refusal, inability or failure on the part of the Company to perform any agreement herein or to satisfy any condition or to comply with the provisions hereof, then in addition to the payment of amounts in accordance with Section 5, the Company shall reimburse the Underwriters for the reasonable fees and expenses of Underwriters' counsel and for such other out-of-pocket expenses as shall have been reasonably incurred by them in connection with this Agreement and the proposed purchase of the Stock, including, without limitation, travel and lodging expenses of the Underwriters, and upon demand the Company shall pay the full amount thereof to the Representatives; *provided* that if this Agreement is terminated pursuant to Section 10 by reason of the default of one or more Underwriters, the Company shall not be obligated to reimburse any defaulting Underwriter on account of expenses to the extent incurred by such defaulting Underwriter *provided further* that the foregoing shall not limit any reimbursement obligation of the Company to any non-defaulting Underwriter under this Section 9.

10. *SUBSTITUTION OF UNDERWRITERS.* If any Underwriter or Underwriters shall default in its or their obligations to purchase shares of Stock hereunder on any Closing Date and the aggregate number of shares which such defaulting Underwriter or Underwriters agreed but failed to purchase does not exceed ten percent (10%) of the total number of shares to be purchased by all Underwriters on the Closing Date or the Option Closing Date, as the case may be, the other Underwriters shall be obligated severally, in proportion to their respective commitments hereunder, to purchase the shares which such defaulting Underwriter or Underwriters agreed but failed to purchase on the Closing Date or the Option Closing Date, as the case may be. If any Underwriter or Underwriters shall so default and the aggregate number of shares with respect to which such default or defaults occur is more than ten percent (10%) of the total number of shares to be purchased by all Underwriters on the Closing Date or the Option Closing Date, as the case may be, and arrangements satisfactory to the Representatives and the Company for the purchase of such shares by other persons are not made within forty-eight (48) hours after such default, this Agreement shall terminate.

If the remaining Underwriters or substituted Underwriters are required hereby or agree to take up all or part of the shares of Stock of a defaulting Underwriter or Underwriters on the Closing Date or the Option Closing Date, as the case may be, as provided in this Section 10, (i) the Company shall have the right to postpone the Closing Date or the Option Closing Date, as the case may be, for a period of not more than five (5) full business days in order that the Company may effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus, or in any other documents or arrangements, and the Company agrees promptly to file any amendments to the Registration Statement or supplements to the Prospectus which may thereby be made necessary, and (ii) the respective numbers of shares to be purchased by the remaining Underwriters or substituted Underwriters shall be taken as the basis of their underwriting obligation for all purposes of this Agreement. Nothing herein contained shall relieve any defaulting Underwriter of its liability to the Company or the other Underwriters for damages occasioned by its default hereunder. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of any non-defaulting Underwriter or the Company, except that the representations, warranties, covenants, indemnities, agreements and other statements set forth in Section 2, the obligations with respect to expenses to be paid or reimbursed pursuant to Sections 5 and 9 and the provisions of Section 7 and Sections 11 through 21, inclusive, shall not terminate and shall remain in full force and effect.

11. *ABSENCE OF FIDUCIARY RELATIONSHIP.* The Company acknowledges and agrees that:

(a) each Underwriter's responsibility to the Company is solely contractual in nature, the Representatives have been retained solely to act as underwriters in connection with the sale of the Stock and no fiduciary, advisory or agency relationship between the Company and the Representatives have been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether any of the Representatives has advised or is advising the Company on other matters;

(b) the price of the Stock set forth in this Agreement was established by the Company following discussions and arms-length negotiations with the Representatives, and the Company is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) it has been advised that the Representatives and their affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Representatives have no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and

(d) it waives, to the fullest extent permitted by law, any claims it may have against the Representatives for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that the Representatives shall have no liability (whether direct or indirect) to the Company in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, employees or creditors of the Company.

12. *SUCCESSORS; PERSONS ENTITLED TO BENEFIT OF AGREEMENT.* This Agreement shall inure to the benefit of and be binding upon the several Underwriters, the Company and their respective successors and assigns. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, other than the persons mentioned in the preceding sentence, any legal or equitable right, remedy or claim under or in respect of this Agreement, or any provisions herein contained, this Agreement and all conditions and provisions hereof being intended to be and being for the sole and exclusive benefit of such persons and for the benefit of no other person; except that the representations, warranties, covenants, agreements and indemnities of the Company contained in this Agreement shall also be for the benefit of the Underwriter Indemnified Parties, and the indemnities of the several Underwriters shall be for the benefit of the Company Indemnified Parties. It is understood that each Underwriter's responsibility to the Company is solely contractual in nature and the Underwriters do not owe the Company, or any other party, any fiduciary duty as a result of this Agreement. No purchaser of any of the Stock from any Underwriter shall be deemed to be a successor or assign by reason merely of such purchase.

13. *SURVIVAL OF INDEMNITIES, REPRESENTATIONS, WARRANTIES, ETC.* The respective indemnities, covenants, agreements, representations, warranties and other statements of the Company and the several Underwriters, as set forth in this Agreement or made by them respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter, the Company or any person controlling any of them and shall survive delivery of and payment for the Stock. Notwithstanding any termination of this Agreement, including without limitation any termination pursuant to Section 8 or Section 10, the indemnities, covenants, agreements, representations, warranties and other statements forth in Sections 2, 5, 7 and 9 and Sections 11 through 21, inclusive, of this Agreement shall not terminate and shall remain in full force and effect at all times.

14. *NOTICES.* All statements, requests, notices and agreements hereunder shall be in writing, and:

(a) if to the Underwriters, shall be delivered or sent by mail, telex, facsimile transmission or email to (i) Cowen and Company, LLC, Attention: Head of Equity Capital Markets, Fax: 646-562-1249 with a copy to the General Counsel, Fax: 646-562-1124; and (ii) Piper Jaffray & Co., 800 Nicollett Mall, Minneapolis, Minnesota 55402, Attention: General Counsel with a copy to Legal, Fax: [•]; and

(b) if to the Company shall be delivered or sent by mail, telex, facsimile transmission or email to Sutro Biopharma, Inc., Attention: William J. Newell, Chief Executive Officer, Fax: 650) 872-8924, email bnewell@sutrobio.com;

provided, however, that any notice to an Underwriter pursuant to Section 7 shall be delivered or sent by mail, or facsimile transmission to such Underwriter at its address set forth in its acceptance telex to the Representatives, which address will be supplied to any other party hereto by the Representatives upon request. Any such statements, requests, notices or agreements shall take effect at the time of receipt thereof.

15. *DEFINITION OF CERTAIN TERMS.* For purposes of this Agreement, (a) "***affiliate***" has the meaning set forth in Rule 405 under the Securities Act, (b) "***business day***" means any day on which the New York Stock Exchange, Inc. is open for trading and (c) "***subsidiary***" has the meaning set forth in Rule 405 of the Rules and Regulations.

16. ***GOVERNING LAW.*** **This Agreement shall be governed by and construed in accordance with the laws of the State of New York, including without limitation Section 5-1401 of the New York General Obligations.** Each of the parties hereto irrevocably (a) submits to thenon-exclusive jurisdiction of the Federal and state courts in the Borough of Manhattan in The City of New York for the purpose of any suit, action or other proceeding arising out of this Agreement or the transactions contemplated by this Agreement, the Registration Statement and any Preliminary Prospectus or the Prospectus, (b) agrees that all claims in respect of any such suit, action or proceeding may be heard and determined by any such court, (c) waives to the fullest extent permitted by applicable law, any immunity from the jurisdiction of any such court or from any legal process, (d) agrees not to commence any such suit, action or proceeding other than in such courts, and (e) waives, to the fullest extent permitted by applicable law, any claim that any such suit, action or proceeding is brought in an inconvenient forum.

17. *UNDERWRITERS' INFORMATION.* The parties hereto acknowledge and agree that, for all purposes of this Agreement, the Underwriters' Information consists solely of the following information in the Prospectus: (i) the last paragraph on the front cover page concerning the terms of the offering by the Underwriters; and (ii) the statements concerning the Underwriters contained in the [•] paragraphs under the heading "Underwriting."

18. *AUTHORITY OF THE REPRESENTATIVES.* In connection with this Agreement, the Representatives will act for and on behalf of the several Underwriters, and any action taken under this Agreement by the Representatives, will be binding on all the Underwriters.

19. *PARTIAL UNENFORCEABILITY.* The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision hereof. If any section, paragraph, clause or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

20. *GENERAL.* This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. In this Agreement, the masculine, feminine and neuter genders and the singular and the plural include one another. The section headings in this Agreement are for the convenience of the parties only and will not affect the construction or interpretation of this Agreement. This Agreement may be amended or modified, and the observance of any term of this Agreement may be waived, only by a writing signed by the Company and the Representatives.

21. *COUNTERPARTS*. This Agreement may be signed in any number of counterparts, including by facsimile or other electronic transmission, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

[Signature page follows]

If the foregoing is in accordance with your understanding please indicate your acceptance of this Agreement by signing in the space provided for that purpose below.

Very truly yours,

SUTRO BIOPHARMA, INC.

By: _____
Name:
Title:

Accepted as of
the date first above written:

COWEN AND COMPANY, LLC

PIPER JAFFRAY & CO.

Acting on their own behalf
and as Representatives of several Underwriters listed on
Schedule A to this Agreement.

By: COWEN AND COMPANY, LLC

By: _____
Name:
Title:

By: PIPER JAFFRAY & CO.

By: _____
Name:
Title:

SCHEDULE A

Name	Number of Shares of Firm Stock to be Purchased	Number of Shares of Optional Stock to be Purchased
Cowen and Company, LLC		
Piper Jaffray & Co.		
Wedbush Securities Inc.		
JMP Securities LLC		
Total		

SCHEDULE B

General Use Free Writing Prospectuses

[None]

Exhibit 1.1

SCHEDULE C

Pricing Information

Firm Stock to be Sold: [•] shares

Offering Price: $[•] per share

Underwriting Discounts and Commissions: [•]%

Estimated Net Proceeds to the Company (after underwriting discounts and commissions, but before transaction expenses): $[•]

SCHEDULE D

[List of Testing-the-Waters Communications distributed by Company pursuant to Section 2(i)]

Exhibit I

[Form of Lock-Up Agreement]

_____, 2018

COWEN AND COMPANY, LLC
PIPER JAFFRAY & CO.

As Representatives of the several Underwriters
c/o Cowen and Company, LLC
599 Lexington Avenue
New York, New York 10022

c/o Piper Jaffray & Co.
800 Nicollet Mall, Suite 1000
Minneapolis, Minnesota 55402

Re: Sutro Biopharma, Inc. – Registration Statement on Form S-1 for Shares of Common Stock

Dear Sirs or Madams:

This Agreement is being delivered to you in connection with the proposed Underwriting Agreement (the "Underwriting Agreement") between Sutro Biopharma, Inc., a Delaware corporation (the "Company") and Cowen and Company, LLC ("Cowen") and Piper Jaffray & Co. ("Piper"), as representatives (the "Representatives") of a group of underwriters (collectively, the "Underwriters"), to be named therein, and the other parties thereto (if any), relating to the proposed public offering of shares of the common stock (the "Offering"), par value $0.001 per share (the "Common Stock"), of the Company.

In order to induce you and the other Underwriters to enter into the Underwriting Agreement, and in light of the benefits that the offering of the Common Stock will confer upon the undersigned in its capacity as a securityholder and/or an officer, director or employee of the Company, and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agrees with each Underwriter that, during the period beginning on the date hereof through and including the date that is the 180th day after the date of the Underwriting Agreement (the "Lock-Up Period"), the undersigned will not, without the prior written consent of Cowen and Piper, directly or indirectly, (i) offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, or announce the intention to otherwise dispose of, any shares of Common Stock (including, without limitation, Common Stock which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations promulgated under the Securities Act of 1933, as amended (such shares, the "Beneficially Owned Shares,"

and such act, the "Securities Act")) or securities convertible into or exercisable or exchangeable for Common Stock, (ii) enter into any swap, hedge or similar agreement or arrangement that transfers in whole or in part, the economic risk of ownership of the Beneficially Owned Shares or securities convertible into or exercisable or exchangeable for Common Stock, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition, or (iii) engage in any short selling of the Common Stock or securities convertible into or exercisable or exchangeable for Common Stock.

If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any issuer-directed shares of Common Stock the undersigned may purchase in the Offering.

If the undersigned is an officer or director of the Company, (i) Cowen and Piper agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of shares of Common Stock, Cowen and Piper will notify the Company of the impending release or waiver, and (ii) if required by FINRA Rule 5131 (or any successor provision thereto), the Company has agreed or will agree in the Underwriting Agreement to announce the impending release or waiver with respect to the undersigned by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by Cowen and Piper hereunder to any such officer or director shall only be effective two business day after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this Agreement to the extent and for the duration that such terms remain in effect at the time of the transfer.

The restrictions set forth in the second paragraph shall not apply to:

(1) if the undersigned is a natural person, any transfers made by the undersigned (a) as a bona fide gift, or gifts, or for bona fide estate planning purposes, (b) to any member of the immediate family (as defined below) of the undersigned or to a trust the direct or indirect beneficiaries of which are exclusively the undersigned or members of the undersigned's immediate family, (c) by will, testamentary document or intestate succession upon the death of the undersigned, or (d) as a bona fide gift to a charity or educational institution; provided, however, (A) in the case of any transfer described in clauses (1)(a) and (1)(b), no filing by any party (donor, donee, transferor or transferee) under Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") except a filing on a Form 5, but no sooner than February 10, 2019, or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution, and (B) in the case of any transfer described in clauses (1)(c) and (1)(d), if the undersigned is required to file a report under Section 16 of the Exchange Act reporting any transfer pursuant to clauses (1)(c) or (1)(d), the undersigned shall include a statement in such report to the effect that such transfer relates to the circumstances described in clauses (1)(c) and (1)(d), as the case may be, and no other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution.

(2) if the undersigned is a corporation, partnership, limited liability company or other business entity, any transfers to any stockholder, partner (which for additional clarity, includes limited partners) or member or managers of, or owner of a similar equity interest in, the undersigned, as the case may be, or to the estates of any such stockholders, partners, members, managers, or owners of similar equity interest in the undersigned, if, in any such case, such transfer is not for value;

(3) if the undersigned is a corporation, partnership, limited liability company or other business entity, any transfer made by the undersigned (a) in connection with the sale or other bona fide transfer in a single transaction of all or substantially all of the undersigned's capital stock, partnership interests, membership interests or other similar equity interests, as the case may be, or all or substantially all of the undersigned's assets, in any such case not undertaken for the purpose of avoiding the restrictions imposed by this Agreement or (b) to another corporation, partnership, limited liability company or other business entity so long as the transferee is a direct or indirect affiliate (as defined below) of the undersigned and such transfer is not for value;

(4) if the undersigned is a trust, to a trust, trustee or beneficiary of the trust or to the estate of a trustor, trustee or beneficiary of such trust;

(5) the transfer of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock (or the economic consequences of ownership of Common Stock) that occurs pursuant to a settlement agreement related to the distribution of assets in connection with the dissolution of a marriage or civil union, by operation of law pursuant to a qualified domestic order in connection with a divorce settlement or pursuant to any other court order;

(6) transactions relating to Common Stock or other securities convertible into or exercisable or exchangeable for Common Stock acquired in the Offering or in open market transactions after completion of the Offering; provided, however, that no filing under Section 16 of the Exchange Act or other public announcement shall be required or shall be voluntarily made in connection with subsequent sales of Common Stock or other securities acquired by the undersigned in such open market transactions;

(7) to the Company pursuant to the undersigned's employment agreement or agreements governed by the Company's equity incentive plans described in the final prospectus relating to the Offering (the "Prospectus") under which the Company has the option to repurchase such shares or a right of first refusal with respect to transfers of such shares upon termination of service of the undersigned;

(8) the establishment of a trading plan pursuant to Rule 10b5-1 of the Exchange Act, provided, however, (i) that such plan does not provide for, or permit, the sale of any Common Stock during the Lock-up Period, (ii) the establishment of such plan is not required to be reported in any public report or filing with the SEC, or otherwise, and (iii) the undersigned does not otherwise voluntarily effect any public filing or report or any public announcement regarding the establishment of such trading plan;

(9) any transfers made by the undersigned to the Company to satisfy tax withholding obligations pursuant to the Company's equity incentive plans or arrangements disclosed in the Prospectus; provided, however, that no filing under Section 16 of the Exchange Act or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of common stock shall be required or shall be voluntarily made during the 30 days after the date of the Prospectus, and after such 30th day, if the undersigned is required to file a report under Section 16 of the Exchange Act reporting a reduction in beneficial ownership of shares of common stock during the Lock-up Period, the undersigned shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this clause

(9);

(10) the transfer of shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of the Company's securities involving a change of control of the Company that is approved by the board of directors of the Company, provided, however, that in the event that such tender offer, merger, consolidation or other such transaction is not completed, such securities held by the undersigned shall remain subject to the restrictions on transfer set forth in this Agreement;

(11) the conversion or reclassification of the outstanding preferred shares or other securities of the Company into Common Stock in connection with the consummation of the Offering as described in the Prospectus, provided, however, that any such Common Stock received upon such conversion or reclassification shall be subject to the restrictions contained in this Agreement; and

(12) transactions pursuant to the Underwriting Agreement;

provided, however, that (A) in the case of any transfer described in clause (1) through (5) above, it shall be a condition to the transfer that the transferee executes and delivers to Cowen and Piper, acting on behalf of the Underwriters, not later than one business day prior to such transfer, a written agreement, in substantially the form of this Agreement (it being understood that any references to "immediate family" in the agreement executed by such transferee shall expressly refer only to the immediate family of the undersigned and not to the immediate family of the transferee), (B) in the case of any transfer described in clauses (2) through (4), no filing by any party (donor, donee, transferor or transferee) under Section 16 of the Exchange Act or other public announcement shall be required or shall be made voluntarily in connection with such transfer or distribution during the Lock-Up Period, (C) in the case of any transfer described in clauses (5) or (7), any required filings made under Section 16 of the Exchange Act shall state that the transfer is by operation of law, court order, in connection with a divorce settlement, a repurchase by the Company or the exercise of the Company's right of first refusal, as the case may be, and no other public announcement shall be required or voluntarily made, and (D) in the case of any transfer described in clauses (1) or (4) such transfer shall not involve a disposition for value. For purposes of this paragraph, "immediate family" shall mean a spouse or domestic partner, child, grandchild or other lineal descendant (including by adoption), father, mother, brother or sister of the undersigned; and "affiliate" shall have the meaning set forth in Rule 405 under the Securities Act. For the purposes of clause (10), "change of control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons (other than an Underwriter pursuant to the Offering), of the Company's voting securities if, after such transfer such person or group of affiliated persons, other than the Company or its subsidiaries, becomes the beneficial owner (as defined in Rules 13d-3 and 13d-5 of the Exchange Act) of 90% or more of the outstanding voting securities of the Company (or the surviving entity).

For avoidance of doubt, nothing in this Agreement prohibits the receipt by the undersigned of shares of Common Stock upon the exercise or settlement of any options, restricted stock units, warrants or other rights (which exercises may be effected on a cashless or net exercise basis to the extent permitted by the instruments representing such security to cover the exercise price or taxes due upon the exercise or vesting of such security), it being understood that any Common Stock issued upon such exercises or settlement will be subject to the restrictions of this Agreement.

In order to enable this covenant to be enforced, the undersigned hereby consents to the placing of legends or stop transfer instructions with the Company's transfer agent with respect to any Common Stock or securities convertible into or exercisable or exchangeable for Common Stock except in compliance with the foregoing restrictions.

The undersigned further agrees that, without the prior written consent of Cowen and Piper on behalf of the Underwriters, it will not, during the Lock-Up Period (as the same may be extended as described above), make any demand or request for or exercise any right with respect to the registration under the Securities Act, of any shares of Common Stock or other Beneficially Owned Shares or any securities convertible into or exercisable or exchangeable for Common Stock or other Beneficially Owned Shares. For the avoidance of doubt, the undersigned hereby waives any and all notice requirements and rights with respect to the registration of any securities pursuant to any agreement, instrument, understanding or otherwise setting forth the terms of any security of the Company held by the undersigned, including any stockholders or registration rights agreement or similar agreement, to which the undersigned is a party or under which the undersigned is entitled to any right or benefit; provided, however, that such waiver shall apply only to the proposed Offering, and any other action taken by the Company in connection with the proposed Offering.

This Agreement and all authority herein conferred are irrevocable and shall survive the death or incapacity of the undersigned and shall be binding upon the heirs, personal representatives, successors and assigns of the undersigned.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Agreement and that this Agreement has been duly authorized (if the undersigned is not a natural person), executed and delivered by the undersigned and is a valid and binding agreement of the undersigned.

This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state.

If (i) the Company notifies Cowen and Piper in writing that it does not intend to proceed with the Offering, (ii) the Company files an application with the Securities and Exchange Commission to withdraw the registration statement related to the Offering, (iii) the Underwriting Agreement is not executed by December 31, 2018 (provided, however, that the Company may extend such date by up to three months with written notice to the undersigned prior thereto if the Company is still pursuing the Offering contemplated by the Underwriting Agreement), or (vi) the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated for any reason prior to payment for and delivery of any Common Stock to be sold thereunder, then this Agreement shall immediately be terminated and the undersigned shall automatically be released from all of his or her obligations under this Agreement. The undersigned acknowledges and agrees that whether or not any public offering of Common Stock actually occurs depends on a number of factors, including market conditions.

The undersigned hereby consents to receipt of this Agreement in electronic form and understands and agrees that this Agreement may be signed electronically. In the event that any signature is delivered by facsimile transmission, electronic mail, or otherwise by electronic transmission evidencing an intent to sign this Agreement, such facsimile transmission, electronic mail or other electronic transmission shall create a valid and binding obligation of the undersigned with the same force and effect as if such signature were an original. Execution and delivery of this Agreement by facsimile transmission, electronic mail or other electronic transmission is legal, valid and binding for all purposes.

[Signature page follows]

Very truly yours,

_____

Name of Security Holder *(Print exact name*)

By: _____

Signature

If not signing in an individual capacity:

_____

Name of Authorized Signatory *(Print*)

_____

Title of Authorized Signatory *(Print*)

(indicate capacity of person signing if signing as custodian, trustee, or on behalf of an entity)

[Signature page to Lockup Agreement]

Exhibit II

Sutro Biopharma, Inc.

[Date]

Sutro Biopharma, Inc. announced today that Cowen and Company, LLC and Piper Jaffray & Co., the lead book-running managers in the Company's recent public sale of [•] shares of common stock, are [waiving][releasing] a lock-up restriction with respect to [•] shares of the Company's common stock held by [certain officers or directors][an officer or director] of the Company. The [waiver][release] will take effect on , 20 , and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or exemption from registration under the United States Securities Act of 1933, as amended.

EXHIBIT 3.1

EIGHTH AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF SUTRO BIOPHARMA, INC.

Sutro Biopharma, Inc., a corporation organized and existing under the laws of the State of Delaware, hereby certifies as follows:

A. The name of the corporation is Sutro Biopharma, Inc. The original Certificate of Incorporation of the corporation was filed with the Secretary of State of the State of Delaware on April 21, 2003 under the name Fundamental Applied Biology, Inc.

B. This Eighth Amended and Restated Certificate of Incorporation has been duly adopted in accordance with the provisions of the General Corporation Law of the State of Delaware by the Board of Directors and the stockholders of the corporation.

C. Pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware (the "DGCL"), this Eighth Amended and Restated Certificate of Incorporation restates and integrates and further amends the provisions of the Seventh Amended and Restated Certificate of Incorporation of this corporation.

D. The text of the Seventh Amended and Restated Certificate of Incorporation is hereby amended and restated in its entirety to read as follows:

ARTICLE I.

The name of the corporation is Sutro Biopharma, Inc. (the "Company").

ARTICLE II.

The address of the Company's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle County, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III.

The purpose of the Company is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

ARTICLE IV.

Effective immediately upon the filing of this Eighth Amended and Restated Certificate of Incorporation (this "Certificate of Incorporation") with the Secretary of State of Delaware (the "Effective Time"), each share of the Series E Preferred Stock of the Company (the "Series E Preferred Stock") issued and outstanding immediately prior to the Effective Time will be reclassified as and changed into 1.1940912491 shares of Series E Preferred Stock. This reclassification of the shares of Series E Preferred Stock issued and outstanding prior to the

Effective Time (collectively, "***Old Stock***") shall be referred to collectively as the "***Stock Split***." The Stock Split shall occur without any further action on the part of the Company or the holders of Series E Preferred Stock issued and outstanding following the Effective Time (collectively, "***New Stock***") and whether or not certificates representing such holders' shares prior to the Stock Split are surrendered for cancellation. All certificates dated as of a date prior to the Effective Time representing outstanding shares of Old Stock shall, after the Effective Time, represent the same number of shares of New Stock as is reflected on the face of such certificates, multiplied by 1.1940912491 with respect to shares of Series E Preferred Stock, rounded down to the nearest whole number. The Company shall not be obliged to issue new certificates evidencing the shares of New Stock outstanding as a result of the Stock Split unless and until the certificates evidencing the shares held by a holder prior to the Stock Split are either delivered to the Company or its transfer agent, or the holder notifies the Company or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Company to indemnify the Company from any loss incurred by it in connection with such certificates. No fractional interest in a share of New Stock shall be deliverable upon the Stock Split. All references to "Series E Preferred Stock" in this Certificate of Incorporation shall be to the New Stock. No further adjustment of any Conversion Price, preference, price or right set forth in this Certificate of Incorporation shall be made as a result of the Stock Split, as all share amounts, amounts per share and per share numbers set forth below in this Certificate of Incorporation have been appropriately adjusted to reflect the Stock Split.

The Company is authorized to issue two classes of stock, designated "Common Stock" and "Preferred Stock," respectively. The total number of shares which the Company is authorized to issue is 1,316,070,991 shares, $0.001 par value. The number of shares of Common Stock which the Company is authorized to issue is 818,000,000 shares, and the number of shares of Preferred Stock which the Company is authorized to issue is 498,070,991 shares, of which 3,503,692 shares shall be designated "Series A Preferred," 24,515,966 shares shall be designated "Series B Preferred," 78,582,049 shares shall be designated "Series C Preferred," 8,338,892 shares shall be designated "Series C-2 Preferred," 43,362,233 shares shall be designated "Series D Preferred," 18,779,561 shares shall be designated "Series D-2 Preferred" and 320,988,598 shares shall be designated "Series E Preferred." The Series A Preferred, Series B Preferred, Series C Preferred, Series C-2 Preferred, Series D Preferred and Series D-2 Preferred are hereinafter referred to collectively as the "Junior Preferred."

ARTICLE V.

The relative rights, preferences, privileges, and restrictions granted to or imposed on the respective classes of the shares of capital stock or the holders thereof are as follows:

1. Dividends.

(a) The holders of Series E Preferred shall be entitled to receive, when, as and if declared by the Board of Directors, dividends out of funds legally available therefor, prior and in preference to any declaration or payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock of the Company) on the Common Stock of the Company or on the Junior Preferred, at the per annum rate of $0.0214 per share of

Series E Preferred (as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events). Such dividends shall not be cumulative, and no right to such dividends shall accrue to holders of the Series E Preferred unless declared by the Board of Directors. Any declared dividends by the Board of Directors shall be declared and calculated based on the original issuance date of each share of Series E Preferred and the per annum dividend rate for such share of Preferred Stock set forth in the prior sentence. No dividends or other distributions shall be made with respect to the Common Stock or the Junior Preferred, other than dividends payable solely in Common Stock, unless at the same time an equivalent dividend with respect to the Series E Preferred has been paid or set apart for payment.

(b) The holders of the Junior Preferred shall be entitled to receive, when, as and if declared by the Board of Directors, dividends out of funds legally available therefor, prior and in preference to any declaration or payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock of the Company) on the Common Stock of the Company (but subject to the senior dividend preference of the Series E Preferred), at the per annum rate of $0.0472 per share of Series A Preferred, $0.07056 per share of Series B Preferred, $0.03838 per share of Series C Preferred, $0.048 per share of Series C-2 Preferred, $0.048 per share of Series D Preferred and $0.0528 per share of Series D-2 Preferred (each, as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events). Such dividends shall not be cumulative, and no right to such dividends shall accrue to holders of the Junior Preferred unless declared by the Board of Directors. Any declared dividends by the Board of Directors shall be declared and calculated based on the original issuance date of each share of Junior Preferred and the respective per annum dividend rate for such share of Junior Preferred. No dividends or other distributions shall be made with respect to the Common Stock, other than dividends payable solely in Common Stock, unless at the same time an equivalent dividend with respect to the Junior Preferred Stock has been paid or set apart for payment. Payment of any dividends to the holders of Junior Preferred shall be on a *pro rata, pari passu* basis in proportion to the dividend rates set forth above for each series of Junior Preferred.

(c) After the payment or setting aside for payment of the dividends described in Section 1(a) and Section 1(b), any additional dividends (other than dividends on Common Stock payable solely in Common Stock) set aside or paid in any fiscal year shall be set aside or paid among the holders of the Preferred Stock and Common Stock then outstanding in proportion to the greatest whole number of shares of Common Stock which would be held by each such holder if all shares of Preferred Stock had been converted to Common Stock pursuant to the terms of this Certificate of Incorporation immediately prior to such event.

2. Liquidation Preference. In the event of any liquidation, dissolution, or winding up of the Company (a "Liquidation"), either voluntary or involuntary, distributions to the stockholders of the Company shall be made in the following manner:

(a) (i) The holders of the Series E Preferred shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Company to the holders of the Junior Preferred or the Common Stock by reason of their ownership of such stock, an amount per share equal to the Original Issue Price (as defined below) of the Series E Preferred and all declared but unpaid dividends (if any) on such share of Series E Preferred. If

the assets and funds thus distributed among the holders of the Series E Preferred shall be insufficient to permit the payment to such holders of the full aforesaid preferential amount, then the entire assets and funds of the Company legally available for distribution shall be distributed pro rata among the holders of the Series E Preferred in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 2(a)(i). For purposes of this Certificate of Incorporation, the "Original Issue Price" of a series of Preferred Stock shall mean the following (in each case, as adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events):

Series	Original Issue Price
Series A Preferred	$ 0.59
Series B Preferred	$ 0.8822
Series C Preferred	$ 0.4797
Series C-2 Preferred	$ 0.5996
Series D Preferred	$ 0.5996
Series D-2 Preferred	$ 0.6596
Series E Preferred	$ 0.2674

(ii) After giving effect to the provisions of Section 2(a)(i), the holders of the Junior Preferred shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Company to the holders of the Common Stock by reason of their ownership of such stock, an amount per share equal to the Original Issue Price specified for such share of Junior Preferred and all declared but unpaid dividends (if any) on such share of Junior Preferred. If the assets and funds thus distributed among the holders of the Junior Preferred shall be insufficient to permit the payment to such holders of the full aforesaid preferential amount, then the entire assets and funds of the Company legally available for distribution shall be distributed pro rata among the holders of the Junior Preferred in proportion to the full amounts they would otherwise be entitled to receive pursuant to this Section 2(a)(ii).

(iii) After giving effect to the provisions of Section 2(a)(i) and Section 2(a)(ii), all of the assets of the Company shall be distributed to the holders of Preferred Stock and Common Stock *pro rata* based on the number of shares of Common Stock held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of this Certificate of Incorporation immediately prior to such Liquidation; provided, however, that if the aggregate amount which the holders of Preferred Stock are entitled to receive under Sections 2(a)(i)-(iii) exceeds two times the applicable Original Issue Price per share for such series of Preferred Stock plus any dividends declared pursuant to Section 1(a)-(c) but unpaid thereon (the "Maximum Participation Amount"), each holder of Preferred Stock shall be entitled to receive upon such Liquidation the greater of (i) the Maximum Participation Amount and (ii) the amount such holder would have received if all shares of such series of Preferred Stock had been converted into Common Stock immediately prior to such

Liquidation. The aggregate amount which a holder of a share of Preferred Stock is entitled to receive under Section 2(a) is hereinafter referred to as the "Liquidation Amount."

(iv) In the event of a Liquidation pursuant to this Section 2, if any portion of the consideration payable to the stockholders of the Company is payable to the stockholders of the Company subject to contingencies (such consideration collectively referred to herein as "Contingent Consideration"), the governing transaction agreement shall provide that (a) the portion of such consideration that is not subject to any contingencies (the "Initial Consideration") shall be allocated among the holders of capital stock of the Company in accordance withSections 2(a)(i)-(iii) as if the Initial Consideration were the only consideration payable in connection with such Liquidation and (b) any additional consideration which becomes payable to the stockholders of the Company upon satisfaction of contingencies shall be allocated among the holders of capital stock of the Company in accordance with Sections 2(a)(i)-(iii) after taking into account (x) the previous payment of (1) the Initial Consideration and (2) any other Contingent Consideration as part of the same transaction and (y) the application of Section 2(a)(iii). For the purposes of the application of Section 2(a)(iii), the value of the Initial Consideration and any Contingent Consideration shall be determined at the time such Initial Consideration or Contingent Consideration, as applicable, are to be legally distributed to the Company's stockholders as a result of a Liquidation.

(b) For purposes of this Section 2, unless the Preferred Majority (as defined below) and the Requisite Series E Majority (as defined below) elect otherwise, any of the following shall be treated as a Liquidation (each, a "Deemed Liquidation"): (i) any consolidation, merger or acquisition in which the Company is a constituent party (but excluding any merger effected solely for the purpose of reincorporating into another state), or any other corporate reorganization (including, without limitation, any consolidation, merger or acquisition in which a subsidiary of the Company is a constituent party and the Company issues shares of its capital stock pursuant to such merger, consolidation or acquisition), in which, in each case, the stockholders of the Company immediately prior to such consolidation, merger, acquisition or reorganization, own less than 50% of the voting power of the surviving or successor entity or its parent immediately after such consolidation, merger, acquisition or reorganization; (ii) any transaction or series of related transactions to which the Company is a party in which in excess of 50% of the Company's voting power is transferred, excluding any consolidation or merger effected solely for the purpose of reincorporating into another state; or (iii) any sale, lease, transfer, exclusive license or other disposition by the Company or any subsidiary or subsidiaries of the Company of all or substantially all of the assets of the Company and its subsidiaries taken as a whole (or, if substantially all of the assets of the Company and its subsidiaries taken as a whole are held by one or more subsidiaries, the sale or disposition (whether by consolidation, merger, conversion or otherwise) of such subsidiaries of the Company or all or substantially all of the assets of such subsidiaries), except where such sale, lease, transfer, exclusive license or other disposition is made to the Company or one or more wholly owned subsidiaries of the Company. Notwithstanding the foregoing, neither (i) the sale and issuance of Series E Preferred pursuant to the Amended and Restated Series E Preferred Stock Purchase Agreement (as may be amended or modified from time to time) dated on or about the date of filing of this Certificate of Incorporation, nor (ii) the transfer by any stockholder of shares of the Company's capital stock to any third party in a transaction or series of related transactions to which the Company is not a party, shall be a Deemed Liquidation for purposes of this Section 2.

For purposes of this Certificate of Incorporation, (i) the term "Preferred Majority" shall mean the holders of a majority of the then-outstanding shares of Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, and (ii) the term "Requisite Series E Majority" shall mean the holders of at least 70% of the then-outstanding shares of Series E Preferred, voting as a separate class.

(c) Any securities to be delivered pursuant to Section 2(a) above shall be valued as follows:

(i) securities not subject to investment letter or other similar restrictions on free marketability:

(A) if traded on a nationally recognized securities exchange, the value shall be deemed to be the average of the closing prices of the securities on such exchange over the 30-day period ending three days prior to the closing;

(B) if actively traded over-the-counter or through an automated dealer quotation system, the value shall be deemed to be the average of the closing bid or sale prices (whichever are applicable) over the 30 day period ending three days prior to the closing; and

(C) if there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Board of Directors.

(ii) The method of valuation of securities subject to investment letter or other restrictions on free marketability shall be to make an appropriate discount from the market value determined as above in subparagraphs 2(c)(i)(A), (B), or (C) to reflect the approximate fair market value thereof, as determined in good faith by the Board of Directors.

(d) In accordance with Section 500 of the California Corporations Code, a distribution can be made without regard to any preferential dividends arrears amount (as defined in Section 500 of the California Corporations Code) or any preferential rights amount (as defined in Section 500 of the California Corporations Code) in connection with (i) repurchases of Common Stock issued to or held by employees, officers, directors or consultants of the Company or its subsidiaries upon termination of their employment or services pursuant to agreements providing for the right of said repurchase, or (ii) repurchases of Common Stock issued to or held by employees, officers, directors or consultants of the Company or its subsidiaries pursuant to rights of first refusal contained in agreements providing for such right, in each case as approved by the Board of Directors.

3. Redemption.

(a) At the election of the Preferred Majority anytime following May 24, 2023, the Company shall redeem, out of funds legally available therefor, all (but not less than all) outstanding shares of Preferred Stock which have not been converted into Common Stock, in three equal annual installments (each a "Redemption Date") commencing no earlier than four months and no later than six months after the date on which the Preferred Majority notify the Company in writing of their election to redeem the Preferred Stock hereunder. The Company

shall redeem the shares of Preferred Stock by paying in cash an amount per share equal to the applicable Original Issue Price for such series of Preferred Stock, plus 8% per annum of the applicable Original Issue Price calculated from the original issue date of each redeemed share of Preferred Stock (the "Redemption Price"). The number of shares of Preferred Stock that the Company shall be required under this Section 3 to redeem on any one Redemption Date shall be equal to the amount determined by dividing: (a) the aggregate number of shares of Preferred Stock outstanding immediately prior to the Redemption Date by (b) the number of remaining Redemption Dates (including the Redemption Date to which such calculation applies). If the funds legally available for redemption of the Preferred Stock shall be insufficient to permit the payment to such holders of the full respective Redemption Prices, the Company shall effect such redemption (i) first, to the holders of Series E Preferred, until the Redemption Price for the Series E Preferred has been paid in full and (ii) second (and only after the Redemption Price for the Series E Preferred has been paid in full) to the holders of Junior Preferred, *pro rata* among such holders so that each such holder shall receive a redemption payment equal to a fraction of the aggregate amount available for redemption, (x) the numerator of which is the number of shares of Junior Preferred held by such holder, with each share of Junior Preferred multiplied by the applicable Redemption Price of such share, and (y) the denominator of which is the number of shares of Junior Preferred outstanding multiplied by the Redemption Price of each such outstanding share of Junior Preferred.

(b) At least 15, but no more than 30 days prior to each Redemption Date, written notice shall be mailed by the Company, first class postage prepaid, to each holder of record (at the close of business on the business day next preceding the day on which notice is given) of the Preferred Stock to be redeemed, at the address last shown on the records of the Company for such holder, notifying such holder of the redemption to be effected, specifying the number of shares to be redeemed from such holder, the Redemption Date, the Redemption Price, the place at which payment may be obtained and calling upon such holder to surrender to the Company, in the manner and at the place designated, the holder's certificate or certificates representing the shares to be redeemed (the "Redemption Notice"). Except as provided herein, on or after the Redemption Date each holder of Preferred Stock to be redeemed shall surrender to this Company the certificate or certificates representing such shares, in the manner and at the place designated in the Redemption Notice, or such holder may notify the Company that such certificates have been lost, stolen, or destroyed and execute an agreement satisfactory to the Company to indemnify the Company from any loss incurred by it in connection with such certificates, and thereupon the Redemption Price of such shares shall be payable to the order of the person whose name appears on such certificate or certificates, or such agreement and indemnification in the case of a lost certificate, as the owner thereof and each surrendered certificate shall be cancelled. In the event less than all the shares represented by any such certificate are redeemed, a new certificate shall be issued representing the unredeemed shares.

(c) From and after the applicable Redemption Date, unless there shall have been a default in payment of the Redemption Price, all rights of the holders of shares of Preferred Stock designated for redemption in the Redemption Notice as holders of Preferred Stock (except the right to receive the Redemption Price without interest upon surrender of their certificate or certificates) shall cease with respect to the shares designated for redemption on such date, and such shares shall not thereafter be transferred on the books of the Company or be deemed to be outstanding for any purpose whatsoever. If the funds of the Company legally available for

redemption of shares of Preferred Stock on any Redemption Date are insufficient to redeem the total number of shares of Preferred Stock to be redeemed on such date, those funds which are legally available will be used to redeem the maximum possible number of such shares ratably among the holders of such shares to be redeemed based upon their holdings of Preferred Stock. The shares of Preferred Stock not redeemed shall remain outstanding and entitled to all the rights and preferences provided herein. At any time thereafter when additional funds of the Company are legally available for the redemption of shares of Preferred Stock such funds will immediately be used to redeem the balance of the shares which the Company has become obliged to redeem on any Redemption Date, but which it has not redeemed, in each case according to the priority set forth in the last sentence of Section 3(a).

(d) On or prior to each Redemption Date, the Company may deposit the Redemption Price of all shares of Preferred Stock designated for redemption in the Redemption Notice and not yet redeemed with a bank or trust corporation having aggregate capital and surplus in excess of $100,000,000, as a trust fund for the benefit of the respective holders of the shares designated for redemption and not yet redeemed, with irrevocable instructions and authority to the bank or trust corporation to pay the Redemption Price for such shares to their respective holders on or after the Redemption Date upon receipt of notification from the Company that such holder has surrendered a share certificate, or an agreement and indemnification in the case of a lost certificate, to the Company pursuant to Section 3(c). As of the Redemption Date, the deposit shall constitute full payment of the shares to their holders, and from and after the Redemption Date the shares so called for redemption shall be redeemed and shall be deemed to be no longer outstanding, and the holders thereof shall cease to be stockholders with respect to such shares and shall have no rights with respect thereto except the right to receive from the bank or trust corporation payment of the Redemption Price of the shares, without interest, upon surrender of their certificates therefor. Such instructions shall also provide that any moneys deposited by the Company pursuant to this Section 3(d) for the redemption of shares thereafter converted into shares of the Company's Common Stock prior to the Redemption Date shall be returned to the Company forthwith upon such conversion. The balance of any moneys deposited by the Company pursuant to this Section 3(d) remaining unclaimed at the expiration of two years following the Redemption Date shall thereafter be returned to the Company upon its request expressed in a resolution of its Board of Directors.

4. Conversion. The holders of Preferred Stock shall have conversion rights as follows (the "Conversion Rights"):

(a) Right to Convert.

(i) Subject to Section 4(b) below, each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Company or any transfer agent for the Preferred Stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price for such series of Preferred Stock by the Conversion Price (as defined below) for such series of Preferred Stock in effect at the time of conversion (such quotient, the "***Conversion Rate***" of such series of Preferred Stock). The "***Conversion Price***" of each series of Preferred Stock shall initially mean the following amounts, subject to further adjustment as hereinafter provided:

Series	Conversion Price
Series A Preferred	$ 0.3756
Series B Preferred	$ 0.4203
Series C Preferred	$ 0.3573
Series C-2 Preferred	$ 0.4081
Series D Preferred	$ 0.4081
Series D-2 Preferred	$ 0.4336
Series E Preferred	$ 0.2674

(b) Automatic Conversion. Each share of Preferred Stock shall automatically be converted into shares of Common Stock at the then-effective Conversion Rate for such series upon the date of the closing (the "Public Offering Closing Date") of a firm commitment underwritten public offering (the "Public Offering") pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale to the public of Common Stock for the account of the Company at a public offering price of not less than $0.4011 per share (as appropriately adjusted for stock splits, stock dividends or distributions, recapitalizations, and similar events) and resulting in at least $50,000,000 in cash proceeds to the Company, net of underwriting discounts and commissions (a "Qualified Public Offering"). In addition, (i) each share of Junior Preferred shall automatically be converted into shares of Common Stock at the then-effective Conversion Rate for such series upon the written election of the holders of a majority of the then-outstanding Junior Preferred, voting or consenting together as a single class on an as-converted to Common Stock basis and (ii) each share of Series E Preferred shall automatically be converted into shares of Common Stock at the then-effective Conversion Rate for such series upon the written election of the Requisite Series E Majority.

(c) Mechanics of Conversion. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Company shall pay cash equal to such fraction multiplied by the then-effective Conversion Price for the applicable series of Preferred Stock. If a single holder shall surrender more than one share of Preferred Stock for conversion at the same time, the number of full shares of Common Stock issuable by the Company upon conversion thereof shall be computed on the basis of the aggregate number of shares of Preferred Stock so surrendered. Before any holder of Preferred Stock shall be entitled to convert the same into full shares of Common Stock and to receive certificates therefor, such holder shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Company or of any transfer agent for the Preferred Stock, or shall notify the Company or its transfer agent that such certificates have been lost, stolen, or destroyed and executes an agreement satisfactory to the Company to indemnify the Company from any loss incurred by it in connection with such certificates, and shall give written notice to the Company at such office that he elects to convert the same. The Company shall, as soon as practicable after such delivery, or such agreement and indemnification in the case of a lost certificate, issue and deliver at such office to such holder of

Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid, a check payable to the holder in the amount of any cash amounts payable as the result of a conversion into fractional shares of Common Stock and payment of any declared but unpaid dividends. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, or in the case of automatic conversion on the date of closing of the offering or the effective date of such written consent, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date. Notwithstanding the foregoing, in the event of an automatic conversion pursuant to Section 4(b) above, the outstanding shares of the applicable series of Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Company or its transfer agent, and provided further that the Company shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such automatic conversion unless the certificates evidencing such shares of Preferred Stock, or such agreement and indemnification in the case of a lost certificate, are delivered to the Company or its transfer agent as provided above.

(d) Adjustments for Diluting Issues.

(i) Special Definitions. For purposes of this Section 4(d), the following definitions shall apply:

(A) 'Options' shall mean rights, options or warrants to subscribe for, purchase, or otherwise acquire either Common Stock or Convertible Securities.

(B) 'Original Issue Date' shall mean the first date to occur on or after the date of filing of this Certificate of Incorporation on which the first share of Series E Preferred was issued.

(C) 'Convertible Securities' shall mean any equity securities (other than the Common Stock) convertible into or exchangeable for Common Stock.

(D) 'Additional Shares of Common Stock' shall mean all shares of Common Stock issued (or, pursuant to Section 4(d)(iii)(B), deemed to be issued) by the Company on or after the Original Issue Date, other than:

(1) shares of Common Stock actually issued at any time upon conversion of the shares of the Preferred Stock authorized herein or upon conversion of Convertible Securities (including Preferred Stock to be issued upon exercise of warrants exercisable for Preferred Stock);

(2) shares of Common Stock, Options or Convertible Securities issued at any time to any officer, director or employee of, or any consultant or strategic partner to, the Company pursuant to a plan, agreement or other arrangement approved by the Board of Directors;

(3) shares of Common Stock or Convertible Securities issued at any time in connection with a business combination approved by the Board of Directors and entered into primarily for a purpose other than for financing purposes, including combinations by merger or asset purchase or other reorganization approved by the Board of Directors and entered into primarily for a purpose other than for financing purposes, which, in each case, financing purposes include without limitation, providing the Company with access to another company's cash or financing opportunities to finance the Company's operations;

(4) shares of Common Stock, Options or Convertible Securities issued at any time in connection with debt financing transactions or equipment lease transactions or other similar transactions that are not primarily equity financing transactions with lenders, customers, vendors, lessors or other commercial or strategic partners, which transactions are approved by the Board of Directors;

(5) shares of Common Stock or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships, in each case which are not primarily equity financing transactions and which are approved by the Board of Directors;

(6) shares of Common Stock or Convertible Securities issued at any time as a dividend or distribution on the Preferred Stock, or any event for which adjustment is made pursuant to subparagraph (d)(iv),(v), (vi) or (ix) hereof;

(7) shares of Common Stock or Preferred Stock issued at any time in connection with a firm commitment public offering pursuant to a registration statement filed with the U.S. Securities and Exchange Commission;

(8) shares of Series E Preferred issued pursuant to that certain Amended and Restated Series E Preferred Stock Purchase Agreement dated on or about the date of filing of this Certificate of Incorporation, as the same may be amended from time to time; and

(9) shares of Common Stock or Convertible Securities issued at any time by way of dividend or other distribution on shares of Common Stock excluded from the definition of Additional Shares of Common Stock by the foregoing clauses (1), (2), (3), (4), (5), (6), (7), (8) or this clause (9), or on shares of Common Stock so excluded.

For the avoidance of doubt, the issuance and sale of shares of Preferred Stock by the Company in a preferred stock financing shall constitute an issuance of "Additional Shares of Common Stock" for purposes of this Section 4 except as otherwise set forth above.

(ii) Adjustment of Conversion Price upon Issuance of Additional Shares of Common Stock. In the event the Company shall at any time or from time to time on or after the Original Issue Date issue Additional Shares of Common Stock without consideration or for a consideration per share less than the Conversion Price of a series of Preferred Stock as in effect on the date of and immediately prior to such issue, then in such event, the Conversion Price of such series of Preferred Stock shall be reduced, concurrently with such issue, to a price (rounded to the nearest one hundredth of one cent) determined by multiplying such Conversion

Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of shares of Common Stock which the aggregate consideration received by the Company for the total number of Additional Shares of Common Stock so issued would purchase at the then-applicable Conversion Price for such series of Preferred Stock; and the denominator of which shall be the number of shares of Common Stock outstanding immediately prior to such issue plus the number of such Additional Shares of Common Stock so issued; provided that for the purposes of this Section 4(d)(ii), all shares of Common Stock issued or issuable upon conversion of the then outstanding Preferred Stock or other Convertible Securities, or upon exercise of then-outstanding Options, shall be deemed to be outstanding.

(iii) Determination of Consideration. For purposes of this Section 4(d), the consideration received by the Company for the issue of any Additional Shares of Common Stock shall be computed as follows:

(A) Cash and Property: Such consideration shall:

(1) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Company without any deduction for commissions and excluding amounts paid or payable for accrued interest or accrued dividends;

(2) insofar as it consists of property other than cash, be computed at the fair value thereof at the time of such issue, as determined in good faith by the Board of Directors; and

(3) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Company for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (1) and (2) above, as determined in good faith by the Board of Directors.

(B) Options and Convertible Securities. In the case of issuance of Options or Convertible Securities, the following provisions shall apply for all purposes of Section 4(d):

(1) The aggregate maximum number of shares of Common Stock deliverable upon exercise (assuming the satisfaction of any conditions to exercisability or convertibility or exchangeability, including, without limitation, the passage of time) of such Options shall be deemed to be Additional Shares of Common Stock issued at the time such Options were issued and for a consideration equal to the consideration (determined in the manner provided in subparagraph 4(d)(iii)(A)), if any, received by the Company upon the issuance of such Options plus the exercise price provided in such Options for the Common Stock covered thereby.

(2) The aggregate maximum number of shares of Common Stock deliverable upon conversion or in exchange for such Convertible Securities or upon the exercise or conversion (assuming the satisfaction of any conditions to exercisability or convertibility or exchangeability, including, without limitation, the passage of time) of any Options or Convertible Securities issued upon exercise or conversion of such Convertible

Securities shall be deemed to be Additional Shares of Common Stock issued at the time such securities were issued or such Options or Convertible Securities were issued and for a consideration equal to the consideration, if any, received by the Company for any such securities and related Options or Convertible Securities (excluding any cash received on account of accrued interest or accrued dividends), plus the additional consideration, if any, to be received by the Company upon the conversion or exchange of such securities or the exercise of any related Options or Convertible Securities (the consideration in each case to be determined in the manner provided in subparagraph 4(d)(iii)(A)).

(3) In the event of any change in the number of shares of Common Stock deliverable or in the consideration payable to this Company upon exercise or conversion of such Options or Convertible Securities, including, but not limited to, a change resulting from the antidilution provisions thereof, the Conversion Price of each series of Preferred Stock, to the extent in any way affected by or computed using such Options or Convertible Securities, shall be recomputed to reflect such change, but no further adjustment shall be made for the actual issuance of Common Stock or any payment of such consideration upon the exercise or conversion of such Options or Convertible Securities.

(4) Upon the expiration of any such Options or Convertible Securities, the Conversion Price of each series of Preferred Stock, to the extent in any way affected by or computed using such Options or Convertible Securities, shall be recomputed to reflect the issuance of only the number of shares of Common Stock (and Options and Convertible Securities which remain in effect) actually issued upon the conversion or exchange of such securities or upon the exercise of the Options (but without affecting shares of Common Stock already issued upon conversion of any shares of Preferred Stock already converted).

(5) The number of shares of Common Stock deemed issued and the consideration deemed paid therefor pursuant to subparagraphs 4(d)(iii)(B)(1) and (2) shall be appropriately adjusted to reflect any change, termination or expiration of the type described in either subparagraph 4(d)(iii)(B)(3) or (4).

(iv) Adjustments for Subdivisions or Combinations of or Stock Dividends on Common Stock In the event the outstanding shares of Common Stock shall be subdivided (by stock split or otherwise), into a greater number of shares of Common Stock, or the Company at any time or from time to time after the Original Issue Date shall declare or pay any dividend on the Common Stock payable in Common Stock, then the Conversion Rate of each series of Preferred Stock as then in effect shall, concurrently with the effectiveness of such subdivision or stock dividend, be proportionately increased based on the ratio of (A) the number of shares of Common Stock outstanding immediately after such subdivision or stock dividend to (B) the number of shares of Common Stock outstanding immediately prior to such subdivision or stock dividend. In the event the outstanding shares of Common Stock shall be combined or consolidated, by reclassification or otherwise, into a lesser number of shares of Common Stock, then the Conversion Rate of each series of Preferred Stock as then in effect shall, concurrently with the effectiveness of such combination or consolidation, be proportionately decreased on the same basis.

(v) Adjustments for Other Distributions. In the event the Company at any time or from time to time makes, or fixes a record date for the determination of holders of Common Stock entitled to receive, any distribution payable in (A) securities of the Company or other entities (other than shares of Common Stock and other than as otherwise adjusted in this Section 4 or as otherwise provided in Section 1), (B) evidences of indebtedness issued by the Company or other persons, or (C) assets (excluding cash dividends) or options or rights not referred to in subparagraph 4(d)(iii)(B), then, and in each such event, provision shall be made so that the holders of Preferred Stock shall receive upon conversion thereof, in addition to the number of shares of Common Stock receivable thereupon, the amount of such distribution which they would have received had their shares of Preferred Stock been converted into Common Stock on the date of such event at the then-applicable Conversion Rate and had they thereafter, during the period from the date of such event to and including the date of conversion, retained such securities receivable by them as aforesaid during such period, subject to all other adjustments called for during such period under this Section 4 with respect to the rights of the holders of the Preferred Stock.

(vi) Adjustments for Recapitalization, Reclassification, Exchange and Substitution. If at any time or from time to time the Common Stock issuable upon conversion of the Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock, whether by recapitalization, capital reorganization, reclassification or otherwise (other than a subdivision, combination of shares or merger or sale of assets transaction provided for above or in Section 2(b)), then the Conversion Rate of each series of Preferred Stock as then in effect shall, concurrently with the effectiveness of such recapitalization, reorganization or reclassification, be proportionately adjusted such that each series of Preferred Stock shall be convertible into, in lieu of the number of shares of Common Stock which the holders thereof would otherwise have been entitled to receive, a number of shares of such other class or classes of stock equivalent to the number of shares of Common Stock that would have been subject to receipt by the holders upon conversion of such series of Preferred Stock immediately before that change. In addition, to the extent applicable in any reorganization or recapitalization, provision shall be made so that the holders of Preferred Stock shall thereafter be entitled to receive upon conversion of the Preferred Stock the number of shares of stock or other securities or property of the Company or otherwise, to which a holder of Common Stock deliverable upon conversion would have been entitled on such reorganization or recapitalization.

(vii) No Adjustment of Conversion Price. No adjustment of the Conversion Price of the Series A Preferred shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Company receives written notice from the holders of at least a majority of the then outstanding shares of Series A Preferred agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment to the Conversion Price of the Series C Preferred or the Series C-2 Preferred shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock without consideration or for a consideration per share less than then-applicable Conversion Price if the Company receives written notice from the holders of at least two-thirds of the then outstanding shares of Series C Preferred and Series C-2 Preferred, voting together as a single class on an as-converted to Common Stock basis, agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment of the Conversion Price of the Series E

Preferred shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Company receives written notice from the Requisite Series E Majority agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment of the Conversion Price of any series of Preferred Stock other than the Series A Preferred, the Series C Preferred, the Series C-2 Preferred and the Series E Preferred shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Company receives written notice from the holders of at least two-thirds of the then outstanding shares of such series of Preferred Stock agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

(viii) In the event of a Financing Acquisition Transaction, pursuant to which the Company's stockholders are to receive securities of another company (the "Issuing Company") and the Effective Consideration Per Share is less than the Conversion Price of the Series C Preferred, Series C-2 Preferred, Series D Preferred, Series D-2 Preferred or Series E Preferred, as applicable, in effect immediately prior to the consummation of the Financing Acquisition Transaction (the "Closing"), then the Conversion Price of such series in effect immediately prior to the Closing shall be adjusted in a manner consistent with subparagraph (4)(d)(ii); provided that (i) the number of shares of "Additional Shares of Common Stock" issued shall be deemed to be equal to the number of the Issuing Company's Merger Shares, (ii) the aggregate consideration per share received by the Company shall be deemed to be equal to the Effective Consideration Per Share and (iii) the number of shares of "Common Stock outstanding" as used in subparagraph (4)(d)(ii) shall be deemed to be equal to the number of Consideration Merger Shares, with appropriate corresponding adjustments to the Original Issue Price and the Conversion Price of such series of Preferred Stock (including, without limitation, for purposes of determining (x) if the Effective Consideration Per Share is less than the Conversion Price of the applicable series of Preferred Stock and (y) the resulting Conversion Rate of the applicable series of Preferred Stock). For purposes of this subsection (viii):

(A) "Combined Entity" shall mean the company issuing shares to the former stakeholders (including, without limitation, stockholders and other equityholders) of the Company pursuant to the Financing Acquisition Transaction.

(B) "Consideration Merger Shares" shall mean all Outstanding Stock (as defined below) of the Combined Entity to be issued to all former stakeholders (including, without limitation, stockholders and other equityholders) of the Company, as of immediately prior to the Closing, upon the Closing as a result of their holdings in the Company immediately prior to the Closing.

(C) "Effective Consideration Per Share" shall mean the fair market value of all Outstanding Stock (as defined below) of the Issuing Company (calculated immediately prior to the Financing Acquisition Transaction), which shall be determined in a manner consistent with subsection 2(c), divided by the number of Issuing Company's Merger Shares.

(D) "Financing Acquisition Transaction" means a bona fide business acquisition of or by the Company, whether by merger, consolidation, sale of assets, sale

or exchange of stock or otherwise, which does not constitute a Liquidation or Deemed Liquidation and is entered into primarily for the purpose of financing the Company, which financing purposes include without limitation, providing the Company with access to the Issuing Company's cash or financing opportunities.

(E) "Issuing Company's Merger Shares" shall mean all Outstanding Stock of the Combined Entity to be held by all former stakeholders (including, without limitation, stockholders and other equityholders) of the Issuing Company, as of immediately prior to the Closing, upon the Closing as a result of their holdings in the Issuing Company immediately prior to the Closing.

(F) "Outstanding Stock" shall mean and include the following: (1) outstanding Common Stock, (2) Common Stock issuable upon conversion of outstanding Preferred Stock, (3) Common Stock issuable upon exercise of outstanding stock options and other rights to purchase shares of capital stock and (4) Common Stock issuable upon exercise (and, in the case of warrants to purchase Preferred Stock, conversion) of outstanding warrants. Shares described in (1) through (4) above shall be included whether vested or unvested, whether contingent or non-contingent and whether exercisable or not yet exercisable.

(ix) Adjustment upon a Triggering Event. Upon the occurrence of a Triggering Event, the Conversion Price of the Series E Preferred shall (unless waived by the Requisite Series E Majority pursuant to written notice delivered to the Company on or before February 15, 2019) automatically be reduced to the price obtained by dividing (a) the Conversion Price of the Series E Preferred as in effect immediately prior to the Triggering Event by (b) 1.25, rounded to the nearest one hundredth of one cent. For the avoidance of doubt, in the event no Triggering Event occurs, this subsection (ix) shall lapse and no adjustment to the Conversion Price of the Series E Preferred shall be made pursuant to this subsection (ix). For purposes of this subsection (ix):

(A) "Approved IPO" means (a) a Qualified Public Offering or (b) an initial public offering of the Company's Common Stock that is approved by the Requisite Series E Majority; and

(B) "Triggering Event" means the failure of the Company to close an Approved IPO on or before February 15, 2019.

(e) No Impairment. Except as provided in Section 5, the Company will not, by amendment of its Certificate of Incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Company, but will at all times in good faith assist in the carrying out of all the provisions of this Section 4 and in the taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders of the Preferred Stock.

(f) Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Conversion Price or the Conversion Rate of a series of Preferred Stock pursuant to this Section 4, the Company at its expense shall promptly compute such adjustment

or readjustment in accordance with the terms hereof and furnish to each holder of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Company shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustments and readjustments, (ii) the respective Conversion Price and Conversion Rate of each series of Preferred Stock at the time in effect, and (iii) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of each series of Preferred Stock.

(g) Reservation of Stock Issuable Upon Conversion. The Company shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock solely for the purpose of effecting the conversion of the shares of the Preferred Stock such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, in addition to such other remedies as shall be available to the holder of such Preferred Stock, the Company will take such corporate action as may, in the opinion of counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes.

(h) Notices of Record Date. In the event that the Company shall propose at any time:

(i) to declare any dividend or distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not a regular cash dividend and whether or not out of earnings or earned surplus;

(ii) to offer for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights;

(iii) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or

(iv) to merge or consolidate with or into any other corporation, or sell, lease or convey all or substantially all its property or business, or to liquidate, dissolve or wind up; then, in connection with each such event, the Company shall send to the holders of the Preferred Stock:

(A) in the case of the matters referred to in (i) and (ii) above, at least 10 days' prior written notice of the date on which a record shall be taken for such dividend, distribution or subscription rights (and specifying the date on which the holders of Common Stock shall be entitled thereto and the amount and character of such dividend, distribution or right); and

(B) in the case of the matters referred to in (iii) and (iv) above, at least 10 days' prior written notice of the date when the same shall take place (and specifying the date on which the holders of Common Stock shall be entitled to exchange their Common

Stock for securities or other property deliverable upon the occurrence of such event or the record date for the determination of such holders if such record date is earlier).

Any notice required by the provisions of this Section 4(h) shall be in writing and shall be deemed effectively given: (i) upon personal delivery to the party to be notified; (ii) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient (if not sent during normal business hours, then on the next business day); (iii) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All notices shall be addressed to each holder of record at the address of such holder appearing on the books of the Company. Any notice required by the provisions of this Section 4(h) may be shortened or waived prospectively or retrospectively, with respect to any series of Preferred Stock other than the Series E Preferred, by the vote or written consent of the Preferred Majority, and with respect to the Series E Preferred, by the vote or written consent of the Requisite Series E Majority.

5. Covenants.

(a) In addition to any other rights provided by law (including the rights of holders of each series of Preferred Stock under §242 of the DGCL), so long as not less than an aggregate of 10,000,000 shares of Preferred Stock (subject to adjustment for stock splits, stock dividends or distributions, recapitalizations and similar events) shall be outstanding, the Company shall not, directly or indirectly, whether by amendment, merger, recapitalization or otherwise, without first obtaining the affirmative vote or written consent of the Preferred Majority:

(i) amend, waive, alter or repeal any provision of, or add any provision to, the Company's Certificate of Incorporation or Bylaws in any manner, including if such action would (A) adversely alter or change the preferences, rights, privileges, or powers of, or the restrictions provided for the benefit of, any of the Preferred Stock in a manner different from other classes of stock; (B) increase or decrease the authorized number of shares of Common Stock or Preferred Stock; or (C) authorize, create or reclassify any class or series of stock (or any security convertible into or exercisable for any class or series of stock) having any rights, preferences, privileges or voting powers senior to or on parity with any series of Preferred Stock;

(ii) authorize or consummate a Liquidation, Deemed Liquidation or any consolidation, merger, or acquisition by the Company with, into, or of any other corporation or other entity or person;

(iii) increase or decrease the authorized size of the Company's Board of Directors;

(iv) pay or declare any dividend or other distribution on any shares of Common Stock or Preferred Stock;

(v) redeem or repurchase any shares of Common Stock, except (i) as expressly permitted herein; (ii) as a result of the Company's exercising its right of first refusal on

stockholder transfers as set forth in any agreement between the Company and any holder of its outstanding capital stock; and (iii) from employees or consultants of the Company upon termination of employment or association pursuant to the terms of restrictive stock purchase agreements providing for the repurchase of such shares at the lower of fair market value or cost entered into with such employees or consultants, in each case as approved by the Board of Directors; or

(vi) create any subsidiary, dispose of any subsidiary or dispose of any material assets of any subsidiary outside of the ordinary course of business.

(b) In addition to any other rights provided by law, so long as not less than an aggregate of 10,000,000 shares of Preferred Stock (subject to adjustment for stock splits, stock dividends or distributions, recapitalizations and similar events) shall be outstanding, the Company shall not, directly or indirectly, whether by merger or otherwise, without first obtaining the affirmative vote or written consent of the Board of Directors, including a majority of the Preferred Directors:

(i) enter into any exclusive license not in the ordinary course of business, or anyout-license of Company intellectual property or out-license of any intellectual property relating to the Company's business that is owned or controlled by the Company;

(ii) enter into any guarantee, endorsement or otherwise become directly or contingently liable on any indebtedness of any other person, firm or other entity;

(iii) grant a security interest in the assets of the Company (other than in the ordinary course of business);

(iv) enter into any loan or advance to any officer, director, employee, consultant or any other person, or any subsidiary or other corporation, partnership, person, individual or other entity;

(v) enter into any transaction with any director, officer or employee of the Company or any "associate" (as defined in Rule12b-2 promulgated under the Securities Exchange Act of 1934, as amended) of any such person except transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company's business and upon fair and reasonable terms that are approved by a majority of the Board of Directors;

(vi) make any material change to the principal business of the Company, or entry into a new principal line of business, or exit from the current principal line of business;

(vii) hire, fire or change the compensation of the Company's Chief Executive Officer;

(viii) authorize new borrowings of the Company in excess of $500,000; or

(ix) effect any transfer or other conveyance of assets of the Company, other than in the ordinary course of business, if the value of such transfer or conveyance, either individually or in the aggregate, would exceed $50,000.

(c) In addition to any other rights provided by law, so long as any shares of Series E Preferred remain outstanding, the Company shall not, directly or indirectly, whether by amendment, merger, recapitalization or otherwise, without first obtaining the affirmative vote or written consent of the Requisite Series E Majority:

(i) amend, alter, waive or repeal any provision of the Company's Certificate of Incorporation or Bylaws in a manner that would alter or change the powers, preferences or special rights of the Series E Preferred so as to affect them adversely; provided, however, that neither (x) the authorization or issuance of any equity security (including any other security convertible into or exercisable for any such equity security) and/or (y) the inclusion of such equity security in the definition of "Preferred Stock" in the Company's Certificate of Incorporation or any amendment thereto, shall be deemed to alter or change the powers, preferences or special rights of the Series E Preferred or otherwise require the separate vote or written consent of the holders of the Series E Preferred pursuant to this paragraph;

(ii) waive, amend, alter or repeal the rights of the holders of Series E Preferred pursuant to Section 6(b) to elect the Series E Director;

(iii) waive, amend, alter or repeal (a) the definitions of "Requisite Series E Majority," "Qualified Public Offering" or the Original Issue Price of the Series E Preferred or the use of such terms herein or (b) Section 4(d)(ix);

(iv) purchase or redeem (or permit any subsidiary to purchase or redeem) (a) any shares of any class of Preferred Stock other than the Series E Preferred or (b) any shares of Common Stock except as permitted by Section 5(a)(v) above;

(v) reclassify, alter or amend any existing security of the Company that is junior to the Series E Preferred in respect of the distribution of assets on the liquidation, dissolution or winding up of the Company, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series E Preferred Stock in respect of any such right, preference or privilege; or

(vi) increase the number of authorized shares of Series E Preferred Stock.

6. Voting Rights.

(a) Holders of the Preferred Stock shall have full voting rights and powers equal to the voting rights and powers of the holders of Common Stock and shall be entitled to vote, together with the holders of Common Stock, with respect to any questions upon which holders of Common Stock have the right to vote. Except as otherwise required by law or by Section 5, the holder of each share of Common Stock issued and outstanding shall have one vote, and the holder of each share of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which such share of Preferred Stock could be

converted at the record date for determination of the stockholders entitled to vote on such matters, or, if no such record date is established, at the date such vote is taken or any written consent of stockholders is solicited, such votes to be counted together with all other shares of stock of the Company having general voting power and not separately as a class. Fractional votes by the holders of Preferred Stock shall not, however, be permitted and any fractional voting rights shall (after aggregating all shares into which shares of Preferred Stock held by each holder could be converted) be rounded to the nearest whole number. Holders of Common Stock and Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Company. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Company representing a majority of the votes represented by all outstanding shares of capital stock of the Company entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

(b) Election of Directors. The holders of record of the shares of Series E Preferred, voting as a separate class, shall be entitled to elect one director of the Company (the "Series E Director"). The holders of record of the shares of Series C Preferred shall be entitled to elect two directors of the Company (the "Series C Directors"), the holders of record of the shares of Series B Preferred shall be entitled to elect one director of the Company (the "Series B Director"), the holders of record of the shares of Series A Preferred shall be entitled to elect one director of the Company (the "Series A Director," and together with the Series E Director, the Series C Directors and Series B Director, the "Preferred Directors"). The holders of record of the shares of Common Stock, voting as a separate class, shall be entitled to elect one director (the "Common Director"). Any director elected as provided in the preceding sentences may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. The holders of record of the shares of Common Stock and Preferred Stock, exclusively and voting together as a single class, shall be entitled to elect the balance of the total number of directors of the Company (the "Remaining Directors"). At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. A vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Section 6(b). Notwithstanding the foregoing, for administrative convenience, the initial Series E Director may also be appointed by the Board in connection with the issuance of Series E Preferred on or about the date of filing of this Certificate of Incorporation without a separate action by the holders of Series E Preferred.

ARTICLE VI.

The Company is to have perpetual existence.

ARTICLE VII.

Elections of directors need not be by written ballot unless the Bylaws of the Company shall so provide.

ARTICLE VIII.

The number of directors which constitute the whole Board of Directors of the Company shall be determined in the manner set forth in the Bylaws of the Company.

ARTICLE IX.

Subject to the provisions of Article V, Section 5(a) herein, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Company.

ARTICLE X.

1. To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, a director of the Company shall not be personally liable to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director.

2. The Company shall indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he, his testator or intestate is or was a director, officer or employee of the Company or any predecessor of the Company, or serves or served at any other enterprise as a director, officer or employee at the request of the Company or any predecessor to the Company.

3. Neither any amendment nor repeal of this Article X, nor the adoption of any provision of the Company's Certificate of Incorporation inconsistent with this Article X, shall eliminate or reduce the effect of this Article X, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article X, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE XI.

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Company may be kept (subject to any provision contained in the statutes) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Company.

ARTICLE XII.

Except as provided in the last sentence of Article V, Section 6(b), vacancies created by the resignation of one or more members of the Board of Directors and newly created directorships, created in accordance with the Bylaws of this Company, may be filled by the vote of a majority, although less than a quorum, of the directors then in office, or by a sole remaining director.

ARTICLE XIII.

Advance notice of new business and stockholder nominations for the election of directors shall be given in the manner and to the extent provided in the Bylaws of the Company.

ARTICLE XIV.

The Company reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation; provided that any such amendment, alteration, change or repeal shall require the prior written consent of (x) the Preferred Majority, if and to the extent such consent is required under Article V, Section 5(a) and (y) the Requisite Series E Majority, if and to the extent such consent is required under Article V, Section 5(c).

ARTICLE XV.

The Company renounces any interest or expectancy of the Company in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "Excluded Opportunity" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of, (1) any director of the Company who is not an employee of the Company or any of its subsidiaries, or (2) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, if such holder is not an employee of the Company or of any of its subsidiaries (collectively, "Covered Persons"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Company.

IN WITNESS WHEREOF, the Company has caused this Amended and Restated Certificate of Incorporation to be signed by William Newell, its Chief Executive Officer, effective as of July 26, 2018.

SUTRO BIOPHARMA, INC.

By: /s/ William Newell
William Newell, Chief Executive Officer

CERTIFICATE OF AMENDMENT

TO

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

SUTRO BIOPHARMA, INC.

Sutro Biopharma, Inc. (the "***Company***"), a corporation duly organized and existing under the General Corporation Law of the State of Delaware (the "***DGCL***"), does hereby certify that the following amendment to the Company's Amended and Restated Certificate of Incorporation, filed with the Delaware Secretary of State on July 26, 2018 (the "***Current Certificate***"), has been duly adopted in accordance with the provisions of Section 242 of the Delaware General Corporation Law, with the approval of such amendment by the Company's stockholders having been given by written consent without a meeting in accordance with Sections 228(d) and 242 of the DGCL:

1. The following two paragraphs are hereby added to precede the first paragraph of Article IV of the Current Certificate:

"Contingent and effective upon the filing of this Certificate of Amendment to the Amended and Restated Certificate of Incorporation (the "***Certificate of Amendment***"), every 36.3 outstanding shares of Common Stock will be combined into and automatically, without any further action by the Company or the stockholders thereof, become one outstanding share of Common Stock of the Company (the "***Reverse Stock Split***"). No fractional share shall be issued in connection with the foregoing combination of the shares pursuant to the Reverse Stock Split. The Company will pay in cash the fair value of such fractional shares, without interest and as determined in good faith by the Board of Directors of the Company when those entitled to receive such fractional shares are determined.

The Reverse Stock Split shall occur automatically without any further action by the holders of Common Stock and whether or not the certificates representing such shares have been surrendered to the Company; *provided, however*, that the Company shall not be obligated to issue certificates evidencing the shares of Common Stock issuable as a result of the Reverse Stock Split unless the existing certificates evidencing the applicable shares of stock prior to the Reverse Stock Split are either delivered to the Company, or the holder notifies the Company that such certificates have been lost, stolen or destroyed, and executes an agreement satisfactory to the Company to indemnify the Company from any loss incurred by it in connection with such certificates."

2. The following paragraph is hereby added to follow Article XV of the Current Certificate:

"ARTICLE XVI.

Unless the Company consents in writing to the selection of an alternative forum, the federal district court of the United States, to the fullest extent permitted by law, shall be the sole and exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended. Any person or entity purchasing or otherwise acquiring or holding any interest in shares of capital stock of the Company shall be deemed to have notice of and to have consented to the provisions of this Article XVI."

3. The foregoing amendment to the Current Certificate has been duly approved by the Company's Board of Directors in accordance with Sections 141 and 242 of the DGCL.

4. The foregoing amendment to Current Certificate has been duly approved by the Company's stockholders in accordance with Sections 228 and 242 of the DGCL.

5. This Certificate of Amendment shall be effective upon filing with the Delaware Secretary of State.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Company has caused this Certificate of Amendment to be signed by its duly authorized officer this 14th day of September, 2018 and the foregoing facts stated herein are true and correct.

SUTRO BIOPHARMA, INC.

By: /s/ William J. Newell
Name: William J. Newell
Title: Chief Executive Officer

Exhibit 3.2

SUTRO BIOPHARMA, INC.

RESTATED CERTIFICATE OF INCORPORATION

Sutro Biopharma, Inc., a Delaware corporation, hereby certifies as follows:

1. The name of the corporation is Sutro Biopharma, Inc. The date of the filing of its original Certificate of Incorporation with the Secretary of State was April 21, 2003 under the name Fundamental Applied Biology, Inc.

2. The Restated Certificate of Incorporation of the corporation attached hereto as Exhibit "A", which is incorporated herein by this reference, and which restates, integrates and further amends the provisions of the Certificate of Incorporation of this corporation as previously amended and/or restated, has been duly adopted by this corporation's Board of Directors and by the stockholders in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware, with the approval of the corporation's stockholders having been given by written consent without a meeting in accordance with Section 228 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, this corporation has caused this Restated Certificate of Incorporation to be signed by its duly authorized officer and the foregoing facts stated herein are true and correct.

Dated: [●], 2018

SUTRO BIOPHARMA, INC.

By: _____

Name: William Newell

Title: Chief Executive Officer

EXHIBIT "A"

SUTRO BIOPHARMA, INC.

RESTATED CERTIFICATE OF INCORPORATION

ARTICLE I: NAME

The name of the corporation is Sutro Biopharma, Inc. (the "***Corporation***").

ARTICLE II: AGENT FOR SERVICE OF PROCESS

The address of the Corporation's registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, County of New Castle, Delaware 19801. The name of the registered agent of the Corporation at that address is The Corporation Trust Company.

ARTICLE III: PURPOSE

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the "***General Corporation Law***").

ARTICLE IV: AUTHORIZED STOCK

1. Total Authorized. The total number of shares of all classes of stock that the Corporation has authority to issue is Three Hundred Ten Million (310,000,000) shares, consisting of two classes: Three Hundred Million (300,000,000) shares of Common Stock, $0.001 par value per share ("***Common Stock***"), and Ten Million (10,000,000) shares of Preferred Stock, $0.001 par value per share ("***Preferred Stock***").

2. Designation of Additional Series.

2.1. The Board of Directors of the Corporation (the "***Board***") is authorized, subject to any limitations prescribed by the law of the State of Delaware, to provide for the issuance of the shares of Preferred Stock in one or more series, and, by filing a Certificate of Designation pursuant to the applicable law of the State of Delaware ("***Certificate of Designation***"), to establish from time to time the number of shares to be included in each such series, to fix the designation, vesting, powers (including voting powers), preferences and relative, participating, optional or other special rights, if any, of the shares of each such series and any qualifications, limitations or restrictions thereof, and, except where otherwise provided in the applicable Certificate of Designation, to thereafter increase (but not above the total number of authorized shares of the Preferred Stock) or decrease (but not below the number of shares of such series then outstanding) the number of shares of any such series. The number of authorized shares of Preferred Stock may also be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of two-thirds of the voting power of all of the then-outstanding shares of capital stock of the Corporation entitled to vote thereon, without a separate vote of the

holders of the Preferred Stock, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law, unless a separate vote of the holders of one or more series is required pursuant to the terms of any Certificate of Designation; *provided*, *however*, that if two-thirds of the Whole Board (as defined below) has approved such increase or decrease of the number of authorized shares of Preferred Stock, then only the affirmative vote of the holders of a majority of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, without a separate vote of the holders of the Preferred Stock (unless a separate vote of the holders of one or more series is required pursuant to the terms of any Certificate of Designation), shall be required to effect such increase or decrease. For purposes of this Restated Certificate of Incorporation (as the same may be amended and/or restated from time to time, including pursuant the terms of any Certificate of Designation designating a series of Preferred Stock, this "***Certificate of Incorporation***"), the term "***Whole Board***" shall mean the total number of authorized directors whether or not there exist any vacancies in previously authorized directorships.

2.2 Except as otherwise expressly provided in any Certificate of Designation designating any series of Preferred Stock pursuant to the foregoing provisions of this Article IV, any new series of Preferred Stock may be designated, fixed and determined as provided herein by the Board without approval of the holders of Common Stock or the holders of Preferred Stock, or any series thereof, and any such new series may have powers, preferences and rights, including, without limitation, voting powers, dividend rights, liquidation rights, redemption rights and conversion rights, senior to, junior to or pari passu with the rights of the Common Stock, any series of Preferred Stock or any future class or series of capital stock of the Corporation.

2.3 Each outstanding share of Common Stock shall entitle the holder thereof to one vote on each matter properly submitted to the stockholders of the Corporation for their vote; *provided, however*, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Certificate of Incorporation (including any Certificate of Designation relating to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon pursuant to this Certificate of Incorporation (including any Certificate of Designation relating to any series of Preferred Stock).

ARTICLE V: AMENDMENT OF BYLAWS

The Board shall have the power to adopt, amend or repeal the Bylaws of the Corporation (as the same may be amended and/or restated from time to time, the "***Bylaws***"). Any adoption, amendment or repeal of the Bylaws by the Board shall require the approval of a majority of the Whole Board. The stockholders shall also have power to adopt, amend or repeal the Bylaws; *provided*, *however*, that notwithstanding any other provision of this Certificate of Incorporation or any provision of law that might otherwise permit a lesser or no vote, but in addition to any vote of the holders of any class or series of stock of the Corporation required by applicable law or by this Certificate of Incorporation (including any Preferred Stock issued pursuant to a Certificate of Designation), the affirmative vote of the holders of at least two-thirds of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required for the stockholders to adopt, amend or repeal any provision of the Bylaws; *provided further*, that, in the case of any

proposed adoption, amendment or repeal of any provisions of the Bylaws that is approved by the Board and submitted to the stockholders for adoption thereby, if two-thirds of the Whole Board has approved such adoption, amendment or repeal of any provisions of the Bylaws, then only the affirmative vote of the holders of a majority of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to adopt, amend or repeal any provision of the Bylaws.

ARTICLE VI: MATTERS RELATING TO THE BOARD OF DIRECTORS

1. Director Powers. Except as otherwise provided by the General Corporation Law or this Certificate of Incorporation, the conduct of the affairs of the Corporation shall be managed by or under the direction of the Board. In addition to the powers and authority expressly conferred upon them by applicable law or by this Certificate of Incorporation or the Bylaws of the Corporation, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation.

2. Number of Directors. Subject to the special rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the total number of directors constituting the Whole Board shall be fixed from time to time exclusively by resolution adopted by a majority of the Whole Board.

3. Classified Board. Subject to the special rights of the holders of one or more series of Preferred Stock to elect additional directors under specified circumstances, the directors shall be divided, with respect to the time for which they severally hold office, into three classes designated as Class I, Class II and Class III, respectively (the "***Classified Board***"). The Board may assign members of the Board already in office to the Classified Board, which assignments shall become effective at the same time the Classified Board becomes effective. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board. The number of directors in each class shall be divided as nearly equal as reasonably possible. The initial term of office of the Class I directors shall expire at the Corporation's first annual meeting of stockholders following the closing of the Corporation's initial public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, relating to the offer and sale of Common Stock to the public (the "***Initial Public Offering***"), the initial term of office of the Class II directors shall expire at the Corporation's second annual meeting of stockholders following the closing of the Initial Public Offering and the initial term of office of the Class III directors shall expire at the Corporation's third annual meeting of stockholders following the closing of the Initial Public Offering. At each annual meeting of stockholders following the closing of the Initial Public Offering, directors elected to succeed those directors of the class whose terms then expire shall be elected for a term of office expiring at the third succeeding annual meeting of stockholders after their election.

4. Term and Removal. Each director shall hold office until the annual meeting at which such director's term expires and until such director's successor is duly elected and qualified, or until such director's earlier death, resignation, disqualification or removal. Any director may resign at any time upon notice to the Corporation given in writing or by any electronic transmission permitted in the Bylaws. Subject to the special rights of the holders of any series of Preferred Stock, no director may be removed from the Board except for cause and only by the affirmative

vote of the holders of at least two-thirds of the voting power of the then-outstanding shares of capital stock of the Corporation entitled to vote thereon, voting together as a single class. No decrease in the authorized number of directors constituting the Whole Board shall shorten the term of any incumbent director.

5. **Board Vacancies and Newly Created Directorships**. Subject to the special rights of the holders of any series of Preferred Stock, any vacancy occurring in the Board for any cause, and any newly created directorship resulting from any increase in the authorized number of directors, shall, unless (a) the Board determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders or (b) as otherwise provided by law, be filled only by the affirmative vote of a majority of the directors then in office, even if less than a quorum, or by a sole remaining director, and shall not be filled by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for a term expiring at the annual meeting of stockholders at which the term of office of the class to which the director has been assigned expires and until such director's successor shall have been duly elected and qualified, or until such director's earlier death, resignation, disqualification or removal.

6. **Vote by Ballot**. Election of directors need not be by written ballot unless the Bylaws shall so provide.

ARTICLE VII: DIRECTOR LIABILITY

1. **Limitation of Liability**. To the fullest extent permitted by law, no director of the Corporation shall be personally liable for monetary damages for breach of fiduciary duty as a director. Without limiting the effect of the preceding sentence, if the General Corporation Law is hereafter amended to authorize the further elimination or limitation of the liability of a director, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law, as so amended.

2. **Change in Rights**. Neither any amendment nor repeal of this Article VII, nor the adoption of any provision of this Certificate of Incorporation inconsistent with this Article VII, shall eliminate, reduce or otherwise adversely affect any limitation on the personal liability of a director of the Corporation existing at the time of such amendment, repeal or adoption of such an inconsistent provision.

ARTICLE VIII: MATTERS RELATING TO STOCKHOLDERS

1. **No Action by Written Consent of Stockholders**. Subject to the rights of any series of Preferred Stock then outstanding, no action shall be taken by the stockholders of the Corporation except at a duly called annual or special meeting of stockholders and no action shall be taken by the stockholders of the Corporation by written consent in lieu of a meeting.

2. **Special Meeting of Stockholders**. Special meetings of the stockholders of the Corporation may be called only by the Chairperson of the Board, the Chief Executive Officer, the Lead Independent Director (as defined in the Bylaws), the President, or the Board acting pursuant to a resolution adopted by a majority of the Whole Board and may not be called by any other person or persons.

3. Advance Notice of Stockholder Nominations and Business Transacted at Special Meetings. Advance notice of stockholder nominations for the election of directors of the Corporation and of business to be brought by stockholders before any meeting of stockholders of the Corporation shall be given in the manner provided in the Bylaws. Business transacted at special meetings of stockholders shall be limited to the purpose or purposes stated in the notice of meeting.

ARTICLE IX: CHOICE OF FORUM

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware, to the fullest extent permitted by law, shall be the sole and exclusive forum for: (a) any derivative action or proceeding brought on behalf of the Corporation; (b) any action asserting a claim of breach of a fiduciary duty owed by, or other wrongdoing by, any director, officer, stockholder, employee or agent of the Corporation to the Corporation or the Corporation's stockholders; (c) any action asserting a claim against the Corporation or any director, officer, stockholder, employee or agent of the Corporation arising pursuant to any provision of the General Corporation Law, this Certificate of Incorporation or the Bylaws or as to which the General Corporation Law confers jurisdiction on the Court of Chancery of the State of Delaware; (d) any action to interpret, apply, enforce or determine the validity of this Certificate of Incorporation or the Bylaws; or (e) any action asserting a claim against the Corporation or any director, officer, stockholder, employee or agent of the Corporation governed by the internal affairs doctrine. The provision would not apply to suits brought to enforce a duty or liability created by the Securities Exchange Act of 1934.

Any person or entity purchasing or otherwise acquiring or holding any interest in shares of capital stock of the Corporation shall be deemed to have notice of and to have consented to the provisions of this Article IX.

ARTICLE X: AMENDMENT OF CERTIFICATE OF INCORPORATION

If any provision of this Certificate of Incorporation becomes or is declared on any ground by a court of competent jurisdiction to be illegal, unenforceable or void, portions of such provision, or such provision in its entirety, to the extent necessary, shall be severed from this Certificate of Incorporation, and the court will replace such illegal, void or unenforceable provision of this Certificate of Incorporation with a valid and enforceable provision that most accurately reflects the Corporation's intent, in order to achieve, to the maximum extent possible, the same economic, business and other purposes of the illegal, void or unenforceable provision. The balance of this Certificate of Incorporation shall be enforceable in accordance with its terms.

The Corporation reserves the right to amend or repeal any provision contained in this Certificate of Incorporation in the manner prescribed by the laws of the State of Delaware and all rights conferred upon stockholders are granted subject to this reservation; *provided*, *however*, that, notwithstanding any other provision of this Certificate of Incorporation or any provision of law that might otherwise permit a lesser vote or no vote (but subject to Section 2 of Article IV hereof), but in addition to any vote of the holders of any class or series of the stock of the Corporation required by law or by this Certificate of Incorporation, the affirmative vote of the holders of at least two-thirds of the voting power of all of the then-outstanding shares of the capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, shall be required to amend or repeal this Article X or Article V, Article VI, Article VII or Article VIII; *provided*, *further*, that if two-thirds of the Whole Board has approved such amendment or

repeal of any provisions of this Certificate of Incorporation, then only the affirmative vote of the holders of at least a majority of the voting power of all of the then-outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class (in addition to any other vote of the holders of any class or series of stock of the Corporation required by law of by this Certificate of Incorporation), shall be required to amend or repeal such provisions of this Certificate of Incorporation.

* * * * * * * * * * *

Exhibit 3.4

SUTRO BIOPHARMA, INC.

(a Delaware corporation)

RESTATED BYLAWS

As Adopted [●], 2018 and

As Effective [●], 2018

SUTRO BIOPHARMA, INC.

(a Delaware corporation)

RESTATED BYLAWS

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SUTRO BIOPHARMA, INC.

(a Delaware corporation)

RESTATED BYLAWS

As Adopted [●], 2018 and
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ARTICLE I: STOCKHOLDERS

Section 1.1: Annual Meetings

If required by applicable law, an annual meeting of stockholders shall be held for the election of directors at such date and time as the Board of Directors (the "***Board***") of Sutro Biopharma, Inc. (the "***Corporation***") shall each year fix. The meeting may be held either at a place, within or without the State of Delaware as permitted by the Delaware General Corporation Law (the "***DGCL***"), or by means of remote communication as the Board in its sole discretion may determine. Any proper business may be transacted at the annual meeting.

Section 1.2: Special Meetings

Special meetings of stockholders for any purpose or purposes shall be called in the manner set forth in the Restated Certificate of Incorporation of the Corporation (as the same may be amended and/or restated from time to time, the "***Certificate of Incorporation***"). The special meeting may be held either at a place, within or without the State of Delaware, or by means of remote communication as the Board in its sole discretion may determine. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of the meeting.

Section 1.3: Notice of Meetings

Notice of all meetings of stockholders shall be given in writing or by electronic transmission in the manner provided by applicable law (including, without limitation, as set forth in Section 7.1.1 of these Bylaws) stating the date, time and place, if any, of the meeting, the means of remote communication, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, and the record date for determining the stockholders entitled to vote at the meeting (if such date is different from the record date for stockholders entitled to notice of the meeting). In the case of a special meeting, such notice shall also set forth the purpose or purposes for which the meeting is called. Unless otherwise required by applicable law or the Certificate of Incorporation, notice of any meeting of stockholders shall be given not less than ten (10), nor more than sixty (60), days before the date of the meeting to each stockholder of record entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

Section 1.4: Adjournments

The chairperson of the meeting shall have the power to adjourn the meeting to another time, date and place (if any). Any meeting of stockholders, annual or special, may be adjourned from time to time, and notice need not be given of any such adjourned meeting if the time, date and place (if any) thereof and the means of remote communication (if any) by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken; *provided*, *however*, that if the adjournment is for more than thirty (30) days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for determination of stockholders entitled to vote is fixed for the adjourned meeting, the Board shall fix as the record date for determining stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote at the adjourned meeting, and shall give notice of the adjourned meeting to each stockholder of record as of the record date so fixed for notice of such adjourned meeting. At the adjourned meeting, the Corporation may transact any business that might have been transacted at the original meeting. To the fullest extent permitted by law, the Corporation may postpone, reschedule or cancel any previously scheduled special or annual meeting of stockholders before it is to be held, regardless of whether any notice or public disclosure with respect to any such meeting has been sent or made pursuant to Section 1.3 hereof or otherwise, in which case notice shall be provided to the stockholders of the new date, time and place, if any, of the meeting as provided in Section 1.3 above.

Section 1.5: Quorum

Except as otherwise provided by applicable law, the Certificate of Incorporation or these Bylaws, at each meeting of stockholders the holders of a majority of the voting power of the shares of stock issued and outstanding and entitled to vote at the meeting, present in person or represented by proxy, shall constitute a quorum for the transaction of business; *provided*, *however*, that where a separate vote by a class or classes or series of stock is required by applicable law or the Certificate of Incorporation, the holders of a majority of the voting power of the shares of such class or classes or series of the stock issued and outstanding and entitled to vote on such matter, present in person or represented by proxy at the meeting, shall constitute a quorum entitled to take action with respect to the vote on such matter. If a quorum shall fail to attend any meeting, the chairperson of the meeting or, if directed to be voted on by the chairperson of the meeting, the holders of a majority of the voting power of the shares entitled to vote who are present in person or represented by proxy at the meeting may adjourn the meeting. Shares of the Corporation's stock belonging to the Corporation (or to another corporation, if a majority of the shares entitled to vote in the election of directors of such other corporation are held, directly or indirectly, by the Corporation), shall neither be entitled to vote nor be counted for quorum purposes; *provided*, *however*, that the foregoing shall not limit the right of the Corporation or any other corporation to vote any shares of the Corporation's stock held by it in a fiduciary capacity and to count such shares for purposes of determining a quorum. A quorum, once established at a meeting, shall not be broken by the withdrawal of enough votes to leave less than a quorum.

Section 1.6: Organization

Meetings of stockholders shall be presided over by (a) such person as the Board may designate, or (b) in the absence of such a person, the Chairperson of the Board, or (c) in the absence of such person, the Lead Independent Director, or, (d) in the absence of such person, the Chief

Executive Officer of the Corporation, or (e) in the absence of such person, the President of the Corporation, or (f) in the absence of such person, by a Vice President. Such person shall be chairperson of the meeting and, subject to Section 1.10 hereof, shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of discussion as seems to him or her to be in order. The Secretary of the Corporation shall act as secretary of the meeting, but in such person's absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 1.7: Voting; Proxies

Each stockholder of record entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by proxy. Such a proxy may be prepared, transmitted and delivered in any manner permitted by applicable law. Except as may be required in the Certificate of Incorporation, directors shall be elected by a plurality of the votes cast by the holders of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. At any meeting of stockholders at which a quorum is present, unless a different or minimum vote is required by applicable law, rule or regulation applicable to the Corporation or its securities, the rules or regulations of any stock exchange applicable to the Corporation, the Certificate of Incorporation or these Bylaws, in which case such different or minimum vote shall be the applicable vote on the matter, every matter other than the election of directors shall be decided by the affirmative vote of the holders of a majority of the voting power of the shares of stock entitled to vote on such matter that are present in person or represented by proxy at the meeting and are voted for or against the matter (or if there are two or more classes or series of stock entitled to vote as separate classes, then in the case of each class or series, the holders of a majority of the voting power of the shares of stock of that class or series present in person or represented by proxy at the meeting voting for or against such matter).

Section 1.8: Fixing Date for Determination of Stockholders of Record

In order that the Corporation may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which record date shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination. If no record date is fixed by the Board, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided*, *however*, that the Board may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance herewith at the adjourned meeting.

In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board may fix, in advance, a record date, which shall not precede the date upon which the resolution fixing the record date is adopted by the Board and which shall not be more than sixty (60) days prior to such action. If no such record date is fixed by the Board, then the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

Section 1.9: List of Stockholders Entitled to Vote

The Corporation shall prepare, at least ten (10) days before every meeting of stockholders, a complete list of stockholders entitled to vote at the meeting (*provided*, *however*, if the record date for determining the stockholders entitled to vote is less than ten (10) days before the date of the meeting, the list shall reflect the stockholders entitled to vote as of the tenth (10th) day before the meeting date), arranged in alphabetical order and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, for a period of at least ten (10) days prior to the meeting, either (a) on a reasonably accessible electronic network as permitted by applicable law (*provided* that the information required to gain access to the list is provided with the notice of the meeting), or (b) during ordinary business hours, at the principal place of business of the Corporation. If the meeting is held at a location where stockholders may attend in person, a list of stockholders entitled to vote at the meeting shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present at the meeting. If the meeting is held solely by means of remote communication, then the list shall be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access the list shall be provided with the notice of the meeting. Except as otherwise provided by law, the stock ledger shall be the only evidence as to who are the stockholders entitled to examine the list of stockholders required by this Section 1.9 or to vote in person or by proxy at any meeting of stockholders.

Section 1.10: Inspectors of Elections

1.10.1 Applicability. Unless otherwise required by the Certificate of Incorporation or by applicable law, the following provisions of this Section 1.10 shall apply only if and when the Corporation has a class of voting stock that is: (a) listed on a national securities exchange; (b) authorized for quotation on an interdealer quotation system of a registered national securities association; or (c) held of record by more than two thousand (2,000) stockholders. In all other cases, observance of the provisions of this Section 1.10 shall be optional, and at the discretion of the Board.

1.10.2 Appointment. The Corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors of election to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting.

1.10.3 Inspector's Oath. Each inspector of election, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of such inspector's ability.

1.10.4 Duties of Inspectors. At a meeting of stockholders, the inspectors of election shall (a) ascertain the number of shares outstanding and the voting power of each share, (b) determine the shares represented at a meeting and the validity of proxies and ballots, (c) count all votes and ballots, (d) determine and retain for a reasonable period of time a record of the disposition of any challenges made to any determination by the inspectors, and (e) certify their determination of the number of shares represented at the meeting, and their count of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of the duties of the inspectors.

1.10.5 Opening and Closing of Polls. The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced by the chairperson of the meeting at the meeting. No ballot, proxies or votes, nor any revocations thereof or changes thereto, shall be accepted by the inspectors after the closing of the polls unless the Court of Chancery upon application by a stockholder shall determine otherwise.

1.10.6 Determinations. In determining the validity and counting of proxies and ballots, the inspectors shall be limited to an examination of the proxies, any envelopes submitted with those proxies, any information provided in connection with proxies pursuant to Section 211(a)(2)b.(i) of the DGCL, or in accordance with Sections 211(e) or 212(c)(2) of the DGCL, ballots and the regular books and records of the Corporation, except that the inspectors may consider other reliable information for the limited purpose of reconciling proxies and ballots submitted by or on behalf of banks, brokers, their nominees or similar persons which represent more votes than the holder of a proxy is authorized by the record owner to cast or more votes than the stockholder holds of record. If the inspectors consider other reliable information for the limited purpose permitted herein, the inspectors at the time they make their certification of their determinations pursuant to this Section 1.10 shall specify the precise information considered by them, including the person or persons from whom they obtained the information, when the information was obtained, the means by which the information was obtained and the basis for the inspectors' belief that such information is accurate and reliable.

Section 1.11: Conduct of Meetings

The date and time of the opening and the closing of the polls for each matter upon which the stockholders will vote at a meeting shall be announced at the meeting by the person presiding over the meeting. The Board may adopt by resolution such rules and regulations for the conduct of the meeting of stockholders as it shall deem appropriate. Except to the extent inconsistent with such rules and regulations as adopted by the Board, the person presiding over any meeting of stockholders shall have the right and authority to convene and (for any or no reason) to recess and/or adjourn the meeting, to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such presiding person, are appropriate for the proper conduct of the meeting. Such rules, regulations or procedures, whether adopted by the Board or prescribed by the presiding person of the meeting, may include, without limitation, the following: (i) the establishment of an agenda or order of business for the meeting; (ii) rules and procedures for maintaining order at the meeting and the safety of those present; (iii) limitations on attendance at

or participation in the meeting to stockholders entitled to vote at the meeting, their duly authorized and constituted proxies or such other persons as the presiding person of the meeting shall determine; (iv) restrictions on entry to the meeting after the time fixed for the commencement thereof; and (v) limitations on the time allotted to questions or comments by participants. The presiding person at any meeting of stockholders, in addition to making any other determinations that may be appropriate to the conduct of the meeting, shall, if the facts warrant, determine and declare to the meeting that a matter or business was not properly brought before the meeting and if such presiding person should so determine, such presiding person shall so declare at the meeting and any such matter or business not properly brought before the meeting shall not be transacted or considered. Unless and to the extent determined by the Board or the person presiding over the meeting, meetings of stockholders shall not be required to be held in accordance with the rules of parliamentary procedure.

Section 1.12: Notice of Stockholder Business; Nominations.

1.12.1 Annual Meeting of Stockholders.

(a) Nominations of persons for election to the Board and the proposal of other business to be considered by the stockholders may be made at an annual meeting of stockholders only: (i) pursuant to the Corporation's notice of such meeting (or any supplement thereto), (ii) by or at the direction of the Board or any committee thereof or (iii) by any stockholder of the Corporation who was a stockholder of record at the time of giving of the notice provided for in this Section 1.12 (the "***Record Stockholder***"), who is entitled to vote at such meeting and who complies with the notice and other procedures set forth in this Section 1.12 in all applicable respects. For the avoidance of doubt, the foregoing clause (iii) shall be the exclusive means for a stockholder to make nominations or propose business (other than business included in the Corporation's proxy materials pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended (such act, and the rules and regulations promulgated thereunder, the "***Exchange Act***")), at an annual meeting of stockholders, and such stockholder must fully comply with the notice and other procedures set forth in this Section 1.12 to make such nominations or propose business before an annual meeting.

(b) For nominations or other business to be properly brought before an annual meeting by a Record Stockholder pursuant to Section 1.12.1(a) of these Bylaws:

(i) the Record Stockholder must have given timely notice thereof in writing to the Secretary of the Corporation and provide any updates or supplements to such notice at the times and in the forms required by this Section 1.12;

(ii) such other business (other than the nomination of persons for election to the Board) must otherwise be a proper matter for stockholder action;

(iii) if the Proposing Person (as defined below) has provided the Corporation with a Solicitation Notice (as defined below), such Proposing Person must, in the case of a proposal other than the nomination of persons for election to the Board, have delivered a proxy statement and form of proxy to holders of at least the percentage of the Corporation's voting shares required under applicable law to carry any such proposal, or, in the case of a nomination or nominations, have delivered a proxy statement and form of proxy to holders of a percentage of the Corporation's voting shares reasonably believed by such Proposing Person to be sufficient to elect the nominee or nominees proposed to be nominated by such Record Stockholder, and must, in either case, have included in such materials the Solicitation Notice; and

(iv) if no Solicitation Notice relating thereto has been timely provided pursuant to this Section 1.12, the Proposing Person proposing such business or nomination must not have solicited a number of proxies sufficient to have required the delivery of such a Solicitation Notice under this Section 1.12.

To be timely, a Record Stockholder's notice must be delivered to the Secretary at the principal executive offices of the Corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred and twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting (except in the case of the Corporation's first annual meeting following its initial public offering, for which such notice shall be timely if delivered in the same time period as if such meeting were a special meeting governed by Section 1.12.2 of these Bylaws); *provided*, *however*, that in the event that the date of the annual meeting is more than thirty (30) days before or more than seventy (70) days after such anniversary date, notice by the Record Stockholder to be timely must be so delivered (A) no earlier than the close of business on the one hundred and twentieth fifth (120th) day prior to such annual meeting and (B) no later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the close of business on the tenth (10th) day following the day on which Public Announcement (as defined below) of the date of such meeting is first made by the Corporation. In no event shall an adjournment or postponement of an annual meeting commence a new time period (or extend any time period) for providing the Record Stockholder's notice. Such Record Stockholder's notice shall set forth:

(x) as to each person whom the Record Stockholder proposes to nominate for election or reelection as a director:

(i) the name, age, business address and residence address of such person;

(ii) the principal occupation or employment of such nominee;

(iii) the class, series and number of any shares of stock of the Corporation that are beneficially owned or owned of record by such person or any Associated Person (as defined below);

(iv) the date or dates such shares were acquired and the investment intent of such acquisition;

(v) all other information relating to such person that would be required to be disclosed in solicitations of proxies for election of directors in an election contest (even if an election contest is not involved), or would be otherwise required, in each case pursuant to and in accordance with Section 14(a) (or any successor provision) under the Exchange Act and the rules and regulations thereunder;

(vi) such person's written consent to being named in the Corporation's proxy statement as a nominee, to the public disclosure of information regarding or related to such person provided to the Corporation by such person or otherwise pursuant to this Section 1.12 and to serving as a director if elected; and

(vii) whether such person meets the independence requirements of the stock exchange upon which the Corporation's Common Stock is primarily traded.

(y) as to any other business that the Record Stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event that such business includes a proposal to amend the Bylaws, the text of the proposed amendment), the reasons for conducting such business at the meeting and any material interest in such business of such Proposing Person, including any anticipated benefit to any Proposing Person therefrom; and

(z) as to each Proposing Person giving the notice:

(i) the current name and address of such Proposing Person, including, if applicable, their name and address as they appear on the Corporation's stock ledger, if different;

(ii) the class or series and number of shares of stock of the Corporation that are directly or indirectly owned of record or beneficially owned by such Proposing Person, including any shares of any class or series of the Corporation as to which such Proposing Person has a right to acquire beneficial ownership at any time in the future;

(iii) whether and the extent to which any derivative interest in the Corporation's equity securities (including without limitation any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the Corporation or with a value derived in whole or in part from the value of any class or series of shares of the Corporation, whether or not such instrument or right shall be subject to settlement in the underlying class or series of shares of the Corporation or otherwise, and any cash-settled equity swap, total return swap, synthetic equity position or similar derivative arrangement, as well as any rights to dividends on the shares of any class or series of shares of the Corporation that are separated or separable from the underlying shares of the Corporation) or any short interest in any security of the Corporation (for purposes of this Bylaw a person shall be deemed to have a short interest in a security if such person directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has the opportunity to profit or share in any profit derived from any increase or decrease in the value of the subject security, including through performance-related fees) is held directly or indirectly by or for the benefit of such Proposing Person, including without limitation whether and the extent to which any ongoing hedging or other transaction or series of transactions has been entered into by or on behalf of, or any other agreement, arrangement or understanding (including without limitation any short position or any borrowing or lending of shares) has been made, the effect or intent of which is to mitigate loss to or manage risk or benefit of share price changes for, or to increase or decrease the voting power of, such Proposing Person with respect to any share of stock of the Corporation;

(iv) any other material relationship between such Proposing Person, on the one hand, and the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation, on the other hand;

(v) any direct or indirect material interest in any material contract or agreement with the Corporation, any affiliate of the Corporation or any principal competitor of the Corporation (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement);

(vi) any other information relating to such Proposing Person that would be required to be disclosed in a proxy statement or other filing required to be made in connection with solicitations of proxies or consents by such Proposing Person in support of the business proposed to be brought before the meeting pursuant to Section 14(a) (or any successor provision) under the Exchange Act and the rules and regulations thereunder (the disclosures to be made pursuant to the foregoing clauses (iv) through (vi) are referred to as "***Disclosable Interests***"). For purposes hereof "Disclosable Interests" shall not include any information with respect to the ordinary course business activities of any broker, dealer, commercial bank, trust company or other nominee who is a Proposing Person solely as a result of being the stockholder directed to prepare and submit the notice required by these Bylaws on behalf of a beneficial owner;

(vii) such Proposing Person's written consent to the public disclosure of information provided to the Corporation pursuant to this Section 1.12;

(viii) a complete written description of any agreement, arrangement or understanding (whether oral or in writing) (including any knowledge that another person or entity is Acting in Concert (as defined below with such Proposing Person) between or among such Proposing Person, any of its respective affiliates or associates and any other person Acting in Concert with any of the foregoing persons;

(ix) as to each person whom such Proposing Person proposes to nominate for election orre-election as a director, any agreement, arrangement or understanding of such person with any other person or entity other than the Corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director known to such Proposing Person after reasonable inquiry;

(x) a representation that the Record Stockholder is a holder of record of stock of the Corporation entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to propose such business or nomination;

(xi) a representation whether such Proposing Person intends (or is part of a group that intends) to deliver a proxy statement or form of proxy to holders of, in the case of a proposal, at least the percentage of the Corporation's voting shares required under applicable law to carry the proposal or, in the case of a nomination or nominations, a sufficient number of holders of the Corporation's voting shares to elect such nominee or nominees (an affirmative statement of such intent being a "***Solicitation Notice***"); and

(xii) any proxy, contract, arrangement, or relationship pursuant to which the Proposing Person has a right to vote, directly or indirectly, any shares of any security of the Corporation.

A stockholder providing written notice required by this Section 1.12 will update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for determining the stockholders entitled to notice of the meeting and (ii) the close of business on the fifth (5th) business day prior to the meeting and, in the event of any adjournment or postponement thereof, the close of business on the fifth (5th) business day prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of the foregoing sentence, such update and supplement will be received by the Secretary of the Corporation at the principal executive office of the Corporation not later than five (5) business days after the record date for determining the stockholders entitled to notice of the meeting, and in the case of an update and supplement pursuant to clause (ii) of the foregoing sentence, such update and supplement will be received by the Secretary of the Corporation at the principal executive office of the Corporation not later than two (2) business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two (2) business days prior to such adjourned or postponed meeting.

(c) Notwithstanding anything in the second sentence of Section 1.12.1(b) of these Bylaws to the contrary, in the event that the number of directors to be elected to the Board is increased and there is no Public Announcement by the Corporation naming all of the nominees for director or specifying the size of the increased Board at least one hundred (100) days prior to the first anniversary of the preceding year's annual meeting, or, if the annual meeting is held more than thirty (30) days before or seventy (70 days after such anniversary date, if there is no such Public Announcement by the Corporation at least seventy five (75) days prior to such annual meeting (in each case except for the Corporation's first annual meeting following its initial public offering, for which this Section 1.12.1(c) shall apply if and only if there is no such Public Announcement prior to the date that is ten (10) days prior to the date on which a stockholder's written notice for such annual meeting would otherwise be required to be delivered to the Secretary of the Corporation), a stockholder's notice required by this Section 1.12 shall also be considered timely, but only with respect to nominees for any new directorships created by such increase, if it shall be delivered to the Secretary of the Corporation at the principal executive office of the Corporation no later than the close of business on the tenth (10th) day following the day on which such Public Announcement is first made by the Corporation.

(d) Notwithstanding anything in Section 1.12 or any other provision of the Bylaws to the contrary, any person who has been determined by a majority of the Whole Board to have violated Section 2.12 of these Bylaws or a Board Confidentiality Policy (as defined below) while serving as a director of the Corporation in the preceding five (5) years shall be ineligible to be nominated or be qualified to serve as a member of the Board, absent a prior waiver for such nomination or qualification approved by two-thirds of the Whole Board.

1.12.2 Special Meetings of Stockholders. Only such business shall be conducted at a special meeting of stockholders as shall have been brought before the meeting pursuant to the Corporation's notice of such meeting. Nominations of persons for election to the Board may be made at a special meeting of stockholders at which directors are to be elected pursuant to the

Corporation's notice of such meeting (a) by or at the direction of the Board or any committee thereof or (b) provided that the Board has determined that directors shall be elected at such meeting, by any stockholder of the Corporation who is a stockholder of record at the time of giving of notice of the special meeting, who shall be entitled to vote at the meeting and who complies with the notice and other procedures set forth in this Section 1.12 in all applicable respects. In the event the Corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board, any such stockholder may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Corporation's notice of meeting, if the stockholder's notice required by Section 1.12.1(b) of these Bylaws shall be delivered to the Secretary of the Corporation at the principal executive offices of the Corporation (i) no earlier than the one hundred and twentieth (120th) day prior to such special meeting and (ii) no later than the close of business on the later of the ninetieth (90th) day prior to such special meeting or the tenth (10th) day following the day on which Public Announcement is first made of the date of the special meeting and of the nominees proposed by the Board to be elected at such meeting. In no event shall an adjournment or postponement of a special meeting commence a new time period (or extend any time period) for providing such notice.

1.12.3 General.

(a) Except as otherwise expressly provided in any applicable rule or regulation promulgated under the Exchange Act, only such persons who are nominated in accordance with the procedures set forth in this Section 1.12 shall be eligible to be elected at a meeting of stockholders and serve as directors and only such business shall be conducted at a meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in this Section 1.12. Except as otherwise provided by law or these Bylaws, the chairperson of the meeting shall have the power and duty to determine whether a nomination or any other business proposed to be brought before the meeting was made or proposed, as the case may be, in accordance with the procedures set forth in this Section 1.12 and, if any proposed nomination or business is not in compliance herewith, to declare that such defective proposal or nomination shall be disregarded. Notwithstanding the foregoing provisions of this Section 1.12, unless otherwise required by law, if the stockholder (or a Qualified Representative of the stockholder (as defined below)) does not appear at the annual or special meeting of stockholders of the Corporation to present a nomination or proposed business, such nomination shall be disregarded and such proposed business shall not be transacted, notwithstanding that proxies in respect of such vote may have been received by the Corporation.

(b) Notwithstanding the foregoing provisions of this Section 1.12, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth herein. Nothing in this Section 1.12 shall be deemed to affect any rights of (a) stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act or (b) the holders of any series of Preferred Stock to elect directors pursuant to any applicable provisions of the Certificate of Incorporation.

(c) For purposes of this Section 1.12 the following definitions shall apply:

(A) a person shall be deemed to be "***Acting in Concert***" with another person if such person knowingly acts (whether or not pursuant to an express

agreement, arrangement or understanding) in concert with, or toward a common goal relating to the management, governance or control of the Corporation in substantial parallel with, such other person where (1) each person is conscious of the other person's conduct or intent and this awareness is an element in their decision-making processes and (2) at least one additional factor suggests that such persons intend to act in concert or in substantial parallel, which such additional factors may include, without limitation, exchanging information (whether publicly or privately), attending meetings, conducting discussions or making or soliciting invitations to act in concert or in substantial parallel; provided that a person shall not be deemed to be Acting in Concert with any other person solely as a result of the solicitation or receipt of revocable proxies or consents from such other person in response to a solicitation made pursuant to, and in accordance with, Section 14(a) (or any successor provision) of the Exchange Act by way of a proxy or consent solicitation statement filed on Schedule 14A. A person Acting in Concert with another person shall be deemed to be Acting in Concert with any third party who is also Acting in Concert with such other person;

(B) "***Associated Person***" shall mean with respect to any subject stockholder or other person (including any proposed nominee) (1) any person directly or indirectly controlling, controlled by or under common control with such stockholder or other person, (2) any beneficial owner of shares of stock of the Corporation owned of record or beneficially by such stockholder or other person, (3) any associate (as defined in Rule 405 under the Securities Act of 1933, as amended), of such stockholder or other person, and (4) any person directly or indirectly controlling, controlled by or under common control or Acting in Concert with any such Associated Person;

(C) "***Proposing Person***" shall mean (1) the stockholder providing the notice of business proposed to be brought before an annual meeting or nomination of persons for election to the Board at a stockholder meeting, (2) the beneficial owner or beneficial owners, if different, on whose behalf the notice of business proposed to be brought before the annual meeting or nomination of persons for election to the Board at a stockholder meeting is made, and (3) any Associated Person on whose behalf the notice of business proposed to be brought before the annual meeting or nomination of persons for election to the Board at a stockholder meeting is made;

(D) "***Public Announcement***" shall mean disclosure in a press release reported by a national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act; and

(E) to be considered a "***Qualified Representative***" of a stockholder, a person must be a duly authorized officer, manager, trustee or partner of such stockholder or must be authorized by a writing executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as a proxy at the meeting of stockholders and such person must produce such writing or electronic transmission, or a reliable reproduction thereof, at the meeting.

The Secretary of the Corporation, or any other person who shall be appointed to serve as secretary of the meeting, may require, on behalf of the Corporation, reasonable and appropriate documentation to verify the status of a person purporting to be a "Qualified Representative" for purposes hereof.

ARTICLE II: BOARD OF DIRECTORS

Section 2.1: Number; Qualifications

The total number of authorized directors constituting the Board (the "***Whole Board***") shall be fixed from time to time in the manner set forth in the Certificate of Incorporation. No decrease in the authorized number of directors constituting the Whole Board shall shorten the term of any incumbent director. Directors need not be stockholders of the Corporation.

Section 2.2: Election; Resignation; Removal; Vacancies

Election of directors need not be by written ballot. Unless otherwise provided by the Certificate of Incorporation and subject to the special rights of the holders of one or more series of Preferred Stock to elect additional directors under specified circumstances, the directors shall be divided, with respect to the time for which they severally hold office, into three classes, designated as Class I, Class II and Class III, respectively. The number of directors in each class shall be divided as nearly equal as reasonably possible. Each director shall hold office until the annual meeting at which such director's term expires and until such director's successor is elected and qualified or until such director's earlier death, resignation, disqualification or removal. Any director may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the Chairperson of the Board, the Chief Executive Officer, or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at a later time or upon the happening of an event. Subject to the special rights of holders of any series of Preferred Stock to elect directors, directors may be removed only as provided by the Certificate of Incorporation and applicable law. All vacancies occurring in the Board and any newly created directorships resulting from any increase in the authorized number of directors shall be filled in the manner set forth in the Certificate of Incorporation.

Section 2.3: Regular Meetings

Regular meetings of the Board may be held at such places, within or without the State of Delaware, and at such times as the Board may from time to time determine. Notice of regular meetings need not be given if the date, times and places thereof are fixed by resolution of the Board.

Section 2.4: Special Meetings

Special meetings of the Board may be called by the Chairperson of the Board, the Chief Executive Officer, the Lead Independent Director or a majority of the members of the Board then in office and may be held at any time, date or place, within or without the State of Delaware, as the person or persons calling the meeting shall fix. Notice of the time, date and place of such meeting shall be given, orally, in writing or by electronic transmission (including electronic mail), by the person or persons calling the meeting to all directors at least four (4) days before the meeting if the notice is mailed, or at least twenty-four (24) hours before the meeting if such notice is given by telephone, hand delivery, telegram, telex, mailgram, facsimile, electronic mail or other means of electronic transmission. Unless otherwise indicated in the notice, any and all business may be transacted at a special meeting.

Section 2.5: Remote Meetings Permitted

Members of the Board, or any committee of the Board, may participate in a meeting of the Board or such committee by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to conference telephone or other communications equipment shall constitute presence in person at such meeting.

Section 2.6: Quorum; Vote Required for Action

At all meetings of the Board, a majority of the Whole Board shall constitute a quorum for the transaction of business. If a quorum shall fail to attend any meeting, a majority of those present may adjourn the meeting to another place, date or time. Except as otherwise provided herein or in the Certificate of Incorporation, or required by law, the vote of a majority of the directors present at a meeting at which a quorum is present shall be the act of the Board.

Section 2.7: Organization

Meetings of the Board shall be presided over by (a) the Chairperson of the Board, or (b) in the absence of such person, the Lead Independent Director, or (c) in such person's absence, by the Chief Executive Officer, or (d) in such person's absence, by a chairperson chosen by the Board at the meeting. The Secretary shall act as secretary of the meeting, but in such person's absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

Section 2.8: Unanimous Action by Directors in Lieu of a Meeting

Any action required or permitted to be taken at any meeting of the Board, or of any committee thereof, may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or committee, respectively, in the minute books of the Corporation. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 2.9: Powers

Except as otherwise provided by the Certificate of Incorporation or the DGCL, the business and affairs of the Corporation shall be managed by or under the direction of the Board.

Section 2.10: Compensation of Directors

Members of the Board, as such, may receive, pursuant to a resolution of the Board, fees and other compensation for their services as directors, including without limitation their services as members of committees of the Board.

Section 2.11: Confidentiality

Each director shall maintain the confidentiality of, and shall not share with any third party person or entity (including third parties that originally sponsored, nominated or designated such director (the "***Sponsoring Party***")), any non-public information learned in their capacities as directors, including communications among Board members in their capacities as directors. The Board may adopt a board confidentiality policy further implementing and interpreting this bylaw (a "***Board Confidentiality Policy***"). All directors are required to comply with this bylaw and any such Board Confidentiality Policy unless such director or the Sponsoring Party for such director has entered into a specific written agreement with the Corporation, in either case as approved by the Board, providing otherwise with respect to such confidential information.

ARTICLE III: COMMITTEES

Section 3.1: Committees

The Board may designate one or more committees, each committee to consist of one or more of the directors of the Corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of the committee, the member or members thereof present at any meeting of such committee who are not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in place of any such absent or disqualified member. Any such committee, to the extent provided in a resolution of the Board, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority in reference to the following matters: (a) approving, adopting, or recommending to the stockholders any action or matter (other than the election or removal of members of the Board) expressly required by the DGCL to be submitted to stockholders for approval or (b) adopting, amending or repealing any bylaw of the Corporation.

Section 3.2: Committee Rules

Each committee shall keep records of its proceedings and make such reports as the Board may from time to time request. Unless the Board otherwise provides, each committee designated by the Board may make, alter and repeal rules for the conduct of its business. In the absence of such rules, each committee shall conduct its business in the same manner as the Board conducts its business pursuant to Article II of these Bylaws. Except as otherwise provided in the Certificate of Incorporation, these Bylaws or the resolution of the Board designating the committee, any committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and may delegate to any such subcommittee any or all of the powers and authority of the committee.

ARTICLE IV: OFFICERS; CHAIRPERSON; LEAD INDEPENDENT DIRECTOR

Section 4.1: Generally

The officers of the Corporation shall consist of a Chief Executive Officer (who may be the Chairperson of the Board or the President), a President, a Secretary and a Treasurer and may consist of such other officers, including, without limitation, a Chief Financial Officer, and one or more Vice Presidents, as may from time to time be appointed by the Board. All officers shall be elected by the Board; *provided*, *however*, that the Board may empower the Chief Executive Officer of the Corporation to appoint any officer other than the Chief Executive Officer, the President, the Chief Financial Officer or the Treasurer. Except as otherwise provided by law, by the Certificate of Incorporation or these Bylaws, each officer shall hold office until such officer's successor is duly elected and qualified or until such officer's earlier resignation, death, disqualification or removal. Any number of offices may be held by the same person. Any officer may resign by delivering a resignation in writing or by electronic transmission to the Corporation at its principal office or to the Chairperson of the Board, the Chief Executive Officer, or the Secretary. Such resignation shall be effective upon delivery unless it is specified to be effective at some later time or upon the happening of some later event. Any vacancy occurring in any office of the Corporation by death, resignation, removal or otherwise may be filled by the Board and the Board may, in its discretion, leave unfilled, for such period as it may determine, any offices. Each such successor shall hold office for the unexpired term of such officer's predecessor and until a successor is duly elected and qualified or until such officer's earlier resignation, death, disqualification or removal.

Section 4.2: Chief Executive Officer

Subject to the control of the Board and such supervisory powers, if any, as may be given by the Board, the powers and duties of the Chief Executive Officer of the Corporation are:

(a) to act as the general manager and, subject to the control of the Board, to have general supervision, direction and control of the business and affairs of the Corporation;

(b) subject to Article I, Section 1.6 of these Bylaws, to preside at all meetings of the stockholders;

(c) subject to Article I, Section 1.2 of these Bylaws, to call special meetings of the stockholders to be held at such times and, subject to the limitations prescribed by law or by these Bylaws, at such places as he or she shall deem proper;

(d) to affix the signature of the Corporation to all deeds, conveyances, mortgages, guarantees, leases, obligations, bonds, certificates and other papers and instruments in writing which have been authorized by the Board or which, in the judgment of the Chief Executive Officer, should be executed on behalf of the Corporation; to sign certificates for shares of stock of the Corporation (if any); and, subject to the direction of the Board, to have general charge of the property of the Corporation and to supervise and control all officers, agents and employees of the Corporation; and

(e) to vote and otherwise act on, or to authorize any officer to vote or otherwise act on, on behalf of the Corporation, in person or by proxy, at any meeting of stockholders of or with respect to any action of stockholders of any other corporation in which this Corporation may hold securities and otherwise to exercise, or authorize any officer otherwise to exercise, any and all rights and powers which this Corporation may possess by reason of its ownership of securities in such other corporation.

The person holding the office of President shall be the Chief Executive Officer of the Corporation unless the Board shall designate another officer to be the Chief Executive Officer. If there is no President, and the Board has not designated any other officer to be the Chief Executive Officer, then the Chairperson of the Board shall be the Chief Executive Officer.

Section 4.3: Chairperson of the Board

Subject to the provisions of Section 2.7 of these Bylaws, the Chairperson of the Board shall have the power to preside at all meetings of the Board and shall have such other powers and duties as provided in these Bylaws and as the Board may from time to time prescribe.

Section 4.4: Lead Independent Director

The Board may, in its discretion, elect a lead independent director from among its members that are Independent Directors (as defined below) (such director, the "***Lead Independent Director***"). The Lead Independent Director shall preside at all meetings at which the Chairperson of the Board is not present and shall exercise such other powers and duties as may from time to time be assigned to him or her by the Board or as prescribed by these Bylaws. For purposes of these Bylaws, "***Independent Director***" has the meaning ascribed to such term under the rules of the exchange upon which the Corporation's Common Stock is primarily traded.

Section 4.5: President

The person holding the office of Chief Executive Officer shall be the President of the Corporation unless the Board shall have designated one individual as the President and a different individual as the Chief Executive Officer of the Corporation. Subject to the provisions of these Bylaws and to the direction of the Board, and subject to the supervisory powers of the Chief Executive Officer (if the Chief Executive Officer is an officer other than the President), and subject to such supervisory powers and authority as may be given by the Board to the Chairperson of the Board, and/or to any other officer, the President shall have the responsibility for the general management and control of the business and affairs of the Corporation and the general supervision and direction of all of the officers, employees and agents of the Corporation (other than the Chief Executive Officer, if the Chief Executive Officer is an officer other than the President) and shall perform all duties and have all powers that are commonly incident to the office of President or that are delegated to the President by the Board.

Section 4.6: Chief Financial Officer

The person holding the office of Chief Financial Officer shall be the Treasurer of the Corporation unless the Board shall have designated another officer as the Treasurer of the Corporation. Subject to the direction of the Board and the Chief Executive Officer, the Chief Financial Officer shall perform all duties and have all powers that are commonly incident to the office of Chief Financial Officer, or as the Board may from time to time prescribe.

Section 4.7: Treasurer

The person holding the office of Treasurer shall have custody of all monies and securities of the Corporation. The Treasurer shall make such disbursements of the funds of the Corporation as are authorized and shall render from time to time an account of all such transactions. The Treasurer shall also perform such other duties and have such other powers as are commonly incident to the office of Treasurer, or as the Board or the Chief Executive Officer may from time to time prescribe.

Section 4.8: Vice President

Each Vice President shall have all such powers and duties as are commonly incident to the office of Vice President or that are delegated to him or her by the Board or the Chief Executive Officer. A Vice President may be designated by the Board to perform the duties and exercise the powers of the Chief Executive Officer or President in the event of the Chief Executive Officer's or President's absence or disability.

Section 4.9: Secretary

The Secretary shall issue or cause to be issued all authorized notices for, and shall keep, or cause to be kept, minutes of all meetings of the stockholders and the Board. The Secretary shall have charge of the corporate minute books and similar records and shall perform such other duties and have such other powers as are commonly incident to the office of Secretary, or as the Board or the Chief Executive Officer may from time to time prescribe.

Section 4.10: Delegation of Authority

The Board may from time to time delegate the powers or duties of any officer of the Corporation to any other officers or agents of the Corporation, notwithstanding any provision hereof.

Section 4.11: Removal

Any officer of the Corporation shall serve at the pleasure of the Board and may be removed at any time, with or without cause, by the Board; *provided* that if the Board has empowered the Chief Executive Officer to appoint any officer of the Corporation, then such officer may also be removed by the Chief Executive Officer. Such removal shall be without prejudice to the contractual rights of such officer, if any, with the Corporation.

ARTICLE V: STOCK

Section 5.1: Certificates; Uncertificated Shares

The shares of capital stock of the Corporation shall be uncertificated shares;*provided*, *however*, that the resolution of the Board that the shares of capital stock of the Corporation shall be uncertificated shares shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation (or the transfer agent or registrar, as the case may be). Notwithstanding the foregoing, the Board may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be certificated shares. Every holder of stock represented by certificates shall be entitled to have a certificate signed by, or in the name of the Corporation, by any two authorized officers of the Corporation (it being understood that each of the Chairperson of the Board, the Vice-Chairperson of the Board, the Chief Executive Officer, the President, any Vice President, the Treasurer, any Assistant Treasurer, the Secretary and any Assistant Secretary shall be an authorized officer for such purpose), representing the number of

shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if such person were an officer, transfer agent or registrar at the date of issue.

Section 5.2: Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificates or Uncertificated Shares

The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate previously issued by it, alleged to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to agree to indemnify the Corporation and/or to give the Corporation a bond sufficient to indemnify it, against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

Section 5.3: Other Regulations

Subject to applicable law, the Certificate of Incorporation and these Bylaws, the issue, transfer, conversion and registration of shares represented by certificates and of uncertificated shares shall be governed by such other regulations as the Board may establish.

ARTICLE VI: INDEMNIFICATION

Section 6.1: Indemnification of Officers and Directors

Each person who was or is made a party to, or is threatened to be made a party to, or is involved in any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, investigative, legislative or any other type whatsoever (a "***Proceeding***"), by reason of the fact that such person (or a person of whom such person is the legal representative), is or was a director or officer of the Corporation, while serving as a director or officer of the Corporation or, is or was serving at the request of the Corporation as a director, officer, employee, agent or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans (for purposes of this Article VI, an "***Indemnitee***"), shall be indemnified and held harmless by the Corporation to the fullest extent permitted by the DGCL as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), against all expenses, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes and penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such Indemnitee in connection therewith, provided such Indemnitee acted in good faith and in a manner that the Indemnitee reasonably believed to be in or not opposed to the best interests of the Corporation, and, with respect to any criminal Proceeding, had no reasonable cause to believe the Indemnitee's conduct was unlawful. Such indemnification shall continue as to an Indemnitee who has ceased to be a director or officer of the Corporation and shall inure to the benefit of such Indemnitees' heirs, executors and administrators. Notwithstanding the foregoing,

subject to Section 6.5 of these Bylaws, the Corporation shall indemnify any such Indemnitee seeking indemnity in connection with a Proceeding (or part thereof) initiated by such Indemnitee only if such Proceeding (or part thereof) was authorized by the Board or such indemnification is authorized by an agreement approved by the Board.

Section 6.2: Advancement of Expenses

Except as otherwise provided in a written indemnification agreement between the Corporation and an Indemnitee upon written request, the Corporation shall pay all expenses (including attorneys' fees) incurred by an Indemnitee in defending any Proceeding as they are incurred in advance of its final disposition; provided, however, that if the DGCL then so requires, the advancement of such expenses shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such Indemnitee, to repay such amounts if it shall ultimately be determined by final judicial decision from which there is no appeal that such Indemnitee is not entitled to be indemnified under this Article VI or otherwise. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents of the Corporation or by persons serving at the request of the Corporation as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise may be so paid upon such terms and conditions, if any, as the Corporation deems appropriate. The right to advancement of expenses shall not apply to any claim for which indemnity is excluded pursuant to these Bylaws, but shall apply to any Proceeding referenced in Section 6.1 prior to a determination that the person is not entitled to be indemnified by the Corporation.

Section 6.3: Non-Exclusivity of Rights

The rights conferred on any person in this Article VI shall not be exclusive of any other right that such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote or consent of stockholders or disinterested directors, or otherwise. Additionally, nothing in this Article VI shall limit the ability of the Corporation, in its discretion, to indemnify or advance expenses to persons whom the Corporation is not obligated to indemnify or advance expenses pursuant to this Article VI.

Section 6.4: Indemnification Contracts

The Board is authorized to cause the Corporation to enter into indemnification contracts with any director, officer, employee or agent of the Corporation, or any person serving at the request of the Corporation as a director, officer, employee, agent or trustee of another corporation, partnership, joint venture, trust or other enterprise, including employee benefit plans, providing indemnification or advancement rights to such person. Such rights may be greater than those provided in this Article VI.

Section 6.5: Right of Indemnitee to Bring Suit

The following shall apply to the extent not in conflict with any indemnification contract provided for in Section 6.4 of these Bylaws.

6.5.1 Right to Bring Suit. If a claim under Section 6.1 or 6.2 of these Bylaws is not paid in full by the Corporation within sixty (60) days after a written claim has been received by the Corporation, except in the case of a claim for an advancement of expenses, in which case the

applicable period shall be twenty (20) days, the Indemnitee may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim. If successful in whole or in part in any such suit, or in a suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Indemnitee shall be entitled to be paid, to the fullest extent permitted by law, the expense of prosecuting or defending such suit. In (a) any suit brought by the Indemnitee to enforce a right to indemnification hereunder (but not in a suit brought by the Indemnitee to enforce a right to an advancement of expenses) it shall be a defense that, and (b) in any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that, the Indemnitee has not met any applicable standard for indemnification set forth in applicable law.

6.5.2 Effect of Determination. Neither the absence of a determination prior to the commencement of such suit that indemnification of the Indemnitee is proper in the circumstances because the Indemnitee has met the applicable standard of conduct set forth in applicable law, nor an actual determination that the Indemnitee has not met such applicable standard of conduct, shall create a presumption that the Indemnitee has not met the applicable standard of conduct or, in the case of such a suit brought by the Indemnitee, be a defense to such suit.

6.5.3 Burden of Proof. In any suit brought by the Indemnitee to enforce a right to indemnification or to an advancement of expenses hereunder, or brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the burden of proving that the Indemnitee is not entitled to be indemnified, or to such advancement of expenses, under this Article VI, or otherwise, shall be on the Corporation.

Section 6.6: Nature of Rights

The rights conferred upon Indemnitees in this Article VI shall be contract rights and such rights shall continue as to an Indemnitee who has ceased to be a director, officer or trustee and shall inure to the benefit of the Indemnitee's heirs, executors and administrators. Any amendment, repeal or modification of any provision of this Article VI that adversely affects any right of an Indemnitee or an Indemnitee's successors shall be prospective only, and shall not adversely affect any right or protection conferred on a person pursuant to this Article VI with respect to any Proceeding involving any occurrence or alleged occurrence of any action or omission to act that took place prior to such amendment, repeal or modification.

Section 6.7: Insurance

The Corporation may purchase and maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any expense, liability or loss asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the DGCL.

ARTICLE VII: NOTICES

Section 7.1: Notice

7.1.1 Form and Delivery. Except as otherwise specifically required in these Bylaws (including, without limitation, Section 7.1.2 of these Bylaws) or by applicable law, all notices required to be given pursuant to these Bylaws shall be in writing and may (a) in every instance in connection with any delivery to a member of the Board, be effectively given by hand delivery (including use of a delivery service), by depositing such notice in the mail, postage prepaid, or by sending such notice by overnight express courier, facsimile, electronic mail or other form of electronic transmission and (b) be effectively delivered to a stockholder when given by hand delivery, by depositing such notice in the mail, postage prepaid or, if specifically consented to by the stockholder as described in Section 7.1.2 of these Bylaws, by sending such notice by facsimile, electronic mail or other form of electronic transmission. Any such notice shall be addressed to the person to whom notice is to be given at such person's address as it appears on the records of the Corporation. The notice shall be deemed given (a) in the case of hand delivery, when received by the person to whom notice is to be given or by any person accepting such notice on behalf of such person, (b) in the case of delivery by mail, upon deposit in the mail, (c) in the case of delivery by overnight express courier, when dispatched, and (d) in the case of delivery via facsimile, electronic mail or other form of electronic transmission, at the time provided in Section 7.1.2 of these Bylaws.

7.1.2 Electronic Transmission. Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation under any provision of the DGCL, the Certificate of Incorporation, or these Bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given in accordance with Section 232 of the DGCL. Any such consent shall be revocable by the stockholder by written notice to the Corporation. Any such consent shall be deemed revoked if (a) the Corporation is unable to deliver by electronic transmission two consecutive notices given by the Corporation in accordance with such consent and (b) such inability becomes known to the Secretary or an Assistant Secretary of the Corporation or to the transfer agent, or other person responsible for the giving of notice; *provided*, *however*, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action. Notice given pursuant to this Section 7.1.2 shall be deemed given: (i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice; (ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of such posting and the giving of such separate notice; and (iv) if by any other form of electronic transmission, when directed to the stockholder.

7.1.3 Affidavit of Giving Notice. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given in writing or by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

Section 7.2: Waiver of Notice

Whenever notice is required to be given under any provision of the DGCL, the Certificate of Incorporation or these Bylaws, a written waiver of notice, signed by the person entitled to notice, or waiver by electronic transmission by such person, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of

objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders, directors or members of a committee of directors need be specified in any waiver of notice.

ARTICLE VIII: INTERESTED DIRECTORS

Section 8.1: Interested Directors

No contract or transaction between the Corporation and one or more of its members of the Board or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are members of the board of directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or committee thereof that authorizes the contract or transaction, or solely because his, her or their votes are counted for such purpose, if: (a) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the Board or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; (b) the material facts as to his, her or their relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (c) the contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board, a committee thereof, or the stockholders.

Section 8.2: Quorum

Interested directors may be counted in determining the presence of a quorum at a meeting of the Board or of a committee which authorizes the contract or transaction.

ARTICLE IX: MISCELLANEOUS

Section 9.1: Fiscal Year

The fiscal year of the Corporation shall be determined by resolution of the Board.

Section 9.2: Seal

The Board may provide for a corporate seal, which may have the name of the Corporation inscribed thereon and shall otherwise be in such form as may be approved from time to time by the Board.

Section 9.3: Form of Records

Any records administered by or on behalf of the Corporation in the regular course of its business, including its stock ledger, books of account and minute books, may be kept on or by means of, or be in the form of, any other information storage device, method or one or more electronic networks or databases (including one or more distributed electronic networks or databases), electronic or otherwise, *provided* that the records so kept can be converted into clearly legible paper form within a reasonable time and otherwise comply with the DGCL. The Corporation shall so convert any records so kept upon the request of any person entitled to inspect such records pursuant to any provision of the DGCL.

Section 9.4: Reliance upon Books, Records and Experts

A member of the Board, or a member of any committee designated by the Board shall, in the performance of such person's duties, be fully protected in relying in good faith upon the books and records of the Corporation and upon such information, opinions, reports or statements presented to the Corporation by any of the Corporation's officers or employees, or committees of the Board, or by any other person as to matters the member reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Corporation.

Section 9.5: Certificate of Incorporation Governs

In the event of any conflict between the provisions of the Certificate of Incorporation and Bylaws, the provisions of the Certificate of Incorporation shall govern.

Section 9.6: Severability

If any provision of these Bylaws shall be held to be invalid, illegal, unenforceable or in conflict with the provisions of the Certificate of Incorporation, then such provision shall nonetheless be enforced to the maximum extent possible consistent with such holding and the remaining provisions of these Bylaws (including without limitation, all portions of any section of these Bylaws containing any such provision held to be invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation, that are not themselves invalid, illegal, unenforceable or in conflict with the Certificate of Incorporation) shall remain in full force and effect.

Section 9.7: Time Periods

In applying any provision of these Bylaws which requires that an act be done or not be done a specified number of days prior to an event or that an act be done during a period of a specified number of days prior to an event, calendar days shall be used, the day of the doing of the act shall be excluded, and the day of the event shall be included.

ARTICLE X: AMENDMENT

Notwithstanding any other provision of these Bylaws, any alteration, amendment or repeal of these Bylaws, and any adoption of new Bylaws, shall require the approval of the Board or the stockholders of the Corporation as expressly provided in the Certificate of Incorporation.

ARTICLE XI: EXCLUSIVE FORUM

Unless the Corporation consents in writing to the selection of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act of 1933, as amended.

Any person or entity purchasing or otherwise acquiring any interest in any security of the corporation shall be deemed to have notice of and consented to the provisions of this Article XI.

CERTIFICATION OF RESTATED BYLAWS
OF
SUTRO BIOPHARMA, INC.
(a Delaware corporation)

I, Edward Albini, certify that I am Secretary of Sutro Biopharma, Inc., a Delaware corporation (the "***Corporation***"), that I am duly authorized to make and deliver this certification, that the attached Bylaws are a true and complete copy of the Restated Bylaws of the Corporation in effect as of the date of this certificate.

Dated: [●], 2018

Edward Albini
Chief Financial Officer and Secretary

EXHIBIT 5.1

FENWICK & WEST LLP

555 CALIFORNIA STREET, 12TH FLOOR SAN FRANCISCO, CA 94104

TEL 415.875.2300 FAX 415.281.1350 WWW.FENWICK.COM

September 17, 2018

Sutro Biopharma, Inc.
310 Utah Ave, Suite 150
South San Francisco, CA 94080

Ladies and Gentlemen:

At your request, we have examined the Registration Statement on Form S-1 (File Number 333-227103) (the "***Registration Statement***") initially filed by Sutro Biopharma, Inc., a Delaware corporation (the "***Company***"), with the Securities and Exchange Commission (the "***Commission***") on or about August 29, 2018, as subsequently amended on September 17, 2018, in connection with the registration under the Securities Act of 1933, as amended ("***Securities Act***"), of an aggregate of 5,750,000 shares of the Company's Common Stock (the "***Stock***").

In connection with our opinion expressed below we have examined originals or copies of the underwriting agreement pursuant to which the Stock will be sold to the underwriters, the Registration Statement, the prospectus prepared in connection with the Registration Statement (the "***Prospectus***"), the Company's certificate of incorporation, as amended (the "***Certificate***"), and the Company's bylaws, as amended (the "***Bylaws***"), certain minutes and consents of the Company's board of directors (the "***Board***") or a committee or committees thereof and the Company's stockholders relating to the Registration Statement, the Certificate and the Bylaws, and such other agreements, documents, certificates and statements of the Company, its transfer agent and public or government officials, as we have deemed advisable, and have examined such questions of law as we have considered necessary. In giving our opinion, we have also relied upon a good standing certificate regarding the Company issued by the Delaware Secretary of State and a management certificate addressed to us and dated of even date herewith executed by the Company containing certain factual representations by the Company.

In our examination of documents for purposes of this opinion, we have assumed, and express no opinion as to, the genuineness of all signatures on original documents, the authenticity and completeness of all documents submitted to us as originals, the conformity to originals and completeness of all documents submitted to us as copies, the legal capacity of all persons or entities executing the same (other than the Company), the lack of any undisclosed termination, modification, waiver or amendment to any document reviewed by us.

We render this opinion only with respect to, and express no opinion herein concerning the application or effect of the laws of any jurisdiction other than, the existing Delaware General Corporation Law.

In connection with our opinion expressed below, we have assumed that, at or prior to the time of the delivery of any shares of Stock, the Registration Statement will have been declared effective under the Securities Act that the registration will apply to the offer and sale of such shares of Stock and will not have been modified or rescinded and that there will not have occurred any change in law affecting the validity of the issuance of such shares of Stock.

Based upon the foregoing, we are of the opinion that the up to 5,750,000 shares of Stock that may be issued and sold by the Company, when issued, sold and delivered in the manner and for the consideration stated in the Registration Statement and the Prospectus and in accordance with the resolutions adopted by the Board and to be adopted by the Pricing Committee of the Board, will be validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us, if any, in the Registration Statement, the Prospectus constituting a part thereof and any amendments thereto.

This opinion is intended solely for use in connection with issuance and sale of shares of Stock subject to the Registration Statement and is not to be relied upon for any other purpose. This opinion is rendered as of the date first written above and is based solely on our understanding of facts in existence as of such date after the aforementioned examination. In rendering the opinions above, we are opining only as to the specific legal issues expressly set forth therein, and no opinion shall be inferred as to any other matter or matters. We assume no obligation to advise you of any fact, circumstance, event or change in the law or the facts that may hereafter be brought to our attention whether or not such occurrence would affect or modify any of the opinions expressed herein.

Very truly yours,

/s/ Fenwick & West LLP

FENWICK & WEST LLP

INDEMNITY AGREEMENT

This Indemnity Agreement, dated as of _____ ____, 2018 is made by and between Sutro Biopharma, Inc., a Delaware corporation (the "***Company***"), and _____, a director, officer or key employee of the Company or one of the Company's subsidiaries or other service provider who satisfies the definition of Indemnifiable Person set forth below ("***Indemnitee***").

RECITALS

A. The Company is aware that competent and experienced persons are increasingly reluctant to serve as representatives of corporations unless they are protected by comprehensive liability insurance and indemnification, due to increased exposure to litigation costs and risks resulting from their service to such corporations, and due to the fact that the exposure frequently bears no relationship to the compensation of such representatives;

B. The members of the Board of Directors of the Company (the "***Board***") have concluded that to retain and attract talented and experienced individuals to serve as representatives of the Company and its Subsidiaries and Affiliates and to encourage such individuals to take the business risks necessary for the success of the Company and its Subsidiaries and Affiliates, it is necessary for the Company to contractually indemnify certain of its representatives and the representatives of its Subsidiaries and Affiliates, and to assume for itself maximum liability for Expenses and Other Liabilities in connection with claims against such representatives in connection with their service to the Company and its Subsidiaries and Affiliates;

C. Section 145 of the Delaware General Corporation Law ("***Section 145***"), empowers the Company to indemnify by agreement its officers, directors, employees and agents, and persons who serve, at the request of the Company, as directors, officers, employees or agents of other corporations, partnerships, joint ventures, trusts or other enterprises, and expressly provides that the indemnification provided thereby is not exclusive; and

D. The Company desires and has requested Indemnitee to serve or continue to serve as a representative of the Company and/or the Subsidiaries or Affiliates of the Company free from undue concern about inappropriate claims for damages arising out of or related to such services to the Company and/or the Subsidiaries or Affiliates of the Company.

AGREEMENT

NOW, THEREFORE, the parties hereto, intending to be legally bound, hereby agree as follows:

1. Definitions.

(a) Affiliate. For purposes of this Agreement, "***Affiliate***" of the Company means any corporation, partnership, limited liability company, joint venture, trust or other enterprise in respect of which Indemnitee is or was or will be serving as a director, officer, trustee, manager, member, partner, employee, agent, attorney, consultant, member of the entity's governing body (whether constituted as a board of directors, board of managers, general partner or otherwise), fiduciary, or in any other similar capacity at the request, election or direction of the Company, and including, but not limited to, any employee benefit plan of the Company or a Subsidiary or Affiliate of the Company.

(b) Change in Control. For purposes of this Agreement, "***Change in Control***" means (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended), other than a Subsidiary or a trustee or other fiduciary holding securities under an employee benefit plan of the Company or Subsidiary, is or becomes the "Beneficial Owner" (as defined in Rule 13d-3 under said Act), directly or indirectly, of securities of the Company representing 50% or more of the total voting power represented by the Company's then outstanding capital stock or (ii) during any period of two consecutive years, individuals who at the beginning of such period constitute the Board and any new director whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds (2/3) of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof, or (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation, other than a merger or consolidation that would result in the outstanding capital stock of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into capital stock of the surviving entity) at least 80% of the total voting power represented by the capital stock of the Company or such surviving entity outstanding immediately after such merger or consolidation, or the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company (in one transaction or a series of transactions) of all or substantially all of the Company's assets.

(c) Expenses. For purposes of this Agreement, "***Expenses***" means all direct and indirect costs of any type or nature whatsoever (including, without limitation, all attorneys' fees and related disbursements, and other out-of-pocket costs), paid or incurred by Indemnitee in connection with either the investigation, defense or appeal of, or being a witness in, a Proceeding (as defined below), or establishing or enforcing a right to indemnification under this Agreement, Section 145 or otherwise; provided, however, that Expenses shall not include any judgments, fines, ERISA excise taxes or penalties or amounts paid in settlement of a Proceeding.

(d) Indemnifiable Event. For purposes of this Agreement, "***Indemnifiable Event***" means any event or occurrence related to Indemnitee's service for the Company or any Subsidiary or Affiliate as an Indemnifiable Person (as defined below), or by reason of anything done or not done, or any act or omission, by Indemnitee in any such capacity.

(e) Indemnifiable Person. For the purposes of this Agreement, "***Indemnifiable Person***" means any person who is or was a director, officer, trustee, manager, member, partner, employee, attorney, consultant, member of an entity's governing body (whether constituted as a board of directors, board of managers, general partner or otherwise) or other agent or fiduciary of the Company or a Subsidiary or Affiliate of the Company.

(f) Independent Counsel. For purposes of this Agreement, "***Independent Counsel***" means legal counsel that has not performed services for the Company or Indemnitee in the five years preceding the time in question and that would not, under applicable standards of professional conduct, have a conflict of interest in representing either the Company or Indemnitee.

(g) Independent Director. For purposes of this Agreement, "***Independent Director***" means a member of the Board who is not a party to the Proceeding for which a claim is made under this Agreement.

(h) Other Liabilities. For purposes of this Agreement, "***Other Liabilities***" means any and all liabilities of any type whatsoever (including, but not limited to, judgments, fines, penalties, ERISA (or other benefit plan related) excise taxes or penalties, and amounts paid in settlement and all interest, taxes, assessments and other charges paid or payable in connection with or in respect of any such judgments, fines, ERISA (or other benefit plan related) excise taxes or penalties, or amounts paid in settlement).

(i) Proceeding. For the purposes of this Agreement, "***Proceeding***" means any threatened, pending, or completed action, suit or other proceeding, whether civil, criminal, administrative, investigative, legislative or any other type whatsoever, preliminary, informal or formal, including any arbitration or other alternative dispute resolution and including any appeal of any of the foregoing.

(j) Subsidiary. For purposes of this Agreement, "***Subsidiary***" means any entity of which more than 50% of the outstanding voting securities is owned directly or indirectly by the Company.

2. Agreement to Serve. The Indemnitee agrees to serve and/or continue to serve as an Indemnifiable Person in the capacity or capacities in which Indemnitee currently serves the Company as an Indemnifiable Person, and any additional capacity in which Indemnitee may agree to serve, until such time as Indemnitee's service in a particular capacity shall end according to the terms of an agreement, the Company's Certificate of Incorporation or Bylaws, governing law, or otherwise. Nothing contained in this Agreement is intended to create any right to continued employment or other form of service for the Company or a Subsidiary or Affiliate of the Company by Indemnitee.

3. Mandatory Indemnification.

(a) Agreement to Indemnify. In the event Indemnitee is a person who was or is a party to or witness in or is threatened to be made a party to or witness in any Proceeding by reason of an Indemnifiable Event, the Company shall indemnify Indemnitee from and against any and all Expenses and Other Liabilities incurred by Indemnitee in connection with (including in preparation for) such Proceeding to the fullest extent not prohibited by the provisions of the Company's Bylaws and the Delaware General Corporation Law ("***DGCL***"), as the same may be amended from time to time (but only to the extent that such amendment permits the Company to provide broader indemnification rights than the Bylaws or the DGCL permitted prior to the adoption of such amendment).

(b) Exception for Amounts Covered by Insurance and Other Sources. Notwithstanding the foregoing, the Company shall not be obligated to indemnify Indemnitee for Expenses or Other Liabilities of any type whatsoever (including, but not limited to judgments, fines, penalties, ERISA excise taxes or penalties and amounts paid in settlement) to the extent such have been paid directly to Indemnitee (or paid directly to a third party on Indemnitee's behalf) by any directors and officers, or other type, of insurance maintained by the Company; provided, however, that payment made to Indemnitee pursuant to an insurance policy purchased and maintained by Indemnitee at his or her own expense of any amounts otherwise indemnifiable or obligated to be made pursuant to this Agreement shall not reduce the Company's obligations to Indemnitee pursuant to this Agreement.

(c) Company Obligations Primary. The Company hereby acknowledges that Indemnitee may have rights to indemnification for Expenses and Other Liabilities provided by a venture capital firm or other sponsoring organization ("***Other Indemnitor***"). The Company agrees with Indemnitee that the Company is the indemnitor of first resort of Indemnitee with respect to matters for which indemnification is provided under this Agreement and that the Company will be obligated to make all payments due to or for the benefit of Indemnitee under this Agreement without regard to any rights that Indemnitee may have against the Other Indemnitor. The Company hereby waives any equitable rights to contribution or indemnification from the Other Indemnitor in respect of any amounts paid to

Indemnitee hereunder. The Company further agrees that no reimbursement of Other Liabilities or payment of Expenses by the Other Indemnitor to or for the benefit of Indemnitee shall affect the obligations of the Company hereunder, and that the Company shall be obligated to repay the Other Indemnitor for all amounts so paid or reimbursed to the extent that the Company has an obligation to indemnify Indemnitee for such Expenses or Other Liabilities hereunder.

4. Partial Indemnification. If Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of any Expenses or Other Liabilities but not entitled, however, to indemnification for the total amount of such Expenses or Other Liabilities, the Company shall nevertheless indemnify Indemnitee for such total amount except as to the portion thereof for which indemnification is prohibited by the provisions of the Company's Bylaws or the DGCL. In any review or Proceeding to determine the extent of indemnification, the Company shall bear the burden to establish, by clear and convincing evidence, the lack of a successful resolution of a particular claim, issue or matter and which amounts sought in indemnity are allocable to claims, issues or matters which were not successfully resolved.

5. Liability Insurance. So long as Indemnitee shall continue to serve the Company or a Subsidiary or Affiliate of the Company as an Indemnifiable Person and thereafter so long as Indemnitee shall be subject to any possible claim or threatened, pending or completed Proceeding as a result of an Indemnifiable Event, the Company shall use reasonable efforts to maintain in full force and effect for the benefit of Indemnitee as an insured (i) liability insurance issued by one or more reputable insurers and having the policy amount and deductible deemed appropriate by the Board and providing in all respects coverage at least comparable to and in the same amount as that provided to the Chairman of the Board or the Chief Executive Officer of the Company and (ii) any replacement or substitute policies issued by one or more reputable insurers providing in all respects coverage at least comparable to and in the same amount as that being provided to the Chairman of the Board or the Chief Executive Officer of the Company. The purchase, establishment and maintenance of any such insurance or other arrangements shall not in any way limit or affect the rights and obligations of the Company or of Indemnitee under this Agreement except as expressly provided herein, and the execution and delivery of this Agreement by the Company and Indemnitee shall not in any way limit or affect the rights and obligations of the Company or the other party or parties thereto under any such insurance or other arrangement. In the event of a Change in Control subsequent to the date of this Agreement, or the Company's becoming insolvent, including being placed into receivership or entering the federal bankruptcy process, the Company shall maintain in force any and all insurance policies then maintained by the Company in providing insurance—directors' and officers' liability, fiduciary, employment practices or otherwise—in respect of the individual directors and officers of the Company, for a fixed period of six years thereafter. Such coverage shall be non-cancelable and shall be placed and serviced by the Company's incumbent insurance broker or a broker selected by a majority of the Independent Directors.

6. Mandatory Advancement of Expenses. If requested by Indemnitee, the Company shall advance prior to the final disposition of the Proceeding all Expenses reasonably incurred by Indemnitee in connection with (including in preparation for) a Proceeding related to an Indemnifiable Event within (30) days after the receipt by the Company of a statement or statements from Indemnitee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by Indemnitee. The right to advances under this section shall in all events continue until final disposition of any Proceeding, including any appeal therein. Indemnitee hereby undertakes to repay such amounts advanced if, and only if and to the extent that, it shall ultimately be determined that Indemnitee is not entitled to be indemnified by the Company under the provisions of this Agreement, the Company's Bylaws or the DGCL, and no additional form of undertaking with respect to such obligation to repay shall be required. Indemnitee's undertaking to repay any Expenses advanced to Indemnitee hereunder shall be unsecured and shall not be

subject to the accrual or payment of any interest thereon. In the event that Indemnitee's request for the advancement of expenses shall be accompanied by an affidavit of counsel to Indemnitee to the effect that such counsel has reviewed such Expenses and that such Expenses are reasonable in such counsel's view, then such expenses shall be deemed reasonable in the absence of clear and convincing evidence to the contrary.

7. Notice and Other Indemnification Procedures.

(a) Notification. Promptly after receipt by Indemnitee of notice of the commencement of or the threat of commencement of any Proceeding, unless the Company is a named co-defendant with Indemnitee, Indemnitee shall, if Indemnitee believes that indemnification or advancement of Expenses with respect thereto may be sought from the Company under this Agreement, notify the Company of the commencement or threat of commencement thereof. However, a failure so to notify the Company promptly following Indemnitee's receipt of such notice shall not relieve the Company from any liability that it may have to Indemnitee except to the extent that the Company is materially prejudiced in its defense of such Proceeding as a result of such failure.

(b) Insurance and Other Matters. If, at the time of the receipt of a notice of the commencement of a Proceeding pursuant to Section 7(a) above, the Company has director and officer liability insurance in effect, the Company shall give prompt notice of the commencement of such Proceeding to the issuers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all reasonable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such Proceeding in accordance with the terms of such insurance policies. In addition, the Company will instruct the insurers and the Company's insurance broker that they may communicate directly with Indemnitee regarding such claim.

(c) Assumption of Defense. In the event the Company shall be obligated to advance the Expenses for any Proceeding against Indemnitee, the Company, if deemed appropriate by the Company, shall be entitled to assume the defense of such Proceeding as provided herein. Such defense by the Company may include the representation of two or more parties by one attorney or law firm as permitted under the ethical rules and legal requirements related to joint representations. Following delivery of written notice to Indemnitee of the Company's election to assume the defense of such Proceeding, the approval by Indemnitee (which approval shall not be unreasonably withheld) of counsel designated by the Company and the retention of such counsel by the Company, the Company will not be liable to Indemnitee under this Agreement for any fees and expenses of counsel subsequently incurred by Indemnitee with respect to the same Proceeding. If (A) the employment of counsel by Indemnitee has been previously authorized by the Company, (B) Indemnitee shall have notified the Board in writing that Indemnitee has reasonably concluded that there may be a conflict of interest between the Company and Indemnitee in the conduct of any such defense, (C) the Company fails to employ counsel to assume the defense of such Proceeding, or (D) after a Change in Control, the employment of counsel by Indemnitee has been approved by the Independent Counsel, the Expenses related to work conducted by Indemnitee's counsel shall be subject to indemnification and/or advancement pursuant to the terms of this Agreement. Nothing herein shall prevent Indemnitee from employing counsel for any such Proceeding at Indemnitee's expense. Indemnitee agrees that any such separate counsel retained by Indemnitee will be a member of any approved list of panel counsel under the Company's applicable directors' and officers' insurance policy, should the applicable policy provide for a panel of approved counsel.

(d) Settlement. The Company shall not be liable to indemnify Indemnitee under this Agreement or otherwise for any amounts paid in settlement of any Proceeding effected without the Company's written consent; provided, however, that if a Change in Control has occurred subsequent to the date of this Agreement, the Company shall be liable for indemnification of Indemnitee for amounts

paid in settlement if the Independent Counsel has approved the settlement. Neither the Company nor any Subsidiary or Affiliate shall enter into a settlement of any Proceeding that might result in the imposition of any Expense, Other Liability, penalty, limitation or detriment on Indemnitee, whether indemnifiable under this Agreement or otherwise, without Indemnitee's written consent. Neither the Company nor Indemnitee shall unreasonably withhold consent from any settlement of any Proceeding. The Company shall promptly notify Indemnitee upon the Company's receipt of an offer to settle, or if the Company makes an offer to settle, any Proceeding, and provide Indemnitee with a reasonable amount of time to consider such settlement, in the case of any such settlement for which the consent of Indemnitee would be required hereunder. The Company shall not, on its own behalf, settle any part of any Proceeding to which Indemnitee is a party with respect to other parties (including the Company) without the written consent of Indemnitee if any portion of the settlement is to be funded from insurance proceeds unless approved by a majority of the Independent Directors, provided that this sentence shall cease to be of any force and effect if it has been determined in accordance with this Agreement that Indemnitee is not entitled to indemnification hereunder with respect to such Proceeding or if the Company's obligations hereunder to Indemnitee with respect to such Proceeding have been fully discharged.

8. Determination of Right to Indemnification.

(a) Success on the Merits or Otherwise. To the extent that Indemnitee has been successful on the merits or otherwise in defense of any Proceeding referred to in Section 3(a) above or in the defense of any claim, issue or matter described therein, the Company shall indemnify Indemnitee against Expenses actually and reasonably incurred in connection therewith.

(b) Indemnification in Other Situations. In the event that Section 8(a) is inapplicable, the Company shall also indemnify Indemnitee if Indemnitee has not failed to meet the applicable standard of conduct for indemnification.

(c) Forum. Indemnitee shall be entitled to select the forum in which determination of whether or not Indemnitee has met the applicable standard of conduct shall be decided, and such election will be made from among the following:

a. Those members of the Board who are Independent Directors even though less than a quorum;

b. A committee of Independent Directors designated by a majority vote of Independent Directors, even though less than a quorum; or

c. Independent Counsel selected by Indemnitee and approved by the Board, which approval may not be unreasonably withheld, which counsel shall make such determination in a written opinion.

If Indemnitee is an officer or a director of the Company at the time that Indemnitee is selecting the forum, then Indemnitee shall not select Independent Counsel as such forum unless there are no Independent Directors or unless the Independent Directors agree to the selection of Independent Counsel as the forum.

The selected forum shall be referred to herein as the "Reviewing Party". Notwithstanding the foregoing, following any Change in Control subsequent to the date of this Agreement, the Reviewing Party shall be Independent Counsel selected in the manner provided in c. above.

(d) Decision Timing and Expenses. As soon as practicable, and in no event later than thirty (30) days after receipt by the Company of written notice of Indemnitee's choice of forum pursuant to Section 8(c) above, the Company and Indemnitee shall each submit to the Reviewing Party such information as they believe is appropriate for the Reviewing Party to consider. The Reviewing Party shall arrive at its decision within a reasonable period of time following the receipt of all such information from the Company and Indemnitee, but in no event later than thirty (30) days following the receipt of all such information, provided that the time by which the Reviewing Party must reach a decision may be extended by mutual agreement of the Company and Indemnitee. All Expenses associated with the process set forth in this Section 8(d), including but not limited to the Expenses of the Reviewing Party, shall be paid by the Company.

(e) Delaware Court of Chancery. Notwithstanding a final determination by any Reviewing Party that Indemnitee is not entitled to indemnification with respect to a specific Proceeding, Indemnitee shall have the right to apply to the Court of Chancery, for the purpose of enforcing Indemnitee's right to indemnification pursuant to this Agreement.

(f) Expenses. The Company shall indemnify Indemnitee against all Expenses incurred by Indemnitee in connection with any hearing or Proceeding under this Section 8 involving Indemnitee and against all Expenses and Other Liabilities incurred by Indemnitee in connection with any other Proceeding between the Company and Indemnitee involving the interpretation or enforcement of the rights of Indemnitee under this Agreement unless a court of competent jurisdiction finds that each of the material claims of Indemnitee in any such Proceeding was frivolous or made in bad faith.

(g) Determination of "Good Faith". For purposes of any determination of whether Indemnitee acted in "good faith" or acted in "bad faith," Indemnitee shall be deemed to have acted in good faith or not acted in bad faith if in taking or failing to take the action in question Indemnitee relied on the records or books of account of the Company or a Subsidiary or Affiliate, including financial statements, or on information, opinions, reports or statements provided to Indemnitee by the officers or other employees of the Company or a Subsidiary or Affiliate in the course of their duties, or on the advice of legal counsel for the Company or a Subsidiary or Affiliate, or on information or records given or reports made to the Company or a Subsidiary or Affiliate by an independent certified public accountant or by an appraiser or other expert selected by the Company or a Subsidiary or Affiliate, or by any other person (including legal counsel, accountants and financial advisors) as to matters Indemnitee reasonably believes are within such other person's professional or expert competence and who has been selected with reasonable care by or on behalf of the Company or a Subsidiary or Affiliate. In connection with any determination as to whether Indemnitee is entitled to be indemnified hereunder, or to advancement of Expenses, the Reviewing Party or court shall presume that Indemnitee has satisfied the applicable standard of conduct and is entitled to indemnification or advancement of Expenses, as the case may be, and the burden of proof shall be on the Company to establish, by clear and convincing evidence, that Indemnitee is not so entitled. The provisions of this Section 8(g) shall not be deemed to be exclusive or to limit in any way the other circumstances in which Indemnitee may be deemed to have met the applicable standard of conduct set forth in this Agreement. In addition, the knowledge and/or actions, or failures to act, of any other person serving the Company or a Subsidiary or Affiliate as an Indemnifiable Person shall not be imputed to Indemnitee for purposes of determining the right to indemnification hereunder.

9. Exceptions. Any other provision herein to the contrary notwithstanding,

(a) Claims Initiated by Indemnitee. The Company shall not be obligated pursuant to the terms of this Agreement to indemnify or advance Expenses to Indemnitee with respect to Proceedings or claims initiated or brought voluntarily by Indemnitee and not by way of defense, except

(1) with respect to Proceedings brought to establish or enforce a right to indemnification under this Agreement, any other statute or law, as permitted under Section 145, or otherwise, (2) where the Board has consented to the initiation of such Proceeding, or (3) with respect to Proceedings brought to discharge Indemnitee's fiduciary responsibilities, whether under ERISA or otherwise, but such indemnification or advancement of Expenses may be provided by the Company in specific cases if the Board finds it to be appropriate; or

(b) Actions Based on Federal Statutes Regarding Profit Recovery and Return of Bonus Payments The Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee on account of (i) any suit in which judgment is rendered against Indemnitee for an accounting of profits made from the purchase or sale by Indemnitee of securities of the Company pursuant to the provisions of Section 16(b) of the Securities Exchange Act of l934 and amendments thereto or similar provisions of any federal, state or local statutory law, or (ii) any reimbursement of the Company by the Indemnitee of any bonus or other incentive-based or equity-based compensation or of any profits realized by the Indemnitee from the sale of securities of the Company, as required in each case under the Exchange Act (including any such reimbursements that arise from an accounting restatement of the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "***Sarbanes-Oxley Act***"), or the payment to the Company of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 306 of the Sarbanes-Oxley Act); or

(c) Unlawful Indemnification. The Company shall not be obligated pursuant to the terms of this Agreement to indemnify Indemnitee for Other Liabilities if such indemnification is prohibited by law as determined by a court of competent jurisdiction in a final adjudication not subject to further appeal.

10. Non-exclusivity. The provisions for indemnification and advancement of Expenses set forth in this Agreement shall not be deemed exclusive of any other rights which Indemnitee may have under any provision of law, the Company's Certificate of Incorporation or Bylaws, the vote of the Company's stockholders or disinterested directors, other agreements, or otherwise, both as to acts or omissions in his or her official capacity and to acts or omissions in another capacity while serving the Company or a Subsidiary or Affiliate as an Indemnifiable Person and Indemnitee's rights hereunder shall continue after Indemnitee has ceased serving the Company or a Subsidiary or Affiliate as an Indemnifiable Person and shall inure to the benefit of the heirs, executors and administrators of Indemnitee.

11. Severability. If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable for any reason whatsoever, (i) the validity, legality and enforceability of the remaining provisions of the Agreement (including, without limitation, all portions of any paragraphs of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby, and (ii) to the fullest extent possible, the provisions of this Agreement (including, without limitation, all portions of any paragraphs of this Agreement containing any such provision held to be invalid, illegal or unenforceable, that are not themselves invalid, illegal or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

12. Supersession, Modification and Waiver. This Agreement supersedes any prior indemnification agreement between the Indemnitee and the Company, its Subsidiaries or its Affiliates. If the Company and Indemnitee have previously entered into an indemnification agreement providing for the indemnification of Indemnitee by the Company, parties entry into this Agreement shall be deemed to amend and restate such prior agreement to read in its entirety as, and be superseded by, this Agreement. No supplement, modification or amendment of this Agreement shall be binding unless executed in writing

by both of the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (whether or not similar) and except as expressly provided herein, no such waiver shall constitute a continuing waiver.

13. Successors and Assigns. The terms of this Agreement shall bind, and shall inure to the benefit of, and be enforceable by the parties hereto and their respective successors (including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business and/or assets of the Company), assigns, spouses, heirs and personal and legal representatives. In addition, the Company shall require and cause any successor (whether direct or indirect by purchase, merger, consolidation or otherwise) to all, substantially all, or a substantial part, of the business and/or assets of the Company, by written agreement in form and substance satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement and indemnify Indemnitee to the fullest extent permitted by law.

14. Notice. All notices, requests, demands and other communications under this Agreement shall be in writing and shall be deemed duly given (i) if delivered by hand and a receipt is provided by the party to whom such communication is delivered, (ii) if mailed by certified or registered mail with postage prepaid, return receipt requested, on the signing by the recipient of an acknowledgement of receipt form accompanying delivery through the U.S. mail, (iii) personal service by a process server, or (iv) delivery to the recipient's address by overnight delivery (e.g., FedEx, UPS or DHL) or other commercial delivery service. Addresses for notice to either party are as shown on the signature page of this Agreement, or as subsequently modified by written notice complying with the provisions of this Section 14. Delivery of communications to the Company with respect to this Agreement shall be sent to the attention of the Company's Chief Financial Officer.

15. No Presumptions. For purposes of this Agreement, the termination of any Proceeding, by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a presumption that Indemnitee did not meet any particular standard of conduct or have any particular belief or that a court has determined that indemnification is not permitted by applicable law or otherwise. In addition, neither the failure of the Company or a Reviewing Party to have made a determination as to whether Indemnitee has met any particular standard of conduct or had any particular belief, nor an actual determination by the Company or a Reviewing Party that Indemnitee has not met such standard of conduct or did not have such belief, prior to the commencement of Proceedings by Indemnitee to secure a judicial determination by exercising Indemnitee's rights under Section 8(e) of this Agreement shall be a defense to Indemnitee's claim or create a presumption that Indemnitee has failed to meet any particular standard of conduct or did not have any particular belief or is not entitled to indemnification under applicable law or otherwise.

16. Survival of Rights. The rights conferred on Indemnitee by this Agreement shall continue after Indemnitee has ceased to serve the Company or a Subsidiary or Affiliate of the Company as an Indemnifiable Person and shall inure to the benefit of Indemnitee's heirs, executors and administrators.

17. Subrogation and Contribution. (a) Except as otherwise expressly provided in this Agreement, in the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee, who shall execute all documents required and shall do all acts that may be necessary to secure such rights and to enable the Company effectively to bring suit to enforce such rights.

(b) To the fullest extent permissible under applicable law, if the indemnification provided for in this Agreement is unavailable to Indemnitee for any reason whatsoever, the Company, in lieu of indemnifying Indemnitee, shall contribute to the amount incurred by or on behalf of Indemnitee,

whether for judgments, fines, penalties, excise taxes, amounts paid or to be paid in settlement and/or for Expenses, in connection with any claim relating to an indemnifiable event under this Agreement, in such proportion as is deemed fair and reasonable in light of all of the circumstances of such Proceeding in order to reflect (i) the relative benefits received by the Company and Indemnitee as a result of the event(s) and/or transaction(s) giving cause to such Proceeding; and/or (ii) the relative fault of the Company (and its directors, officers, employees and agents) and Indemnitee in connection with such event(s) and/or transaction(s).

18. Specific Performance, Etc. The parties recognize that if any provision of this Agreement is violated by the Company, Indemnitee may be without an adequate remedy at law. Accordingly, in the event of any such violation, Indemnitee shall be entitled, if Indemnitee so elects, to institute Proceedings, either in law or at equity, to obtain damages, to enforce specific performance, to enjoin such violation, or to obtain any relief or any combination of the foregoing as Indemnitee may elect to pursue.

19. Counterparts. This Agreement may be executed in counterparts, each of which shall for all purposes be deemed to be an original but all of which together shall constitute one and the same agreement. Only one such counterpart signed by the party against whom enforceability is sought needs to be produced to evidence the existence of this Agreement.

20. Headings. The headings of the sections and paragraphs of this Agreement are inserted for convenience only and shall not be deemed to constitute part of this Agreement or to affect the construction or interpretation thereof.

21. Governing Law. This Agreement shall be governed exclusively by and construed according to the laws of the State of Delaware, as applied to contracts between Delaware residents entered into and to be performed entirely with Delaware.

22. Consent to Jurisdiction. The Company and Indemnitee each hereby irrevocably consent to the jurisdiction of the courts of the State of Delaware for all purposes in connection with any Proceeding which arises out of or relates to this Agreement.

[*Signature Page Follows*]

The parties hereto have entered into this Indemnity Agreement effective as of the date first above written.

SUTRO BIOPHARMA, INC.:

By: _____

Its: _____

INDEMNITEE:

_____

Address: _____

_____

SUTRO BIOPHARMA, INC.

2018 EQUITY INCENTIVE PLAN

1. PURPOSE. The purpose of this Plan is to provide incentives to attract, retain and motivate eligible persons whose present and potential contributions are important to the success of the Company, and any Parents, Subsidiaries and Affiliates that exist now or in the future, by offering them an opportunity to participate in the Company's future performance through the grant of Awards. Capitalized terms not defined elsewhere in the text are defined in Section 28.

2. SHARES SUBJECT TO THE PLAN.

2.1. Number of Shares Available. Subject to Sections 2.6, 21, the automatic increase set forth in Section 2.4 and any other applicable provisions hereof, the total number of Shares reserved and available for grant and issuance pursuant to this Plan as of the date of adoption of the Plan by the Board, is Two Million Three Hundred Thousand (2,300,000) Shares, plus (a) any reserved shares not issued or subject to outstanding grants under the Company's 2004 Stock Plan on the Effective Date (as defined below), (b) shares that are subject to stock options or other awards granted under the Company's 2004 Stock Plan (the "***Prior Plan***") that cease to be subject to such stock options or other awards by forfeiture or otherwise after the Effective Date, (c) shares issued under the Prior Plan before or after the Effective Date pursuant to the exercise of stock options that are, after the Effective Date, forfeited, (d) shares issued under the Prior Plan that are repurchased by the Company at the original issue price and (e) shares that are subject to stock options or other awards under the Prior Plan that are used to pay the exercise price of an option or withheld to satisfy the tax withholding obligations related to any award.

2.2. Lapsed, Returned Awards. Shares subject to Awards, and Shares issued under the Plan under any Award, will again be available for grant and issuance in connection with subsequent Awards under this Plan to the extent such Shares: (a) are subject to issuance upon exercise of an Option or SAR granted under this Plan but which cease to be subject to the Option or SAR for any reason other than exercise of the Option or SAR; (b) are subject to Awards granted under this Plan that are forfeited or are repurchased by the Company at the original issue price; or (c) are subject to Awards granted under this Plan that otherwise terminate without such Shares being issued. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. Shares used to pay the exercise price of an Award or withheld to satisfy the tax withholding obligations related to an Award will become available for future grant or sale under the Plan. For the avoidance of doubt, Shares that otherwise become available for grant and issuance because of the provisions of this Section 2.2 shall not include Shares subject to Awards that initially became available because of the substitution clause in Section 21.2 hereof.

2.3. Minimum Share Reserve. At all times the Company will reserve and keep available a sufficient number of Shares as will be required to satisfy the requirements of all outstanding Awards granted under this Plan.

2.4. Automatic Share Reserve Increase. The number of Shares available for grant and issuance under the Plan will be increased on January 1 of 2019 through 2028 by the lesser of (a) five (5%) of the shares of all classes of the Company's common stock outstanding on each December 31 immediately prior to the date of increase or (b) such number of Shares determined by the Board.

2.5. ISO Limitation. No more than Twenty Three Million (23,000,000) Shares shall be issued pursuant to the exercise of ISOs (as defined below) under the Plan.

2.6. Adjustment of Shares. If the number of outstanding Shares is changed by a stock dividend, extraordinary dividend or distribution (whether in cash, shares or other property, other than a regular cash dividend) recapitalization, stock split, reverse stock split, subdivision, combination, consolidation, reclassification, spin-off or similar change in the capital structure of the Company, without consideration, then (a) the number and class of Shares reserved for issuance and future grant under the Plan set forth in Section 2.1, including shares reserved under sub-clauses (a)-(e) of Section 2.1, (b) the Exercise Prices of and number and class of Shares subject to outstanding Options and SARs, (c) the number and class of Shares subject to other outstanding Awards and (d) the maximum number and class of Shares that may be issued as ISOs set forth in Section 2.5 will be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with applicable securities laws; provided that fractions of a Share will not be issued.

If, by reason of an adjustment pursuant to this Section 2.6, a Participant's Award Agreement or other agreement related to any Award or the Shares subject to such Award covers additional or different shares of stock or securities, then such additional or different shares, and the Award Agreement or such other agreement in respect thereof, will be subject to all of the terms, conditions and restrictions which were applicable to the Award or the Shares subject to such Award prior to such adjustment.

3. ELIGIBILITY. ISOs may be granted only to Employees. All other Awards may be granted to Employees, Consultants, and Directors provided such Consultants and Directors render bona fide services not in connection with the offer and sale of securities in a capital-raising transaction.

4. ADMINISTRATION.

4.1. Committee Composition; Authority. This Plan will be administered by the Committee or by the Board acting as the Committee. Subject to the general purposes, terms and conditions of this Plan, and to the direction of the Board, the Committee will have full power to implement and carry out this Plan, except, however, the Board will establish the terms for the grant of an Award to Non-Employee Directors. The Committee will have the authority to:

(a) construe and interpret this Plan, any Award Agreement and any other agreement or document executed pursuant to this Plan;

(b) prescribe, amend and rescind rules and regulations relating to this Plan or any Award;

(c) select persons to receive Awards;

(d) determine the form and terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the Exercise Price, the time or times when Awards may vest and be exercised (which may be based on performance criteria) or settled, any vesting acceleration or waiver of forfeiture restrictions, the method to satisfy tax withholding obligations or any other tax liability legally due and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Committee will determine;

(e) determine the number of Shares or other consideration subject to Awards;

(f) determine the Fair Market Value in good faith and interpret the applicable provisions of this Plan and the definition of Fair Market Value in connection with circumstances that impact the Fair Market Value, if necessary;

(g) determine whether Awards will be granted singly, in combination with, in tandem with, in replacement of, or as alternatives to, other Awards under this Plan or any other incentive or compensation plan of the Company or any Parent, Subsidiary or Affiliate;

(h) grant waivers of Plan or Award conditions;

(i) determine the vesting, exercisability and payment of Awards;

(j) correct any defect, supply any omission or reconcile any inconsistency in this Plan, any Award or any Award Agreement;

(k) determine whether an Award has been vested and/or earned;

(l) determine the terms and conditions of any, and to institute any Exchange Program;

(m) reduce or waive any criteria with respect to Performance Factors;

(n) adjust Performance Factors;

(o) adopt terms and conditions, rules and/or procedures (including the adoption of any subplan under this Plan) relating to the operation and administration of the Plan to accommodate requirements of local law and procedures outside of the United States or to qualify Awards for special tax treatment under laws of jurisdictions other than the United States;

(p) exercise discretion with respect to Performance Awards;

(q) make all other determinations necessary or advisable for the administration of this Plan; and

(r) delegate any of the foregoing to a subcommittee or to one or more executive officers pursuant to a specific delegation as permitted by applicable law, including Section 157(c) of the Delaware General Corporation Law.

4.2. Committee Interpretation and Discretion. Any determination made by the Committee with respect to any Award will be made in its sole discretion at the time of grant of the Award or, unless in contravention of any express term of the Plan or Award, at any later time, and such determination will be final and binding on the Company and all persons having an interest in any Award under the Plan. Any dispute regarding the interpretation of the Plan or any Award Agreement will be submitted by the Participant or Company to the Committee for review. The resolution of such a dispute by the Committee will be final and binding on the Company and the Participant. The Committee may delegate to one or more executive officers the authority to review and resolve disputes with respect to Awards held by Participants who are not Insiders, and such resolution will be final and binding on the Company and the Participant.

4.3. Section 16 of the Exchange Act. Awards granted to Participants who are subject to Section 16 of the Exchange Act must be approved by two or more "non-employee directors" (as defined in the regulations promulgated under Section 16 of the Exchange Act).

4.4. Documentation. The Award Agreement for a given Award, the Plan and any other documents may be delivered to, and accepted by, a Participant or any other person in any manner (including electronic distribution or posting) that meets applicable legal requirements.

4.5. Foreign Award Recipients. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws and practices in other countries in which the Company and its Subsidiaries or Affiliates operate or have Employees or other individuals eligible for Awards, the Committee, in its sole discretion, will have the power and authority to: (a) determine which Subsidiaries and Affiliates will be covered by the Plan; (b) determine which individuals outside the United States are eligible to participate in the Plan; (c) modify the terms and conditions of any Award granted to individuals outside the United States or foreign nationals to comply with applicable foreign laws, policies, customs and practices; (d) establish subplans and modify exercise procedures and other terms and procedures, to the extent the Committee determines such actions to be necessary or advisable (and such subplans and/or modifications will be attached to this Plan as appendices, if necessary); provided, however, that no such subplans and/or modifications will increase the share limitations contained in Section 2.1 hereof; and (e) take any action, before or after an Award is made, that the Committee determines to be necessary or advisable to obtain approval or comply with any local governmental regulatory exemptions or approvals. Notwithstanding the foregoing, the Committee may not take any actions hereunder, and no Awards will be granted, that would violate the Exchange Act or any other applicable United States securities law, the Code, or any other applicable United States governing statute or law.

5. OPTIONS. An Option is the right but not the obligation to purchase a Share, subject to certain conditions, if applicable. The Committee may grant Options to eligible Employees, Consultants and Directors and will determine whether such Options will be Incentive Stock Options within the meaning of the Code ("***ISOs***") or Nonqualified Stock Options ("***NSOs***"), the number of Shares subject to the Option, the Exercise Price of the Option, the period during which the Option may vest and be exercised, and all other terms and conditions of the Option, subject to the following terms of this section.

5.1. Option Grant. Each Option granted under this Plan will identify the Option as an ISO or an NSO. An Option may be, but need not be, awarded upon satisfaction of such Performance Factors during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the Option is being earned upon the satisfaction of Performance Factors, then the Committee will: (a) determine the nature, length and starting date of any Performance Period for each Option; and (b) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may overlap and Participants may participate simultaneously with respect to Options that are subject to different performance goals and other criteria.

5.2. Date of Grant. The date of grant of an Option will be the date on which the Committee makes the determination to grant such Option, or a specified future date. The Award Agreement will be delivered to the Participant within a reasonable time after the granting of the Option.

5.3. Exercise Period. Options may be vested and exercisable within the times or upon the conditions as set forth in the Award Agreement governing such Option; provided, however, that no Option will be exercisable after the expiration of ten (10) years from the date the Option is granted; and provided further that no ISO granted to a person who, at the time the ISO is granted, directly or by attribution owns more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any Parent or Subsidiary ("***Ten Percent Stockholder***") will be exercisable after the expiration of five (5) years from the date the ISO is granted. The Committee also may provide for Options to become exercisable at one time or from time to time, periodically or otherwise, in such number of Shares or percentage of Shares as the Committee determines.

5.4. Exercise Price. The Exercise Price of an Option will be determined by the Committee when the Option is granted; provided that: (a) the Exercise Price of an Option will be not less than one hundred percent (100%) of the Fair Market Value of the Shares on the date of grant and (b) the Exercise Price of any ISO granted to a Ten Percent Stockholder will not be less than one hundred ten percent (110%) of the Fair Market Value of the Shares on the date of grant. Payment for the Shares purchased may be made in accordance with Section 11 and the Award Agreement and in accordance with any procedures established by the Company.

5.5. Method of Exercise. Any Option granted hereunder will be vested and exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Committee and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share. An Option will be deemed exercised when the Company receives: (a) notice of exercise (in such form as the Committee may specify from time to time) from the person entitled to exercise the Option (and/or via electronic execution through the authorized third party administrator), and (b) full payment for the Shares with respect to which the Option is exercised (together with applicable withholding taxes). Full payment may consist of any consideration and method of payment authorized by the Committee and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 2.6 of the Plan. Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

5.6. Termination of Service. If the Participant's Service terminates for any reason except for Cause or the Participant's death or Disability, then the Participant may exercise such Participant's Options only to the extent that such Options would have been exercisable by the Participant date Participant's Service terminates no later than three (3) months after the date Participant's Service terminates (or such shorter or longer time period as may be determined by the Committee, with any exercise beyond three (3) months after the date Participant's employment terminates deemed to be the exercise of an NSO), but in any event no later than the expiration date of the Options.

(a) Death. If the Participant's Service terminates because of the Participant's death (or the Participant dies within three (3) months after Participant's Service terminates other than for Cause or because of the Participant's Disability), then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the date Participant's Service terminates and must be exercised by the Participant's legal representative, or authorized assignee, no later than twelve (12) months after the date Participant's Service terminates (or such shorter time period or longer time period as may be determined by the Committee), but in any event no later than the expiration date of the Options.

(b) Disability. If the Participant's Service terminates because of the Participant's Disability, then the Participant's Options may be exercised only to the extent that such Options would have been exercisable by the Participant on the date Participant's Service terminates and must be exercised by the Participant (or the Participant's legal representative or authorized assignee) no later than twelve (12) months after the date Participant's Service terminates (or such shorter or longer time period as may be determined by the Committee, with any exercise beyond (a) three (3) months after the date Participant's employment terminates when the termination of Service is for a Disability that is not a "permanent and total disability" as defined in Section 22(e)(3) of the Code, or (b) twelve (12) months after the date Participant's employment terminates when the termination of Service is for a Disability that is a "permanent and total disability" as defined in Section 22(e)(3) of the Code, deemed to be exercise of an NSO), but in any event no later than the expiration date of the Options.

(c) Cause. If the Participant's Service terminates for Cause, then Participant's Options will expire on such Participant's date of termination of Service, or at such later time and on such conditions as are determined by the Committee, but in any event no later than the expiration date of the Options. Unless otherwise provided in an employment agreement, Award Agreement or other applicable agreement Cause will have the meaning set forth in the Plan.

5.7. Limitations on Exercise. The Committee may specify a minimum number of Shares that may be purchased on any exercise of an Option, provided that such minimum number will not prevent any Participant from exercising the Option for the full number of Shares for which it is then exercisable.

5.8. Limitations on ISOs. With respect to Awards granted as ISOs, to the extent that the aggregate Fair Market Value of the Shares with respect to which such ISOs are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars ($100,000), such Options will be treated as NSOs. For purposes of this Section 5.8, ISOs will be taken into account in the order in which they were granted. The Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted. In the event that the Code or the regulations promulgated thereunder are amended after the Effective Date to provide for a different limit on the Fair Market Value of Shares permitted to be subject to ISOs, such different limit will be automatically incorporated herein and will apply to any Options granted after the effective date of such amendment.

5.9. Modification, Extension or Renewal. The Committee may modify, extend or renew outstanding Options and authorize the grant of new Options in substitution therefor, provided that any such action may not, without the written consent of a Participant, impair any of such Participant's rights under any Option previously granted. Any outstanding ISO that is modified, extended, renewed or otherwise altered will be treated in accordance with Section 424(h) of the Code. Subject to Section 18 of this Plan, by written notice to affected Participants, the Committee may reduce the Exercise Price of outstanding Options without the consent of such Participants; provided, however, that the Exercise Price may not be reduced below the Fair Market Value on the date the action is taken to reduce the Exercise Price.

5.10. No Disqualification. Notwithstanding any other provision in this Plan, no term of this Plan relating to ISOs will be interpreted, amended or altered, nor will any discretion or authority granted under this Plan be exercised, so as to disqualify this Plan under Section 422 of the Code or, without the consent of the Participant affected, to disqualify any ISO under Section 422 of the Code.

6. RESTRICTED STOCK AWARDS. A Restricted Stock Award is an offer by the Company to sell to an eligible Employee, Consultant, or Director Shares that are subject to restrictions ("***Restricted Stock***"). The Committee will determine to whom an offer will be made, the number of Shares the Participant may purchase, the Purchase Price, the restrictions under which the Shares will be subject and all other terms and conditions of the Restricted Stock Award, subject to the Plan.

6.1. Restricted Stock Purchase Agreement. All purchases under a Restricted Stock Award will be evidenced by an Award Agreement. Except as may otherwise be provided in an Award Agreement, a Participant accepts a Restricted Stock Award by signing and delivering to the Company an Award Agreement with full payment of the Purchase Price, within thirty (30) days from the date the Award Agreement was delivered to the Participant. If the Participant does not accept such Award within thirty (30) days, then the offer of such Restricted Stock Award will terminate, unless the Committee determines otherwise.

6.2. Purchase Price. The Purchase Price for a Restricted Stock Award will be determined by the Committee and may be less than Fair Market Value on the date the Restricted Stock Award is granted. Payment of the Purchase Price must be made in accordance with Section 11 of the Plan, and the Award Agreement and in accordance with any procedures established by the Company.

6.3. Terms of Restricted Stock Awards. Restricted Stock Awards will be subject to such restrictions as the Committee may impose or are required by law. These restrictions may be based on completion of a specified number of years of service with the Company or upon completion of Performance Factors, if any, during any Performance Period as set out in advance in the Participant's Award Agreement. Prior to the grant of a Restricted Stock

Award, the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Restricted Stock Award; (b) select from among the Performance Factors to be used to measure performance goals, if any; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Restricted Stock Awards that are subject to different Performance Periods and having different performance goals and other criteria.

6.4. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee).

7. STOCK BONUS AWARDS. A Stock Bonus Award is an award to an eligible Employee, Consultant, or Director of Shares for Services to be rendered or for past Services already rendered to the Company or any Parent, Subsidiary or Affiliate. All Stock Bonus Awards shall be made pursuant to an Award Agreement. No payment from the Participant will be required for Shares awarded pursuant to a Stock Bonus Award.

7.1. Terms of Stock Bonus Awards. The Committee will determine the number of Shares to be awarded to the Participant under a Stock Bonus Award and any restrictions thereon. These restrictions may be based upon completion of a specified number of years of service with the Company or upon satisfaction of performance goals based on Performance Factors during any Performance Period as set out in advance in the Participant's Stock Bonus Agreement. Prior to the grant of any Stock Bonus Award the Committee shall: (a) determine the nature, length and starting date of any Performance Period for the Stock Bonus Award; (b) select from among the Performance Factors to be used to measure performance goals; and (c) determine the number of Shares that may be awarded to the Participant. Performance Periods may overlap and a Participant may participate simultaneously with respect to Stock Bonus Awards that are subject to different Performance Periods and different performance goals and other criteria.

7.2. Form of Payment to Participant. Payment may be made in the form of cash, whole Shares, or a combination thereof, based on the Fair Market Value of the Shares earned under a Stock Bonus Award on the date of payment, as determined in the sole discretion of the Committee.

7.3. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee).

8. STOCK APPRECIATION RIGHTS. A Stock Appreciation Right ("***SAR***") is an award to an eligible Employee, Consultant, or Director that may be settled in cash, or Shares (which may consist of Restricted Stock), having a value equal to (a) the difference between the Fair Market Value on the date of exercise over the Exercise Price multiplied by (b) the number of Shares with respect to which the SAR is being settled (subject to any maximum number of Shares that may be issuable as specified in an Award Agreement). All SARs shall be made pursuant to an Award Agreement.

8.1. Terms of SARs. The Committee will determine the terms of each SAR including, without limitation: (a) the number of Shares subject to the SAR; (b) the Exercise Price and the time or times during which the SAR may be settled; (c) the consideration to be distributed on settlement of the SAR; and (d) the effect of the Participant's termination of Service on each SAR. The Exercise Price of the SAR will be determined by the Committee when the SAR is granted, and may not be less than Fair Market Value. A SAR may be awarded upon satisfaction of Performance Factors, if any, during any Performance Period as are set out in advance in the Participant's individual Award Agreement. If the SAR is being earned upon the satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for each SAR; and (y) select from among the Performance Factors to be used to measure the performance, if any. Performance Periods may

overlap and Participants may participate simultaneously with respect to SARs that are subject to different Performance Factors and other criteria.

8.2. Exercise Period and Expiration Date. A SAR will be exercisable within the times or upon the occurrence of events determined by the Committee and set forth in the Award Agreement governing such SAR. The SAR Agreement shall set forth the expiration date; provided that no SAR will be exercisable after the expiration of ten (10) years from the date the SAR is granted. The Committee may also provide for SARs to become exercisable at one time or from time to time, periodically or otherwise (including, without limitation, upon the attainment during a Performance Period of performance goals based on Performance Factors), in such number of Shares or percentage of the Shares subject to the SAR as the Committee determines. Except as may be set forth in the Participant's Award Agreement, vesting ceases on the date Participant's Service terminates (unless determined otherwise by the Committee). Notwithstanding the foregoing, the rules of Section 5.6 also will apply to SARs.

8.3. Form of Settlement. Upon exercise of a SAR, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying (a) the difference between the Fair Market Value of a Share on the date of exercise over the Exercise Price; times (b) the number of Shares with respect to which the SAR is exercised. At the discretion of the Committee, the payment from the Company for the SAR exercise may be in cash, in Shares of equivalent value, or in some combination thereof. The portion of a SAR being settled may be paid currently or on a deferred basis with such interest, if any, as the Committee determines, provided that the terms of the SAR and any deferral satisfy the requirements of Section 409A of the Code to the extent applicable.

8.4. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee).

9. RESTRICTED STOCK UNITS. A Restricted Stock Unit ("***RSU***") is an award to an eligible Employee, Consultant, or Director covering a number of Shares that may be settled in cash, or by issuance of those Shares (which may consist of Restricted Stock). All RSUs shall be made pursuant to an Award Agreement.

9.1. Terms of RSUs. The Committee will determine the terms of an RSU including, without limitation: (a) the number of Shares subject to the RSU; (b) the time or times during which the RSU may be settled; (c) the consideration to be distributed on settlement; and (d) the effect of the Participant's termination of Service on each RSU; provided that no RSU shall have a term longer than ten (10) years. An RSU may be awarded upon satisfaction of such performance goals based on Performance Factors during any Performance Period as are set out in advance in the Participant's Award Agreement. If the RSU is being earned upon satisfaction of Performance Factors, then the Committee will: (x) determine the nature, length and starting date of any Performance Period for the RSU; (y) select from among the Performance Factors to be used to measure the performance, if any; and (z) determine the number of Shares deemed subject to the RSU. Performance Periods may overlap and Participants may participate simultaneously with respect to RSUs that are subject to different Performance Periods and different performance goals and other criteria.

9.2. Form and Timing of Settlement. Payment of earned RSUs shall be made as soon as practicable after the date(s) determined by the Committee and set forth in the Award Agreement. The Committee, in its sole discretion, may settle earned RSUs in cash, Shares, or a combination of both. The Committee may also permit a Participant to defer payment under a RSU to a date or dates after the RSU is earned provided that the terms of the RSU and any deferral satisfy the requirements of Section 409A of the Code to the extent applicable.

9.3. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on such date Participant's Service terminates (unless determined otherwise by the Committee).

10. PERFORMANCE AWARDS. A Performance Award is an award to an eligible Employee, Consultant, or Director of the Company or any Parent, Subsidiary or Affiliate that is based upon the attainment of performance goals, as established by the Committee, and other terms and conditions specified by the Committee, and may be settled in cash, Shares (which may consist of, without limitation, Restricted Stock), other property, or any combination thereof. Grants of Performance Awards shall be made pursuant to an Award Agreement.

10.1. Performance Awards shall include Performance Shares, Performance Units, and cash-based Awards as set forth in Sections 10.1(a), 10.1(b), and 10.1(c) below.

(a) Performance Shares. The Committee may grant Awards of Performance Shares, designate the Participants to whom Performance Shares are to be awarded and determine the number of Performance Shares and the terms and conditions of each such Award.

(b) Performance Units. The Committee may grant Awards of Performance Units, designate the Participants to whom Performance Units are to be awarded and determine the number of Performance Units and the terms and conditions of each such Award.

(c) Cash-Settled Performance Awards. The Committee may grant cash-settled Performance Awards to Participants under the terms of this Plan.

The amount to be paid under any Performance Award may be adjusted on the basis of such further consideration as the Committee shall determine in its sole discretion.

10.2. Terms of Performance Awards. Performance Awards will be based on the attainment of performance goals using the Performance Factors within this Plan that are established by the Committee for the relevant Performance Period. The Committee will determine, and each Award Agreement shall set forth, the terms of each Performance Award including, without limitation: (a) the amount of any cash bonus, (b) the number of Shares deemed subject to an award of Performance Shares; (c) the Performance Factors and Performance Period that shall determine the time and extent to which each award of Performance Shares shall be settled; (d) the consideration to be distributed on settlement, and (e) the effect of the Participant's termination of Service on each Performance Award. In establishing Performance Factors and the Performance Period the Committee will: (x) determine the nature, length and starting date of any Performance Period; (y) select from among the Performance Factors to be used; and (z) determine the number of Shares deemed subject to the award of Performance Shares. Prior to settlement the Committee shall determine the extent to which Performance Awards have been earned. Performance Periods may overlap and Participants may participate simultaneously with respect to Performance Awards that are subject to different Performance Periods and different performance goals and other criteria.

10.3. Termination of Service. Except as may be set forth in the Participant's Award Agreement, vesting ceases on the date Participant's Service terminates (unless determined otherwise by the Committee).

11. PAYMENT FOR SHARE PURCHASES. Payment from a Participant for Shares purchased pursuant to this Plan may be made in cash or by check or, where approved for the Participant by the Committee and where permitted by law (and to the extent not otherwise set forth in the applicable Award Agreement):

(a) by cancellation of indebtedness of the Company to the Participant;

(b) by surrender of Shares by the Participant that have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which said Award will be exercised or settled;

(c) by waiver of compensation due or accrued to the Participant for services rendered or to be rendered to the Company or a Parent or Subsidiary;

(d) by consideration received by the Company pursuant to a broker-assisted or other form of cashless exercise program implemented by the Company in connection with the Plan;

(e) by any combination of the foregoing; or

(f) by any other method of payment as is permitted by applicable law.

12. GRANTS TO NON-EMPLOYEE DIRECTORS.

12.1. No Non-Employee Director may receive Awards under the Plan that, when combined with cash compensation received for service as a Non-Employee Director, exceed $500,000.00 in value (as described below) in a calendar year, increased to $1,000,000.00 in value (as described below) in the calendar year of his or her initial services as a Non-Employee Director. Grant date fair value for purposes of Awards toNon-Employee Directors under the Plan will be determined as follows: (a) for Options and SARs, grant date fair value will be calculated using the Black-Scholes valuation methodology on the date of grant of such Option or SAR and (b) for all other Awards other than Options and SARs, grant date fair value will be determined by either (i) calculating the product of the Fair Market Value per Share on the date of grant and the aggregate number of Shares subject to the Award or (ii) calculating the product using an average of the Fair Market Value over a number of trading days and the aggregate number of Shares subject to the Award as determined by the Committee. Awards granted to an individual while he or she was serving in the capacity as an Employee or while he or she was a Consultant but not a Non-Employee Director will not count for purposes of the limitations set forth in this Section 12.1.

12.2. Grant and Eligibility. Awards pursuant to this Section 12 will be granted only toNon-Employee Directors, and may be automatically made pursuant to a policy adopted by the Board, or made from time to time as determined in the discretion of the Board. A Non-Employee Director who is elected or re-elected as a member of the Board will be eligible to receive an Award under this Section 12.

12.3. Vesting, Exercisability and Settlement. Except as set forth in Section 21, Awards will vest, become exercisable and be settled as determined by the Board. With respect to Options and SARs, the exercise price granted to Non-Employee Directors will not be less than the Fair Market Value of the Shares at the time that such Option or SAR is granted.

12.4. Election to Receive Awards in Lieu of Cash A Non-Employee Director may elect to receive his or her annual retainer payments and/or meeting fees from the Company in the form of cash or Awards or a combination thereof, if permitted, and as determined, by the Committee. Such Awards shall be issued under the Plan. An election under this Section 12.4 shall be filed with the Company on the form prescribed by the Company.

13. WITHHOLDING TAXES.

13.1. Withholding Generally. Whenever Shares are to be issued in satisfaction of Awards granted under this Plan or a tax event occurs, the Company may require the Participant to remit to the Company, or to the Parent, Subsidiary or Affiliate, as applicable, employing the Participant, an amount sufficient to satisfy applicable U.S. federal, state, local and international tax or any other tax or social

insurance liability (the "***Tax-Related Items***") required to be withheld from the Participant prior to the delivery of Shares pursuant to exercise or settlement of any Award. Whenever payments in satisfaction of Awards granted under this Plan are to be made in cash, such payment will be net of an amount sufficient to satisfy applicable withholding obligations for Tax-Related Items. Unless otherwise determined by the Committee, the Fair Market Value of the Shares will be determined as of the date that the taxes are required to be withheld and such Shares will be valued based on the value of the actual trade or, if there is none, the Fair Market Value of the Shares as of the previous trading day.

13.2. Stock Withholding. The Committee, or its delegate(s), as permitted by applicable law, in its sole discretion and pursuant to such procedures as it may specify from time to time and to limitations of local law, may require or permit a Participant to satisfy such Tax Related Items legally due from the Participant, in whole or in part by (without limitation) (a) paying cash, (b) having the Company withhold otherwise deliverable cash or Shares having a Fair Market Value equal to the Tax-Related Items to be withheld, (c) delivering to the Company already-owned shares having a Fair Market Value equal to the Tax-Related Items to be withheld or (d) withholding from the proceeds of the sale of otherwise deliverable Shares acquired pursuant to an Award either through a voluntary sale or through a mandatory sale arranged by the Company. The Company may withhold or account for these Tax-Related Items by considering applicable statutory withholding rates or other applicable withholding rates, including up to (but not in excess of) the maximum permissible statutory tax rate for the applicable tax jurisdiction, to the extent consistent with applicable laws.

14. TRANSFERABILITY. Unless determined otherwise by the Committee or pursuant to Section 14.2, an Award may not be sold, pledged, assigned, hypothecated, transferred, or disposed of in any manner other than by will or by the laws of descent or distribution. If the Committee makes an Award transferable, including, without limitation, by instrument to an inter vivos or testamentary trust in which the Awards are to be passed to beneficiaries upon the death of the trustor (settlor) or by gift or by domestic relations order to a Permitted Transferee, such Award will contain such additional terms and conditions as the Committee deems appropriate. All Awards will be exercisable: (a) during the Participant's lifetime only by the Participant, or the Participant's guardian or legal representative; (b) after the Participant's death, by the legal representative of the Participant's heirs or legatees; and (c) in the case of all awards except ISOs, by a Permitted Transferee.

15. PRIVILEGES OF STOCK OWNERSHIP; RESTRICTIONS ON SHARES

15.1. Voting and Dividends. No Participant will have any of the rights of a stockholder with respect to any Shares until the Shares are issued to the Participant, except for any dividend equivalent rights permitted by an applicable Award Agreement ("***Dividend Equivalent Rights***"). After Shares are issued to the Participant, the Participant will be a stockholder and have all the rights of a stockholder with respect to such Shares, including the right to vote and receive all dividends or other distributions made or paid with respect to such Shares; provided, that if such Shares are Restricted Stock, then any new, additional or different securities the Participant may become entitled to receive with respect to such Shares by virtue of a stock dividend, stock split or any other change in the corporate or capital structure of the Company will be subject to the same restrictions as the Restricted Stock; provided, further, that the Participant will have no right to such stock dividends or stock distributions with respect to Unvested Shares, and any such dividends or stock distributions will be accrued and paid only at such time, if any, as such Unvested Shares become vested Shares. The Committee, in its discretion, may provide in the Award Agreement evidencing any Award that the Participant will be entitled to Dividend Equivalent Rights with respect to the payment of cash dividends on Shares underlying an Award during the period beginning on the date the Award is granted and ending, with respect to each Share subject to the Award, on the earlier of the date on which the Award is exercised or settled or the date on which it is forfeited provided, that no Dividend Equivalent Right will be paid with respect to the Unvested Shares, and such dividends or stock distributions will be accrued and paid only at such time, if any, as such Unvested Shares become vested Shares. Such Dividend Equivalent Rights, if any, will be credited to the Participant in the form of additional whole Shares as of the date of payment of such cash dividends on Shares.

15.2. Restrictions on Shares. At the discretion of the Committee, the Company may reserve to itself and/or its assignee(s) a right to repurchase (a "***Right of Repurchase***") a portion of any or all Unvested Shares held by a Participant following such Participant's termination of Service at any time within ninety (90) days (or such longer or shorter time determined by the Committee) after the later of the date Participant's Service terminates and the date the Participant purchases Shares under this Plan, for cash and/or cancellation of purchase money indebtedness, at the Participant's Purchase Price or Exercise Price, as the case may be.

16. CERTIFICATES. All Shares or other securities whether or not certificated, delivered under this Plan will be subject to such stock transfer orders, legends and other restrictions as the Committee may deem necessary or advisable, including restrictions under any applicable U.S. federal, state or foreign securities law, or any rules, regulations and other requirements of the SEC or any stock exchange or automated quotation system upon which the Shares may be listed or quoted and any non-U.S. exchange controls or securities law restrictions to which the Shares are subject.

17. ESCROW; PLEDGE OF SHARES. To enforce any restrictions on a Participant's Shares, the Committee may require the Participant to deposit all certificates representing Shares, together with stock powers or other instruments of transfer approved by the Committee, appropriately endorsed in blank, with the Company or an agent designated by the Company to hold in escrow until such restrictions have lapsed or terminated, and the Committee may cause a legend or legends referencing such restrictions to be placed on the certificates. Any Participant who is permitted to execute a promissory note as partial or full consideration for the purchase of Shares under this Plan will be required to pledge and deposit with the Company all or part of the Shares so purchased as collateral to secure the payment of the Participant's obligation to the Company under the promissory note; provided, however, that the Committee may require or accept other or additional forms of collateral to secure the payment of such obligation and, in any event, the Company will have full recourse against the Participant under the promissory note notwithstanding any pledge of the Participant's Shares or other collateral. In connection with any pledge of the Shares, the Participant will be required to execute and deliver a written pledge agreement in such form as the Committee will from time to time approve. The Shares purchased with the promissory note may be released from the pledge on a pro rata basis as the promissory note is paid.

18. REPRICING; EXCHANGE AND BUYOUT OF AWARDS. Without prior stockholder approval, the Committee may (a) reprice Options or SARs (and where such repricing is a reduction in the Exercise Price of outstanding Options or SARs, the consent of the affected Participants is not required provided written notice is provided to them, notwithstanding any adverse tax consequences to them arising from the repricing), and (b) with the consent of the respective Participants (unless not required pursuant to Section 5.9 of the Plan), pay cash or issue new Awards in exchange for the surrender and cancellation of any, or all, outstanding Awards.

19. SECURITIES LAW AND OTHER REGULATORY COMPLIANCE. An Award will not be effective unless such Award is in compliance with all applicable U.S. and foreign federal and state securities and exchange control laws, rules and regulations of any governmental body, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed or quoted, as they are in effect on the date of grant of the Award and also on the date of exercise or other issuance. Notwithstanding any other provision in this Plan, the Company will have no obligation to issue or deliver certificates for Shares under this Plan prior to: (a) obtaining any approvals from governmental agencies that the Company determines are necessary or advisable; and/or (b) completion of any registration or other qualification of such Shares under any state or federal or foreign law or ruling of any governmental body that the Company determines to be necessary or advisable. The Company will be under no obligation to register the Shares with the SEC or to effect compliance with the registration, qualification or listing requirements of any foreign or state securities laws, exchange control laws, stock exchange or automated quotation system, and the Company will have no liability for any inability or failure to do so.

20. NO OBLIGATION TO EMPLOY. Nothing in this Plan or any Award granted under this Plan will confer or be deemed to confer on any Participant any right to continue in the employ of, or to continue any other relationship with, the Company or any Parent, Subsidiary or Affiliate or limit in any way the right of the Company or any Parent, Subsidiary or Affiliate to terminate Participant's employment or other relationship at any time.

21. CORPORATE TRANSACTIONS.

21.1. Assumption or Replacement of Awards by Successor. In the event that the Company is subject to a Corporate Transaction, outstanding Awards acquired under the Plan shall be subject to the agreement evidencing the Corporate Transaction, which need not treat all outstanding Awards in an identical manner. Such agreement, without the Participant's consent, shall provide for one or more of the following with respect to all outstanding Awards as of the effective date of such Corporate Transaction:

(a) The continuation of an outstanding Award by the Company (if the Company is the successor entity).

(b) The assumption of an outstanding Award by the successor or acquiring entity (if any) of such Corporate Transaction (or by its parents, if any), which assumption, will be binding on all selected Participants; provided that the exercise price and the number and nature of shares issuable upon exercise of any such option or stock appreciation right, or any award that is subject to Section 409A of the Code, will be adjusted appropriately pursuant to Section 424(a) of the Code and/or Section 409A of the Code, as applicable. The Board shall have full power and authority to assign the Company's right to repurchase or re-acquire or forfeiture rights to such successor or acquiring corporation.

(c) The substitution by the successor or acquiring entity in such Corporate Transaction (or by its parents, if any) of equivalent awards with substantially the same terms for such outstanding Awards (except that the exercise price and the number and nature of shares issuable upon exercise of any such option or stock appreciation right, or any award that is subject to Section 409A of the Code, will be adjusted appropriately pursuant to Section 424(a) of the Code and/or Section 409A of the Code, as applicable).

(d) The full or partial acceleration of exercisability or vesting and accelerated expiration of an outstanding Award and lapse of the Company's right to repurchase or re-acquire shares acquired under an Award or lapse of forfeiture rights with respect to shares acquired under an Award.

(e) The settlement of the full value of such outstanding Award (whether or not then vested or exercisable) in cash, cash equivalents, or securities of the successor entity (or its parent, if any) with a Fair Market Value equal to the required amount, followed by the cancellation of such Awards; provided however, that such Award may be cancelled if such Award has no value, as determined by the Committee, in its discretion. Subject to Section 409A of the Code, such payment may be made in installments and may be deferred until the date or dates the Award would have become exercisable or vested. Such payment may be subject to vesting based on the Participant's continued service, provided that the vesting schedule shall not be less favorable to the Participant than the schedule under which the Award would have become vested or exercisable. For purposes of this Section 21.1(e), the Fair Market Value of any security shall be determined without regard to any vesting conditions that may apply to such security.

In the event a successor or acquiring corporation refuses to assume, convert, replace or substitute Awards or it is otherwise determined that Awards shall not be so assumed, converted, replaced or substituted pursuant to this Section 21.1, each such Award shall become fully vested and, as applicable, exercisable (or deemed exercised if determined by the Committee in its sole discretion) immediately prior

to the consummation of the Corporate Transaction and all forfeiture restrictions on any such Award shall lapse. If an Award vests and, as applicable, is exercisable in lieu of assumption or substitution in connection with a Corporate Transaction, the Committee will notify the Participant in writing or electronically of such vesting and that the Award will be exercisable for a period of time determined by the Committee in its sole discretion, and such Award will terminate upon the earlier of the expiration of such period or upon the Change in Control.

21.2. Assumption of Awards by the Company. The Company, from time to time, also may substitute or assume outstanding awards granted by another company, whether in connection with an acquisition of such other company or otherwise, by either; (a) granting an Award under this Plan in substitution of such other company's award; or (b) assuming such award as if it had been granted under this Plan if the terms of such assumed award could be applied to an Award granted under this Plan. Such substitution or assumption will be permissible if the holder of the substituted or assumed award would have been eligible to be granted an Award under this Plan if the other company had applied the rules of this Plan to such grant. In the event the Company assumes an award granted by another company, the terms and conditions of such award will remain unchanged (except that the Purchase Price or the Exercise Price, as the case may be, and the number and nature of Shares issuable upon exercise or settlement of any such Award will be adjusted appropriately pursuant to Section 424(a) of the Code). In the event the Company elects to grant a new Option in substitution rather than assuming an existing option, such new Option may be granted with a similarly adjusted Exercise Price. Substitute Awards will not reduce the number of Shares authorized for grant under the Plan or authorized for grant to a Participant in a calendar year.

21.3. Non-Employee Directors' Awards. Notwithstanding any provision to the contrary herein, in the event of a Corporate Transaction, the vesting of all Awards granted to Non-Employee Directors will accelerate and such Awards will become exercisable (as applicable) in full prior to the consummation of such event at such times and on such conditions as the Committee determines.

22. ADOPTION AND STOCKHOLDER APPROVAL. This Plan will be submitted for the approval of the Company's stockholders, consistent with applicable laws, within twelve (12) months before or after the date this Plan is adopted by the Board.

23. TERM OF PLAN/GOVERNING LAW. Unless earlier terminated as provided herein, this Plan will become effective on the Effective Date and will terminate ten (10) years from the date this Plan is adopted by the Board. This Plan and all Awards granted hereunder will be governed by and construed in accordance with the laws of the State of Delaware (excluding its conflict of laws rules).

24. AMENDMENT OR TERMINATION OF PLAN. The Board may at any time terminate or amend this Plan in any respect, including, without limitation, amendment of any form of Award Agreement or instrument to be executed pursuant to this Plan; provided, however, that the Board will not, without the approval of the stockholders of the Company, amend this Plan in any manner that requires such stockholder approval; provided further, that a Participant's Award will be governed by the version of this Plan then in effect at the time such Award was granted. No termination or amendment of the Plan or any outstanding Award may adversely affect any then outstanding Award without the consent of the Participant, unless such termination or amendment is necessary to comply with applicable law, regulation or rule.

25. NONEXCLUSIVITY OF THE PLAN. Neither the adoption of this Plan by the Board, the submission of this Plan to the stockholders of the Company for approval, nor any provision of this Plan will be construed as creating any limitations on the power of the Board to adopt such additional compensation arrangements as it may deem desirable, including, without limitation, the granting of stock awards and bonuses otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

26. INSIDER TRADING POLICY. Each Participant who receives an Award will comply with any policy adopted by the Company from time to time covering transactions in the Company's securities by Employees, officers and/or directors of the Company, as well as with any applicable insider trading or market abuse laws to which the Participant may be subject.

27. ALL AWARDS SUBJECT TO COMPANY CLAWBACK OR RECOUPMENT POLICY. All Awards, subject to applicable law, shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of Participant's employment or other service with the Company that is applicable to executive officers, employees, directors or other service providers of the Company, and in addition to any other remedies available under such policy and applicable law, may require the cancellation of outstanding Awards and the recoupment of any gains realized with respect to Awards.

28. DEFINITIONS. As used in this Plan, and except as elsewhere defined herein, the following terms will have the following meanings:

28.1. "***Affiliate***" means any person or entity that directly or indirectly through one or more intermediaries controls, or is controlled by, or is under common control with, the Company, including any general partner, managing member, officer or director of the Company, in each case as of the date on which, or at any time during the period for which, the determination of affiliation is being made. For purposes of this definition, the term "control" (including the correlative meanings of the terms "controlled by" and "under common control with"), as used with respect to any person or entity, means the possession, directly or indirectly, of the power to direct or cause the direction of the management policies of such person or entity, whether through the ownership of voting securities or by contract or otherwise.

28.2. "***Award***" means any award under the Plan, including any Option, Restricted Stock, Stock Bonus, Stock Appreciation Right, Restricted stock Unit or Performance Award.

28.3. "***Award Agreement***" means, with respect to each Award, the written or electronic agreement between the Company and the Participant setting forth the terms and conditions of the Award, and country-specific appendix thereto for grants to non-U.S. Participants, which will be in substantially a form (which need not be the same for each Participant) that the Committee (or in the case of Award agreements that are not used for Insiders, the Committee's delegate(s)) has from time to time approved, and will comply with and be subject to the terms and conditions of this Plan.

28.4. "***Board***" means the Board of Directors of the Company.

28.5. "***Cause***" means (a) Participant's willful failure substantially to perform his or her duties and responsibilities to the Company or deliberate violation of a Company policy; (b) Participant's commission of any act of fraud, embezzlement, dishonesty or any other willful misconduct that has caused or is reasonably expected to result in material injury to the Company; (c) unauthorized use or disclosure by Participant of any proprietary information or trade secrets of the Company or any other party to whom the Participant owes an obligation of nondisclosure as a result of his or her relationship with the Company; or (d) Participant's willful breach of any of his or her obligations under any written agreement or covenant with the Company. The determination as to whether a Participant is being terminated for Cause will be made by the Company and will be final and binding on the Participant. The foregoing definition does not in any way limit the Company's ability to terminate a Participant's employment or consulting relationship at any time as provided in Section 20 above, and the term "Company" will be interpreted to include any Subsidiary or Parent, as appropriate. Notwithstanding the foregoing, the foregoing definition of "Cause" may, in part or in whole, be modified or replaced in each individual employment agreement, Award Agreement or other applicable agreement with any Participant.

28.6. "***Code***" means the United States Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

28.7. "***Committee***" means the Compensation Committee of the Board or those persons to whom administration of the Plan, or part of the Plan, has been delegated as permitted by law.

28.8. "***Company***" means Sutro Biopharma, Inc., a Delaware corporation, or any successor corporation.

28.9. "***Consultant***" means any natural person, including an advisor or independent contractor, engaged by the Company or a Parent, Subsidiary or Affiliate to render services to such entity.

28.10. "***Corporate Transaction***" means the occurrence of any of the following events: (a) any "Person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the total voting power represented by the Company's then-outstanding voting securities; provided, however, that for purposes of this subclause (a) the acquisition of additional securities by any one Person who is considered to own more than fifty percent (50%) of the total voting power of the securities of the Company will not be considered a Corporate Transaction; (b) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; (c) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation; (d) any other transaction which qualifies as a "corporate transaction" under Section 424(a) of the Code wherein the stockholders of the Company give up all of their equity interest in the Company (except for the acquisition, sale or transfer of all or substantially all of the outstanding shares of the Company) or (e) a change in the effective control of the Company that occurs on the date that a majority of members of the Board is replaced during any twelve (12) month period by members of the Board whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election. For purpose of this subclause (e), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Corporate Transaction. For purposes of this definition, Persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company. Notwithstanding the foregoing, to the extent that any amount constituting deferred compensation (as defined in Section 409A of the Code) would become payable under this Plan by reason of a Corporate Transaction, such amount will become payable only if the event constituting a Corporate Transaction would also qualify as a change in ownership or effective control of the Company or a change in the ownership of a substantial portion of the assets of the Company, each as defined within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and IRS guidance that has been promulgated or may be promulgated thereunder from time to time.

28.11. "***Director***" means a member of the Board.

28.12. "***Disability***" means in the case of incentive stock options, total and permanent disability as defined in Section 22(e)(3) of the Code and in the case of other Awards, that the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

28.13. "***Dividend Equivalent Right***" means the right of a Participant, granted at the discretion of the Committee or as otherwise provided by the Plan, to receive a credit for the account of such Participant in an amount equal to the cash, stock or other property dividends in amounts equivalent to cash, stock or other property dividends for each Share represented by an Award held by such Participant.

28.14. "***Effective Date***" means the day immediately prior to the Company's IPO Registration Date, subject to approval of the Plan by the Company's stockholders.

28.15. "***Employee***" means any person, including Officers and Directors, providing services as an employee to the Company or any Parent, Subsidiary or Affiliate. Neither service as a Director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

28.16. "***Exchange Act***" means the United States Securities Exchange Act of 1934, as amended.

28.17. "***Exchange Program***" means a program pursuant to which (a) outstanding Awards are surrendered, cancelled or exchanged for cash, the same type of Award or a different Award (or combination thereof) or (b) the exercise price of an outstanding Award is increased or reduced.

28.18. "***Exercise Price***" means, with respect to an Option, the price at which a holder may purchase the Shares issuable upon exercise of an Option and with respect to a SAR, the price at which the SAR is granted to the holder thereof.

28.19. "***Fair Market Value***" means, as of any date, the value of a share of the Company's common stock determined as follows:

(a) if such common stock is publicly traded and is then listed on a national securities exchange, its closing price on the date of determination on the principal national securities exchange on which the common stock is listed or admitted to trading as reported in *The Wall Street Journal* or such other source as the Committee deems reliable;

(b) if such common stock is publicly traded but is neither listed nor admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in *The Wall Street Journal* or such other source as the Committee deems reliable;

(c) in the case of an Option or SAR grant made on the IPO Registration Date, the price per share at which Shares are initially offered for sale to the public by the Company's underwriters in the initial public offering of Shares as set forth in the Company's final prospectus included within the registration statement on Form S-1 filed with the SEC under the Securities Act; or

(d) by the Board or the Committee in good faith.

28.20. "***Insider***" means an officer or director of the Company or any other person whose transactions in the Company's common stock are subject to Section 16 of the Exchange Act.

28.21. "***IPO Registration Date***" means the date on which the Company's registration statement on Form S-1 in connection with its initial public offering of common stock is declared effective by the SEC under the Securities Act.

28.22. "***IRS***" means the United States Internal Revenue Service.

28.23. "***Non-Employee Director***" means a Director who is not an Employee of the Company or any Parent or Subsidiary.

28.24. "***Option***" means an Award as defined in Section 5 and granted under the Plan.

28.25. "***Parent***" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company if each of such corporations other than the Company owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

28.26. "***Participant***" means a person who holds an Award under this Plan.

28.27. *"**Performance Award**"* means an Award as defined in Section 10 and granted under the Plan.

28.28. *"**Performance Factors**"* means any of the factors selected by the Committee and specified in an Award Agreement, from among the following objective or subjective measures, either individually, alternatively or in any combination applied to the Participant, the Company, any business unit or Subsidiary, either individually, alternatively, or in any combination, on a GAAP or non-GAAP basis, and measured, to the extent applicable on an absolute basis or relative to a pre-established target, to determine whether the performance goals established by the Committee with respect to applicable Awards have been satisfied:

(a) Profit Before Tax;

(b) Sales;

(c) Expenses;

(d) Billings;

(e) Revenue;

(f) Net revenue;

(g) Earnings (which may include earnings before interest and taxes, earnings before taxes, net earnings, stock-based compensation expenses, depreciation and amortization);

(h) Operating income;

(i) Operating margin;

(j) Operating profit;

(k) Controllable operating profit, or net operating profit;

(l) Net Profit;

(m) Gross margin;

(n) Operating expenses or operating expenses as a percentage of revenue;

(o) Net income;

(p) Earnings per share;

(q) Total stockholder return;

(r) Market share;

(s) Return on assets or net assets;

(t) The Company's stock price;

(u) Growth in stockholder value relative to a pre-determined index;

(v) Return on equity;

(w) Return on invested capital;

(x) Cash Flow (including free cash flow or operating cash flows);

(y) Balance of cash, cash equivalents and marketable securities;

(z) Cash conversion cycle;

(aa) Economic value added;

(bb) Individual confidential business objectives;

(cc) Contract awards or backlog;

(dd) Overhead or other expense reduction;

(ee) Credit rating;

(ff) Completion of an identified special project;

(gg) Completion of a joint venture or other corporate transaction;

(hh) Strategic plan development and implementation;

(ii) Succession plan development and implementation;

(jj) Improvement in workforce diversity;

(kk) Employee satisfaction;

(ll) Employee retention;

(mm) Customer indicators and/or satisfaction;

(nn) New product invention or innovation;

(oo) Research and development expenses;

(pp) Attainment of research and development milestones;

(qq) Improvements in productivity;

(rr) Bookings;

(ss) Working-capital targets and changes in working capital; Attainment of operating goals and employee metrics; and

(tt) Any other metric as determined by the Committee.

The Committee may provide for one or more equitable adjustments to the Performance Factors to preserve the Committee's original intent regarding the Performance Factors at the time of the initial award grant, such as but not limited to, adjustments in recognition of unusual or non-recurring items such as acquisition related activities or changes in applicable accounting rules. It is within the sole discretion of the Committee to make or not make any such equitable adjustments.

28.29. "***Performance Period***" means one or more periods of time, which may be of varying and overlapping durations over which the attainment of one or more Performance Factors will be measured for the purpose of determining a Participant's right to, and the payment of, a Performance Award.

28.30. "***Performance Share***" means an Award as defined in Section 10 and granted under the Plan.

28.31. "***Permitted Transferee***" means any child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (including adoptive relationships) of the Employee, any person sharing the Employee's household (other than a tenant or employee), a trust in which these persons (or the Employee) have more than 50% of the beneficial interest, a foundation in which these persons (or the Employee) control the management of assets, and any other entity in which these persons (or the Employee) own more than 50% of the voting interests.

28.32. *"**Performance Unit**"* means an Award as defined in Section 10 and granted under the Plan.

28.33. "***Plan***" means this Sutro Biopharma, Inc. 2018 Equity Incentive Plan.

28.34. "***Purchase Price***" means the price to be paid for Shares acquired under the Plan, other than Shares acquired upon exercise of an Option or SAR.

28.35. "***Restricted Stock Award***" means an Award as defined in Section 6 and granted under the Plan (or issued pursuant to the early exercise of an Option).

28.36. "***Restricted Stock Unit***" means an Award as defined in Section 9 and granted under the Plan.

28.37. "***SEC***" means the United States Securities and Exchange Commission.

28.38. "***Securities Act***" means the United States Securities Act of 1933, as amended.

28.39. "***Service***" means service as an Employee, Consultant, Director or Non-Employee Director, to the Company or a Parent, Subsidiary or Affiliate, subject to such further limitations as may be set forth in the Plan or the applicable Award Agreement. An Employee will not be deemed to have ceased to provide Service in the case of (a) sick leave, (b) military leave, or (c) any other leave of absence approved by the Company; provided, that such leave is for a period of not more than 90 days unless reemployment upon the expiration of such leave is guaranteed by contract or statute. Notwithstanding anything to the contrary, an Employee will not be deemed to have ceased to provide Service if a formal

policy adopted from time to time by the Company and issued and promulgated to employees in writing provides otherwise. In the case of any Employee on an approved leave of absence or a reduction in hours worked (for illustrative purposes only, a change in schedule from that of full-time to part-time), the Committee may make such provisions respecting suspension or modification of vesting of the Award while on leave from the employ of the Company or a Parent, Subsidiary or Affiliate or during such change in working hours as it may deem appropriate, except that in no event may an Award be exercised after the expiration of the term set forth in the applicable Award Agreement. In the event of military or other protected leave, if required by applicable laws, vesting will continue for the longest period that vesting continues under any other statutory or Company approved leave of absence and, upon a Participant's returning from military leave, he or she will be given vesting credit with respect to Awards to the same extent as would have applied had the Participant continued to provide Service to the Company throughout the leave on the same terms as he or she was providing Service immediately prior to such leave. An Employee will have terminated employment as of the date he or she ceases to provide Service (regardless of whether the termination is in breach of local employment laws or is later found to be invalid) and employment will not be extended by any notice period or garden leave mandated by local law, *provided however*, a change in status from an Employee to a Consultant or aNon-Employee Director (or vice versa) will not terminate a Participant's Service, unless determined by the Committee, in its discretion or to the extent set forth in the applicable Award Agreement. The Committee will have sole discretion to determine whether a Participant has ceased to provide Service and the effective date on which the Participant ceased to provide Service.

28.40. "***Shares***" means shares of the Company's common stock, and the common stock of any successor entity.

28.41. "***Stock Appreciation Right***" means an Award as defined in Section 8 and granted under the Plan.

28.42. "***Stock Bonus***" means an Award granted pursuant to Section 7 of the Plan.

28.43. "***Subsidiary***" means any corporation (other than the Company) in an unbroken chain of corporations beginning with the Company if each of the corporations other than the last corporation in the unbroken chain owns stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

28.44. "***Treasury Regulations***" means regulations promulgated by the United States Treasury Department.

28.45. "***Unvested Shares***" means Shares that have not yet vested or are subject to a right of repurchase in favor of the Company (or any successor thereto).

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL NOTICE OF STOCK OPTION GRANT

Unless otherwise defined herein, the terms defined in the Sutro Biopharma, Inc. (the "***Company***") 2018 Equity Incentive Plan (the "***Plan***") will have the same meanings in this Global Notice of Stock Option Grant and the electronic representation of this Global Notice of Stock Option Grant established and maintained by the Company or a third party designated by the Company (this "***Notice***").

Name:

Address:

You ("***Participant***") have been granted an option to purchase shares of common stock of the Company (the "***Option***") under the Plan subject to the terms and conditions of the Plan, this Notice and the attached Global Stock Option Award Agreement (the "***Option Agreement***"), including any applicable country-specific provisions in the appendix attached hereto (the "***Appendix***"), which constitutes part of the Option Agreement.

Grant Number:

Date of Grant:

Vesting Commencement Date:

Exercise Price per Share:

Total Number of Shares:

Type of Option:	Non-Qualified Stock Option Incentive Stock Option
Expiration Date:	_____ __, 20__; This Option expires earlier if Participant's Service terminates earlier, as described in the Option Agreement.
Vesting Schedule:	Subject to the limitations set forth in this Notice, the Plan and the Option Agreement, the Option will vest in accordance with the following schedule: [insert applicable vesting schedule]

By accepting (whether in writing, electronically or otherwise) the Option, Participant acknowledges and agrees to the following:

1) Participant understands that Participant's employment or consulting relationship or Service with the Company or a Parent or Subsidiary or Affiliate is for an unspecified duration, can be terminated at any time (*i.e.*, is "at-will"), except where otherwise prohibited by applicable law, and that nothing in this Notice, the Option Agreement or the Plan changes the nature of that relationship. Participant acknowledges that the vesting of the Option pursuant to this Notice is subject to Participant's continuing Service as an Employee, Director or Consultant. Participant agrees and acknowledges that the Vesting Schedule may change prospectively in the event that Participant's service status changes between full- and part-time and/or in the event Participant is on a leave of absence, in accordance with Company policies relating to work schedules and vesting of Awards or as determined by the Committee. Furthermore, the period during which Participant may exercise the Option after termination of Service, if any, will commence on the Termination Date (as defined in the Option Agreement).

2) This grant is made under and governed by the Plan, the Option Agreement and this Notice, and this Notice is subject to the terms and conditions of the Option Agreement and the Plan, both of which are incorporated herein by reference. Participant has read the Notice, the Option Agreement and the Plan.

3) Participant has read the Company's Insider Trading Policy, and agrees to comply with such policy, as it may be amended from time to time, whenever Participant acquires or disposes of the Company's securities.

4) By accepting the Option, Participant consents to electronic delivery and participation as set forth in the Option Agreement.

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL STOCK OPTION AWARD AGREEMENT

Unless otherwise defined in this Global Stock Option Award Agreement (this "***Option Agreement***"), any capitalized terms used herein will have the meaning ascribed to them in the Sutro Biopharma, Inc. 2018 Equity Incentive Plan (the "***Plan***").

Participant has been granted an option to purchase Shares (the "***Option***") of Sutro Biopharma, Inc. (the "***Company***"), subject to the terms, restrictions and conditions of the Plan, the Global Notice of Stock Option Grant (the "***Notice***") and this Option Agreement, including any applicable country-specific provisions in the appendix attached hereto (the "***Appendix***"), which constitutes part of this Option Agreement.

1. Vesting Rights. Subject to the applicable provisions of the Plan and this Option Agreement, this Option may be exercised, in whole or in part, in accordance with the Vesting Schedule set forth in the Notice. Participant acknowledges that the vesting of the Option pursuant to this Notice and Agreement is subject to Participant's continuing Service as an Employee, Director or Consultant.

2. Grant of Option. Participant has been granted an Option for the number of Shares set forth in the Notice at the exercise price per Share in U.S. Dollars set forth in the Notice (the "***Exercise Price***"). In the event of a conflict between the terms and conditions of the Plan and the terms and conditions of this Option Agreement, the terms and conditions of the Plan shall prevail. If designated in the Notice as an Incentive Stock Option ("***ISO***"), this Option is intended to qualify as an Incentive Stock Option under Section 422 of the Code. However, if this Option is intended to be an ISO, to the extent that it exceeds the U.S. $100,000 rule of Code Section 422(d) it shall be treated as a Nonqualified Stock Option ("***NSO***").

3. Termination Period.

(a) General Rule. If Participant's Service terminates for any reason except death or Disability, and other than for Cause, then this Option will expire at the close of business at Company headquarters on the date three (3) months after Participant's Termination Date (as defined below) (or such shorter time period not less than thirty (30) days or longer time period as may be determined by the Committee, with any exercise beyond three (3) months after the date Participant's Service terminates deemed to be the exercise of an NSO). If Participant's Service is terminated for Cause, this Option will expire upon the date of such termination. The Company determines when Participant's Service terminates for all purposes under this Option Agreement.

(b) Death; Disability. If Participant dies before Participant's Service terminates (or Participant dies within three months of Participant's termination of Service other than for Cause), then this Option will expire at the close of business at Company headquarters on the date twelve (12) months after the date of death (or such shorter time period not less than six (6) months or longer time period as may be determined by the Committee or a shorter period set forth in the Appendix for a specific jurisdiction, subject to the expiration details in Section 7). If Participant's Service terminates because of Participant's Disability, then this Option will expire at the close of business at Company headquarters on the date twelve (12) months after Participant's Termination Date (or such shorter time period not less than six (6) months or longer time period as may be determined by the Committee or a shorter period set forth in the Appendix for a specific jurisdiction, subject to the expiration details in Section 7).

(c) No Notification of Exercise Periods. Participant is responsible for keeping track of these exercise periods following Participant's termination of Service for any reason. The Company will not provide further notice of such periods. In no event shall this Option be exercised later than the Expiration Date set forth in the Notice.

(d) Termination. For purposes of this Option, Participant's Service will be considered terminated (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any) as of the date Participant is no longer actively providing services to the Company, its Parent or one of its Subsidiaries or Affiliates (*i.e.*, Participant's period of Service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any) (the "***Termination Date***"). Unless otherwise provided in this Option Agreement or determined by the Company, Participant's right to vest in the Option under the Plan, if any, will terminate as of the Termination Date and Participant's right to exercise the Option after termination of Service, if any, will be measured from the Termination Date.

In case of any dispute as to whether and when a termination of Service has occurred, the Committee will have sole discretion to determine whether such termination of Service has occurred and the effective date of such termination (including whether Participant may still be considered to be actively providing Services while on a leave of absence).

If Participant does not exercise this Option within the termination period set forth in the Notice or the termination periods set forth above, the Option shall terminate in its entirety. In no event, may any Option be exercised after the Expiration Date of the Option as set forth in the Notice.

4. Exercise of Option.

(a) Right to Exercise. This Option is exercisable during its term in accordance with the Vesting Schedule set forth in the Notice and the applicable provisions of the Plan and this Option Agreement. In the event of Participant's death, Disability, termination for Cause or other cessation of Service, the exercisability of the Option is governed by the applicable provisions of the Plan, the Notice and this Option Agreement. This Option may not be exercised for a fraction of a Share.

(b) Method of Exercise. This Option is exercisable by delivery of an exercise notice in a form specified by the Company (the "***Exercise Notice***"), which will state the election to exercise the Option, the number of Shares in respect of which the Option is being exercised (the "***Exercised Shares***"), and such other representations and agreements as may be required by the Company pursuant to the provisions of the Plan. The Exercise Notice will be delivered in person, by mail, via electronic mail or facsimile or by other authorized method to the Secretary of the Company or other person designated by the Company. The Exercise Notice will be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares together with any applicable Tax-Related Items (as defined in Section 8 below). This Option will be deemed to be exercised upon receipt by the Company of such fully executed Exercise Notice accompanied by such aggregate Exercise Price and payment of any applicable Tax-Related Items (as defined below). No Shares will be issued pursuant to the exercise of this Option unless such issuance and exercise complies with all relevant provisions of law and the requirements of any stock exchange or quotation service upon which the Shares are then listed and any exchange control registrations. Assuming such compliance, for United States income tax purposes the Exercised Shares will be considered transferred to Participant on the date the Option is exercised with respect to such Exercised Shares.

(c) Exercise by Another. If another person wants to exercise this Option after it has been transferred to him or her in compliance with this Option Agreement, that person must prove to the Company's satisfaction that he or she is entitled to exercise this Option. That person must also complete the proper Exercise Notice form (as described above) and pay the Exercise Price (as described below) and any applicable Tax-Related Items (as described below).

5. Method of Payment. Payment of the aggregate Exercise Price, and any Tax-Related Items (as defined below) withholding, will be by any of the following, or a combination thereof, at the election of Participant:

(a) Participant's personal check (representing readily available funds), wire transfer, or a cashier's check;

(b) if permitted by the Committee, certificates for shares of Company stock that Participant owns, along with any forms needed to effect a transfer of those shares to the Company; the value of the shares, determined as of the effective date of the Option exercise, will be applied to the Exercise Price. Instead of surrendering shares of Company stock, Participant may attest to the ownership of those shares on a form provided by the Company and have the same number of shares subtracted from the Option shares issued to Participant. However, Participant may not surrender, or attest to the ownership of, shares of Company stock in payment of the Exercise Price of Participant's Option if Participant's action would cause the Company to recognize compensation expense (or additional compensation expense) with respect to this Option for financial reporting purposes;

(c) cashless exercise through irrevocable directions to a securities broker approved by the Company to sell all or part of the Shares covered by this Option and to deliver to the Company from the sale proceeds an amount sufficient to pay the Exercise Price and any applicable Tax-Related Items (as defined below) withholding. The balance of the sale proceeds, if any, will be delivered to Participant unless otherwise provided in this Option Agreement. The directions must be given by signing a special notice of exercise form provided by the Company; or

(d) other method authorized by the Company;

provided, however, that the Company may restrict the available methods of payment due to facilitate compliance with applicable law or administration of the Plan. In particular, if Participant is located outside the United States, Participant should review the applicable provisions of the Appendix for any such restrictions that may currently apply.

6. Non-Transferability of Option. This Option may not be sold, assigned, transferred, pledged, hypothecated, or otherwise disposed of other than by will or by the laws of descent or distribution or court order and may be exercised during the lifetime of Participant only by Participant or unless otherwise permitted by the Committee on a case-by-case basis. The terms of the Plan and this Option Agreement will be binding upon the executors, administrators, heirs, successors and assigns of Participant.

7. Term of Option. This Option will in any event expire on the expiration date set forth in the Notice, which date is 10 years after the Date of Grant (five years after the Date of Grant if this option is designated as an ISO in the Notice of Stock Option Grant and Section 5.3 of the Plan applies).

8. Taxes.

(a) Responsibility for Taxes. Participant acknowledges that, regardless of any action taken by the Company or a Parent, Subsidiary or Affiliate employing or retaining Participant (the "***Employer***"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax related items related to Participant's participation in the Plan and legally applicable to Participant ("***Tax-Related Items***") is and remains Participant's responsibility and may exceed the amount actually withheld by the Company or the Employer, if any. Participant further acknowledges that the Company and/or the Employer (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of this Option, including, but not limited to, the grant, vesting or exercise of this Option, the subsequent sale of Shares acquired pursuant to such exercise and the receipt of any dividends; and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of this Option to reduce or eliminate Participant's liability for Tax-Related Items or achieve any particular tax result. Further, if Participant is subject to Tax-Related Items in more than one jurisdiction, Participant acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction. *PARTICIPANT SHOULD CONSULT A TAX ADVISER APPROPRIATELY QUALIFIED IN EACH OF THE JURISDICTIONS, INCLUDING COUNTRY OR COUNTRIES IN WHICH PARTICIPANT RESIDES OR IS SUBJECT TO TAXATION BEFORE EXERCISING THE OPTION OR DISPOSING OF THE SHARES.*

(b) Withholding. Prior to any relevant taxable or tax withholding event, as applicable, Participant agrees to make arrangements satisfactory to the Company and/or the Employer to fulfill all Tax-Related Items. In this regard, Participant authorizes the Company and/or the Employer, or their respective agents, at their discretion, to satisfy any withholding obligations for Tax-Related Items by one or a combination of the following:

(i) withholding from Participant's wages or other cash compensation paid to Participant by the Company and/or the Employer or any Parent, Subsidiary or Affiliate; or

(ii) withholding from proceeds of the sale of Shares acquired at exercise of this Option either through a voluntary sale or through a mandatory sale arranged by the Company (on Participant's behalf pursuant to this authorization and without further consent); or

(iii) withholding Shares to be issued upon exercise of the Option, provided the Company only withholds the number of Shares necessary to satisfy no more than the maximum statutory withholding amounts;

(iv) Participant's payment of a cash amount (including by check representing readily available funds or a wire transfer); or

(v) any other arrangement approved by the Committee and permitted under applicable law;

all under such rules as may be established by the Committee and in compliance with the Company's Insider Trading Policy and10b5-1 Trading Plan Policy, if applicable; provided however, that if Participant is a Section 16 officer of the Company under the Exchange Act, then the Committee (as constituted in accordance with Rule 16b-3 under the Exchange Act) shall establish the method of withholding from alternatives (i)-(v) above, and the Committee shall establish the method prior to the Tax-Related Items withholding event.

Depending on the withholding method, the Company may withhold or account forTax-Related Items by considering applicable statutory withholding rates or other applicable withholding rates, including up to the maximum permissible statutory rate for Participant's tax jurisdiction(s) in which case Participant will have no entitlement to the equivalent amount in Shares and may receive a refund of any over-withheld amount in cash in accordance with applicable law. If the obligation for Tax-Related Items is satisfied by withholding in Shares, for tax purposes, Participant is deemed to have been issued the full number of Exercised Shares; notwithstanding that a number of the Shares are held back solely for the purpose of satisfying the withholding obligation for Tax-Related Items.

Finally, Participant agrees to pay to the Company or the Employer any amount ofTax-Related Items that the Company or the Employer may be required to withhold or account for as a result of Participant's participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares, if Participant fails to comply with Participant's obligations in connection with the Tax-Related Items.

(c) Notice of Disqualifying Disposition of ISO Shares. If Participant is subject to Tax-Related Items in the United States and sells or otherwise disposes of any of the Shares acquired pursuant to an ISO on or before the later of (i) two years after the grant date, or (ii) one year after the exercise date, Participant will immediately notify the Company in writing of such disposition. Participant agrees that he or she may be subject to income tax withholding by the Company on the compensation income recognized from such early disposition of ISO Shares by payment in cash or out any wages or other cash compensation paid to Participant by the Company and/or the Employer or any Parent, Subsidiary or Affiliate.

9. Nature of Grant. By accepting the Option, Participant acknowledges, understands and agrees that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the Option is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of options, or benefits in lieu of options, even if options have been granted in the past;

(c) all decisions with respect to future options or other grants, if any, will be at the sole discretion of the Company;

(d) Participant is voluntarily participating in the Plan;

(e) the Option and Participant's participation in the Plan will not create a right to employment or be interpreted as forming or amending an employment or service contract with the Company, the Employer or any Parent, Subsidiary or Affiliate, and shall not interfere with the ability of the Company, the Employer or any Parent, Subsidiary or Affiliate, as applicable, to terminate Participant's employment or service relationship (if any);

(f) the Option and the Shares subject to the Option, and the income from and value of same, are not intended to replace any pension rights or compensation;

(g) the Option and the Shares subject to the Option, and the income from and value of same, are not part of normal or expected compensation for any purpose, including, but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(h) unless otherwise agreed with the Company, the Option and the Shares subject to the Option, and the income from and value of same, are not granted as consideration for, or in connection with, the service Participant may provide as a director of a Parent, Subsidiary or Affiliate;

(i) the future value of the Shares underlying the Option is unknown, indeterminable and cannot be predicted with certainty; if the underlying Shares do not increase in value, the Option will have no value; if Participant exercises the Option and acquires Shares, the value of such Shares may increase or decrease, even below the Exercise Price;

(j) no claim or entitlement to compensation or damages will arise from forfeiture of the Option resulting from Participant's termination of Service (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any); and

(k) neither the Company, the Employer nor any Parent, Subsidiary or Affiliate will be liable for any foreign exchange rate fluctuation between Participant's local currency and the United States Dollar that may affect the value of the Option or of any amounts due to Participant pursuant to the exercise of the Option or the subsequent sale of any Shares acquired upon exercise.

10. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding Participant's participation in the Plan, or Participant's acquisition or sale of the underlying Shares. Participant acknowledges, understands and agrees that he or she should consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

11. *Data Privacy*. *Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of Participant's personal data as described in this Option Agreement and any other Option grant materials by and among, as applicable, the Employer, the Company and any Parent, Subsidiary or Affiliate for the exclusive purpose of implementing, administering and managing Participant's participation in the Plan.*

Participant understands that the Company and the Employer may hold certain personal information about Participant, including, but not limited to, Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport number or other identification number (e.g., resident registration number), salary, nationality, job title, any shares of stock or directorships held in the Company, details of all Options or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan.

Participant understands that Data will be transferred to E*TRADE Financial Services, Solium-Shareworks, or other third party ("Online Administrator") and its affiliated companies or such other stock plan service provider as may be designated by the Company from time to time, which is assisting the Company with the implementation, administration and management of the Plan. Participant understands that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country may have different data privacy laws and protections than Participant's country. Participant understands that if he or she resides outside the United States, he or she may request a list with the names and addresses of any potential recipients of Data by contacting his or her local human resources representative. Participant authorizes the Company, [Online Administrator], or such other stock plan service provider as may be designated by the Company from time to time, and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing his or her participation in the Plan. Participant understands that Data will be held only as

long as is necessary to implement, administer and manage Participant's participation in the Plan. Participant understands if he or she resides outside the United States, he or she may, at any time, view Data, request information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting his or her local human resources representative. Further, Participant understands that he or she is providing the consents herein on a purely voluntary basis. If Participant does not consent, or if Participant later seeks to revoke his or her consent, his or her employment status or service with the Employer will not be affected; the only consequence of refusing or withdrawing Participant's consent is that the Company would not be able to grant Options or other equity awards to Participant or administer or maintain such awards. Therefore, Participant understands that refusing or withdrawing his or her consent may affect Participant's ability to participate in the Plan. For more information on the consequences of Participant's refusal to consent or withdrawal of consent, Participant understands that he or she may contact his or her local human resources representative.

Finally, upon request of the Company or the Employer, Participant agrees to provide an executed data privacy consent form (or any other agreements or consents) that the Company or the Employer may deem necessary to obtain from Participant for the purpose of administering Participant's participation in the Plan in compliance with the data privacy laws in Participant's country, either now or in the future. Participant understands and agrees that Participant will not be able to participate in the Plan if Participant fails to provide any such consent or agreement requested by the Company and/or the Employer.

12. Language. Participant acknowledges that he or she is sufficiently proficient in English to understand the terms and conditions of this Option Agreement. Furthermore, if Participant has received this Option Agreement, or any other document related to the Option and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

13. Appendix. Notwithstanding any provisions in this Option Agreement, the Option will be subject to any special terms and conditions set forth in any appendix to this Option Agreement for Participant's country. Moreover, if Participant relocates to one of the countries included in the Appendix, the special terms and conditions for such country will apply to Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Option Agreement.

14. Imposition of Other Requirements. The Company reserves the right to impose other requirements on Participant's participation in the Plan, on the Option and on any Shares purchased upon exercise of the Option, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

15. Acknowledgement. The Company and Participant agree that the Option is granted under and governed by the Notice, this Option Agreement and the provisions of the Plan (incorporated herein by reference). Participant: (a) acknowledges receipt of a copy of the Plan and the Plan prospectus, (b) represents that Participant has carefully read and is familiar with their provisions, and (c) hereby accepts the Option subject to all of the terms and conditions set forth herein and those set forth in the Plan and the Notice.

16. Entire Agreement; Enforcement of Rights. This Option Agreement, the Plan and the Notice constitute the entire agreement and understanding of the parties relating to the subject matter herein and supersede all prior discussions between them. Any prior agreements, commitments or negotiations concerning the purchase of the Shares hereunder are superseded. No adverse modification of, or adverse amendment to, this Option Agreement, nor any waiver of any rights under this Option Agreement, will be effective unless in writing and signed by the parties to this Option Agreement (which

writing and signing may be electronic). The failure by either party to enforce any rights under this Option Agreement will not be construed as a waiver of any rights of such party.

17. Compliance with Laws and Regulations. The issuance of Shares will be subject to and conditioned upon compliance by the Company and Participant with all applicable state, federal and foreign laws and regulations and with all applicable requirements of any stock exchange or automated quotation system on which the Company's Shares may be listed or quoted at the time of such issuance or transfer. Participant understands that the Company is under no obligation to register or qualify the Shares with any state, federal or foreign securities commission or to seek approval or clearance from any governmental authority for the issuance or sale of the Shares. Further, Participant agrees that the Company shall have unilateral authority to amend the Plan and this Option Agreement without Participant's consent to the extent necessary to comply with securities or other laws applicable to issuance of Shares. Finally, the Shares issued pursuant to this Option Agreement shall be endorsed with appropriate legends, if any, determined by the Company.

18. Severability. If one or more provisions of this Option Agreement are held to be unenforceable under applicable law, then such provision will be enforced to the maximum extent possible given the intent of the parties hereto. If such clause or provision cannot be so enforced, then (a) such provision will be excluded from this Option Agreement, (b) the balance of this Option Agreement will be interpreted as if such provision were so excluded and (c) the balance of this Option Agreement will be enforceable in accordance with its terms.

19. Governing Law and Venue. This Option Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto will be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to such state's conflict of laws rules.

Any and all disputes relating to, concerning or arising from this Option Agreement, or relating to, concerning or arising from the relationship between the parties evidenced by the Plan or this Option Agreement, will be brought and heard exclusively in the United States District Court for the District of Northern California or the Superior Court of California, County of San Mateo. Each of the parties hereby represents and agrees that such party is subject to the personal jurisdiction of said courts; hereby irrevocably consents to the jurisdiction of such courts in any legal or equitable proceedings related to, concerning or arising from such dispute, and waives, to the fullest extent permitted by law, any objection which such party may now or hereafter have that the laying of the venue of any legal or equitable proceedings related to, concerning or arising from such dispute which is brought in such courts is improper or that such proceedings have been brought in an inconvenient forum.

20. No Rights as Employee, Director or Consultant. Nothing in this Option Agreement will affect in any manner whatsoever any right or power of the Company, or a Parent, Subsidiary or Affiliate, to terminate Participant's Service, for any reason, with or without Cause.

21. Consent to Electronic Delivery of All Plan Documents and Disclosures. By Participant's acceptance of the Notice (whether in writing or electronically), Participant and the Company agree that this Option is granted under and governed by the terms and conditions of the Plan, the Notice and this Option Agreement. Participant has reviewed the Plan, the Notice and this Option Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing the Notice and Agreement, and fully understands all provisions of the Plan, the Notice and this Option Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions relating to the Plan, the Notice and this Option Agreement. Participant further agrees to notify the Company upon any change in the residence address. By acceptance of this Option, Participant agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company and consents to the electronic delivery of the Notice, this Option Agreement, the Plan, account statements, Plan prospectuses

required by the SEC, U.S. financial reports of the Company, and all other documents that the Company is required to deliver to its security holders (including, without limitation, annual reports and proxy statements) or other communications or information related to the Option and current or future participation in the Plan. Electronic delivery may include the delivery of a link to the Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other delivery determined at the Company's discretion. Participant acknowledges that Participant may receive from the Company a paper copy of any documents delivered electronically at no cost if Participant contacts the Company by telephone, through a postal service or electronic mail to Stock Administration. Participant further acknowledges that Participant will be provided with a paper copy of any documents delivered electronically if electronic delivery fails; similarly, Participant understands that Participant must provide on request to the Company or any designated third party a paper copy of any documents delivered electronically if electronic delivery fails. Also, Participant understands that Participant's consent may be revoked or changed, including any change in the electronic mail address to which documents are delivered (if Participant has provided an electronic mail address), at any time by notifying the Company of such revised or revoked consent by telephone, postal service or electronic mail to Stock Administration.

22. Insider Trading Restrictions/Market Abuse Laws. Participant acknowledges that, depending on Participant's country of residence, the broker's country, or the country in which the Shares are listed, Participant may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions, which may affect Participant's ability to directly or indirectly, accept, acquire, sell or attempt to sell or otherwise dispose of Shares, or rights to Shares (*e.g.,* Options), or rights linked to the value of Shares, during such times as Participant is considered to have "inside information" regarding the Company (as defined by the laws or regulations in the applicable jurisdiction). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders Participant placed before possessing the inside information. Furthermore, Participant may be prohibited from (i) disclosing the inside information to any third party, including fellow employees (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them to otherwise buy or sell securities. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. Participant acknowledges that it is Participant's responsibility to comply with any applicable restrictions and understands that Participant should consult his or her personal legal advisor on such matters. In addition, Participant acknowledges that he or she read the Company's Insider Trading Policy, and agrees to comply with such policy, as it may be amended from time to time, whenever Participant acquires or disposes of the Company's securities.

23. Foreign Asset/Account, Exchange Control and Tax Reporting. Participant may be subject to foreign asset/account, exchange control and/or tax reporting requirements as a result of the acquisition, holding and/or transfer of Shares or cash resulting from his or her participation in the Plan. Participant may be required to report such accounts, assets, the balances therein, the value thereof and/or the transactions related thereto to the applicable authorities in Participant's country and/or repatriate funds received in connection with the Plan within certain time limits or according to specified procedures. Participant acknowledges that he or she is responsible for ensuring compliance with any applicable foreign asset/account, exchange control and tax reporting requirements and should consult his or her personal legal and tax advisors on such matters.

24. Award Subject to Company Clawback or Recoupment. The Option shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of Participant's employment or other Service that is applicable to Participant. In addition to any other remedies available under such policy, applicable law may require the cancellation of Participant's Option (whether vested or unvested) and the recoupment of any gains realized with respect to Participant's Option.

BY ACCEPTING THIS OPTION, PARTICIPANT AGREES TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.

APPENDIX

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL STOCK OPTION AWARD AGREEMENT

COUNTRY SPECIFIC PROVISIONS FOR EMPLOYEES OUTSIDE THE U.S.

Terms and Conditions

This Appendix includes additional terms and conditions that govern the Option granted to Participant under the Plan if Participant resides and/or works in one of the countries below. This Appendix forms part of the Option Agreement. Any capitalized term used in this Appendix without definition will have the meaning ascribed to it in the Notice, the Option Agreement or the Plan, as applicable.

If Participant is a citizen or resident of a country, or is considered resident of a country, other than the one in which Participant is currently working, or Participant transfers employment and/or residency between countries after the Date of Grant, the Company will, in its sole discretion, determine to what extent the additional terms and conditions included herein will apply to Participant under these circumstances.

Notifications

This Appendix also includes information relating to exchange control, securities laws, foreign asset/account reporting and other issues of which Participant should be aware with respect to Participant's participation in the Plan. The information is based on the securities, exchange control, foreign asset/account reporting and other laws in effect in the respective countries as of September, 2018. Such laws are complex and change frequently. As a result, Participant should not rely on the information herein as the only source of information relating to the consequences of Participant's participation in the Plan because the information may be out of date at the time that Participant exercises the Option, sells Shares acquired under the Plan or takes any other action in connection with the Plan.

In addition, the information is general in nature and may not apply to Participant's particular situation, and the Company is not in a position to assure Participant of any particular result. Accordingly, Participant should seek appropriate professional advice as to how the relevant laws in Participant's country may apply to Participant's situation.

Finally, if Participant is a citizen or resident of a country, or is considered resident of a country, other than the one in which Participant is currently working and/or residing, or Participant transfers employment and/or residency after the Date of Grant, the information contained herein may not apply to Participant in the same manner.

None

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL NOTICE OF RESTRICTED STOCK UNIT AWARD

Unless otherwise defined herein, the terms defined in the Sutro Biopharma, Inc. (the "***Company***") 2018 Equity Incentive Plan (the "***Plan***") will have the same meanings in this Global Notice of Restricted Stock Unit Award and the electronic representation of this Global Notice of Restricted Stock Unit Award established and maintained by the Company or a third party designated by the Company (this "***Notice***").

Name:

Address:

You ("***Participant***") have been granted an award of Restricted Stock Units ("***RSUs***") under the Plan subject to the terms and conditions of the Plan, this Notice and the attached Global Restricted Stock Unit Award Agreement (the "***Agreement***"), including any applicable country-specific provisions in the appendix attached hereto (the "***Appendix***"), which constitutes part of the Agreement.

Grant Number:

Number of RSUs:

Date of Grant:

Vesting Commencement Date:

Expiration Date:	The earlier to occur of: (a) the date on which settlement of all RSUs granted hereunder occurs and (b) the tenth anniversary of the Date of Grant. This RSU expires earlier if Participant's Service terminates earlier, as described in the Agreement.
Vesting Schedule:	Subject to the limitations set forth in this Notice, the Plan and the Agreement, the RSUs will vest in accordance with the following schedule: [insert applicable vesting schedule]

By accepting (whether in writing, electronically or otherwise) the RSUs, Participant acknowledges and agrees to the following:

1) Participant understands that Participant's employment or consulting relationship or Service with the Company or a Parent or Subsidiary or Affiliate is for an unspecified duration, can be terminated at any time (*i.e.*, is "at-will"), except where otherwise prohibited by applicable law, and that nothing in this Notice, the Agreement or the Plan changes the nature of that relationship. Participant acknowledges that the vesting of the RSUs pursuant to this Notice is subject to Participant's continuing Service as an Employee, Director or Consultant. Participant agrees and acknowledges that the Vesting Schedule may change prospectively in the event that Participant's service status changes between full- and part-time and/or in the event Participant is on a leave of absence, in accordance with Company policies relating to work schedules and vesting of Awards or as determined by the Committee.

2) This grant is made under and governed by the Plan, the Agreement and this Notice, and this Notice is subject to the terms and conditions of the Agreement and the Plan, both of which are incorporated herein by reference. Participant has read the Notice, the Agreement and the Plan.

3) Participant has read the Company's Insider Trading Policy, and agrees to comply with such policy, as it may be amended from time to time, whenever Participant acquires or disposes of the Company's securities.

4) By accepting the RSUs, Participant consents to electronic delivery and participation as set forth in the Agreement.

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL RESTRICTED STOCK UNIT AWARD AGREEMENT

Unless otherwise defined in this Global Restricted Stock Unit Award Agreement (this "***Agreement***"), any capitalized terms used herein will have the same meaning ascribed to them in the Sutro Biopharma, Inc. 2018 Equity Incentive Plan (the "***Plan***").

Participant has been granted Restricted Stock Units ("***RSUs***") subject to the terms, restrictions and conditions of the Plan, the Global Notice of Restricted Stock Unit Award (the "***Notice***") and this Agreement, including any applicable country-specific provisions in the appendix attached hereto (the "***Appendix***"), which constitutes part of this Agreement. In the event of a conflict between the terms and conditions of the Plan and the terms and conditions of the Notice or this Agreement, the terms and conditions of the Plan shall prevail.

1. Settlement. Settlement of RSUs will be made within 30 days following the applicable date of vesting under the Vesting Schedule set forth in the Notice. Settlement of RSUs will be in Shares. No fractional RSUs or rights for fractional Shares shall be created pursuant to this Agreement.

2. No Stockholder Rights. Unless and until such time as Shares are issued in settlement of vested RSUs, Participant will have no ownership of the Shares allocated to the RSUs and will have no rights to dividends or to vote such Shares.

3. Dividend Equivalents. Dividends, if any (whether in cash or Shares), will not be credited to Participant.

4. Non-Transferability of RSUs. The RSUs and any interest therein will not be sold, assigned, transferred, pledged, hypothecated, or otherwise disposed of in any manner other than by will or by the laws of descent or distribution or court order or unless otherwise permitted by the Committee on a case-by-case basis.

5. Termination. If Participant's Service terminates for any reason, all unvested RSUs will be forfeited to the Company forthwith, and all rights of Participant to such RSUs will immediately terminate without payment of any consideration to Participant. Participant's Service will be considered terminated (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any) as of the date Participant is no longer actively providing services and Participant's Service will not be extended by any notice period (e.g., Participant's Service would not include a period of "garden leave" or similar period mandated under employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any). Participant acknowledges and agrees that the Vesting Schedule may change prospectively in the event Participant's service status changes between full- and part-time and/or in the event Participant is on a leave of absence, in accordance with Company policies relating to work schedules and vesting of awards or as determined by the Committee. In case of any dispute as to whether and when a termination of Service has occurred, the Committee will have sole discretion to determine whether such termination of Service has occurred and the effective date of such termination (including whether Participant may still be considered to be actively providing Services while on a leave of absence).

6. Taxes.

(a) Responsibility for Taxes. Participant acknowledges that, regardless of any action taken by the Company or a Parent, Subsidiary or Affiliate employing or retaining Participant (the "***Employer***"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax-related items related to Participant's participation in the Plan and legally applicable to Participant ("***Tax-Related Items***") is and remains Participant's responsibility and may exceed the amount actually withheld by the Company or the Employer, if any. Participant further acknowledges that the Company and/or the Employer (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the RSUs, including, but not limited to, the grant, vesting or settlement of the RSUs and the subsequent sale of Shares acquired pursuant to such settlement and the receipt of any dividends, and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the RSUs to reduce or eliminate Participant's liability for Tax-Related Items or achieve any particular tax result. Further, if Participant is subject to Tax-Related Items in more than one jurisdiction, Participant acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction. *PARTICIPANT SHOULD CONSULT A TAX ADVISER APPROPRIATELY QUALIFIED IN EACH OF THE JURISDICTIONS, INCLUDING COUNTRY OR COUNTRIES IN WHICH PARTICIPANT RESIDES OR IS SUBJECT TO TAXATION.*

(b) Withholding. Prior to any relevant taxable or tax withholding event, as applicable, Participant agrees to make arrangements satisfactory to the Company and/or the Employer to fulfill all Tax-Related Items. In this regard, Participant authorizes the Company and/or the Employer, or their respective agents, at their discretion, to satisfy any withholding obligations for Tax-Related Items by one or a combination of the following:

(i) withholding from Participant's wages or other cash compensation paid to Participant by the Company and/or the Employer or any Parent, Subsidiary or Affiliate; or

(ii) withholding from proceeds of the sale of Shares acquired upon settlement of the RSUs either through a voluntary sale or through a mandatory sale arranged by the Company (on Participant's behalf pursuant to this authorization and without further consent); or

(iii) withholding Shares to be issued upon settlement of the RSUs, provided the Company only withholds the number of Shares necessary to satisfy no more than the maximum statutory withholding amounts; or

(iv) Participant's payment of a cash amount (including by check representing readily available funds or a wire transfer); or

(v) any other arrangement approved by the Committee and permitted under applicable law;

all under such rules as may be established by the Committee and in compliance with the Company's Insider Trading Policy and10b5-1 Trading Plan Policy, if applicable; provided however, that if Participant is a Section 16 officer of the Company under the Exchange Act, then unless determined otherwise by the Committee in advance of a Tax-Related Items withholding event, the method of withholding for this RSU will be (ii) above.

Depending on the withholding method, the Company may withhold or account forTax-Related Items by considering applicable statutory withholding rates or other applicable withholding rates, including up to the maximum permissible statutory rate for Participant's tax jurisdiction(s) in which case

Participant will have no entitlement to the equivalent amount in Shares and may receive a refund of any over-withheld amount in cash in accordance with applicable law. If the obligation for Tax-Related Items is satisfied by withholding in Shares, for tax purposes, Participant is deemed to have been issued the full number of Shares subject to the vested RSUs, notwithstanding that a number of the Shares are held back solely for the purpose of satisfying the withholding obligation for Tax-Related Items.

Finally, Participant agrees to pay to the Company or the Employer any amount ofTax-Related Items that the Company or the Employer may be required to withhold or account for as a result of Participant's participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares, if Participant fails to comply with Participant's obligations in connection with the Tax-Related Items.

7. Nature of Grant. By accepting the RSUs, Participant acknowledges, understands and agrees that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the RSUs is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of RSUs, or benefits in lieu of RSUs, even if RSUs have been granted in the past;

(c) all decisions with respect to future RSUs or other grants, if any, will be at the sole discretion of the Company;

(d) Participant is voluntarily participating in the Plan;

(e) the RSUs and Participant's participation in the Plan will not create a right to employment or be interpreted as forming or amending an employment or service contract with the Company, the Employer or any Parent, Subsidiary or Affiliate and shall not interfere with the ability of the Company, the Employer or any Parent, Subsidiary or Affiliate, as applicable, to terminate Participant's employment or service relationship (if any);

(f) the RSUs and the Shares subject to the RSUs, and the income from and value of same, are not intended to replace any pension rights or compensation;

(g) the RSUs and the Shares subject to the RSUs, and the income from and value of same, are not part of normal or expected compensation for any purpose, including, but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(h) unless otherwise agreed with the Company, the RSUs and the Shares subject to the RSUs, and the income from and value of same, are not granted as consideration for, or in connection with, the service Participant may provide as a director of a Parent, Subsidiary or Affiliate;

(i) the future value of the underlying Shares is unknown, indeterminable and cannot be predicted with certainty;

(j) no claim or entitlement to compensation or damages will arise from forfeiture of the RSUs resulting from Participant's termination of Service (regardless of the reason for such termination

and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any); and

(k) neither the Company, the Employer nor any Parent, Subsidiary or Affiliate will be liable for any foreign exchange rate fluctuation between Participant's local currency and the United States Dollar that may affect the value of the RSUs or of any amounts due to Participant pursuant to the settlement of the RSUs or the subsequent sale of any Shares acquired upon settlement.

8. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding Participant's participation in the Plan, or Participant's acquisition or sale of the underlying Shares. Participant acknowledges, understands and agrees he or she should consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

9. *Data Privacy.* ***Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of Participant's personal data as described in this Agreement and any other RSU grant materials by and among, as applicable, the Employer, the Company and any Parent, Subsidiary or Affiliate for the exclusive purpose of implementing, administering and managing Participant's participation in the Plan.***

Participant understands that the Company and the Employer may hold certain personal information about Participant, including, but not limited to, Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport number or other identification number (e.g., resident registration number), salary, nationality, job title, any shares of stock or directorships held in the Company, details of all RSUs or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan.

Participant understands that Data will be transferred to E*TRADE Financial Services, Solium-Shareworks, or other third party ("Online Administrator") and its affiliated companies or such other stock plan service provider as may be designated by the Company from time to time, which is assisting the Company with the implementation, administration and management of the Plan. Participant understands that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country may have different data privacy laws and protections than Participant's country. Participant understands that if he or she resides outside the United States, he or she may request a list with the names and addresses of any potential recipients of Data by contacting his or her local human resources representative. Participant authorizes the Company, [Online Administrator], or such other stock plan service provider as may be designated by the Company from time to time, and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing his or her participation in the Plan. Participant understands that Data will be held only as long as is necessary to implement, administer and manage Participant's participation in the Plan. Participant understands if he or she resides outside the United States, he or she may, at any time, view Data, request information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting his or her local human resources representative. Further, Participant understands that he or she is providing the consents herein on a purely voluntary basis. If Participant does not consent, or if Participant later seeks to revoke his or her consent, his or her employment status or service with the Employer will not be affected; the only consequence of refusing or withdrawing Participant's consent is that the Company would not be able to grant RSUs or other equity awards to Participant or

administer or maintain such awards. Therefore, Participant understands that refusing or withdrawing his or her consent may affect Participant's ability to participate in the Plan. For more information on the consequences of Participant's refusal to consent or withdrawal of consent, Participant understands that he or she may contact his or her local human resources representative.

Finally, upon request of the Company or the Employer, Participant agrees to provide an executed data privacy consent form (or any other agreements or consents) that the Company or the Employer may deem necessary to obtain from Participant for the purpose of administering Participant's participation in the Plan in compliance with the data privacy laws in Participant's country, either now or in the future. Participant understands and agrees that Participant will not be able to participate in the Plan if Participant fails to provide any such consent or agreement requested by the Company and/or the Employer.

10. Language. Participant acknowledges that he or she is sufficiently proficient in English to understand the terms and conditions of this Agreement. Furthermore, if Participant has received this Agreement or any other document related to the RSU and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

11. Appendix. Notwithstanding any provisions in this Agreement, the RSUs will be subject to any special terms and conditions set forth in any appendix to this Agreement for Participant's country. Moreover, if Participant relocates to one of the countries included in the Appendix, the special terms and conditions for such country will apply to Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

12. Imposition of Other Requirements. The Company reserves the right to impose other requirements on Participant's participation in the Plan, on the RSUs and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

13. Acknowledgement. The Company and Participant agree that the RSUs are granted under and governed by the Notice, this Agreement and the provisions of the Plan (incorporated herein by reference). Participant: (a) acknowledges receipt of a copy of the Plan and the Plan prospectus, (b) represents that Participant has carefully read and is familiar with their provisions, and (c) hereby accepts the RSUs subject to all of the terms and conditions set forth herein and those set forth in the Plan and the Notice.

14. Entire Agreement; Enforcement of Rights. This Agreement, the Plan and the Notice constitute the entire agreement and understanding of the parties relating to the subject matter herein and supersede all prior discussions between them. Any prior agreements, commitments or negotiations concerning the purchase of the Shares hereunder are superseded. No adverse modification of or adverse amendment to this Agreement, nor any waiver of any rights under this Agreement, will be effective unless in writing and signed by the parties to this Agreement (which writing and signing may be electronic). The failure by either party to enforce any rights under this Agreement will not be construed as a waiver of any rights of such party.

15. Compliance with Laws and Regulations. The issuance of Shares will be subject to and conditioned upon compliance by the Company and Participant with all applicable state, federal and foreign laws and regulations and with all applicable requirements of any stock exchange or automated quotation system on which the Company's Shares may be listed or quoted at the time of such issuance or

transfer. Participant understands that the Company is under no obligation to register or qualify the Shares with any state, federal or foreign securities commission or to seek approval or clearance from any governmental authority for the issuance or sale of the Shares. Further, Participant agrees that the Company shall have unilateral authority to amend the Plan and this RSU Agreement without Participant's consent to the extent necessary to comply with securities or other laws applicable to issuance of Shares. Finally, the Shares issued pursuant to this RSU Agreement shall be endorsed with appropriate legends, if any, determined by the Company.

16. Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, then such provision will be enforced to the maximum extent possible given the intent of the parties hereto. If such clause or provision cannot be so enforced, then (a) such provision will be excluded from this Agreement, (b) the balance of this Agreement will be interpreted as if such provision were so excluded and (c) the balance of this Agreement will be enforceable in accordance with its terms.

17. Governing Law and Venue. This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto will be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to such state's conflict of laws rules.

Any and all disputes relating to, concerning or arising from this Agreement, or relating to, concerning or arising from the relationship between the parties evidenced by the Plan or this Agreement, will be brought and heard exclusively in the United States District Court for the District of Northern California or the Superior Court of California, County of San Mateo. Each of the parties hereby represents and agrees that such party is subject to the personal jurisdiction of said courts; hereby irrevocably consents to the jurisdiction of such courts in any legal or equitable proceedings related to, concerning or arising from such dispute, and waives, to the fullest extent permitted by law, any objection which such party may now or hereafter have that the laying of the venue of any legal or equitable proceedings related to, concerning or arising from such dispute which is brought in such courts is improper or that such proceedings have been brought in an inconvenient forum.

18. No Rights as Employee, Director or Consultant. Nothing in this Agreement will affect in any manner whatsoever any right or power of the Company, or a Parent, Subsidiary or Affiliate, to terminate Participant's Service, for any reason, with or without Cause.

19. Consent to Electronic Delivery of All Plan Documents and Disclosures. By Participant's acceptance of the Notice (whether in writing or electronically), Participant and the Company agree that the RSUs are granted under and governed by the terms and conditions of the Plan, the Notice and this Agreement. Participant has reviewed the Plan, the Notice and this Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Notice and Agreement, and fully understands all provisions of the Plan, the Notice and this Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions relating to the Plan, the Notice and this Agreement. Participant further agrees to notify the Company upon any change in Participant's residence address. By acceptance of the RSUs, Participant agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company and consents to the electronic delivery of the Notice, this Agreement, the Plan, account statements, Plan prospectuses required by the SEC, U.S. financial reports of the Company, and all other documents that the Company is required to deliver to its security holders (including, without limitation, annual reports and proxy statements) or other communications or information related to the RSUs and current or future participation in the Plan. Electronic delivery may include the delivery of a link to the Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other delivery determined at the Company's discretion. Participant acknowledges that Participant may receive

from the Company a paper copy of any documents delivered electronically at no cost if Participant contacts the Company by telephone, through a postal service or electronic mail to Stock Administration. Participant further acknowledges that Participant will be provided with a paper copy of any documents delivered electronically if electronic delivery fails; similarly, Participant understands that Participant must provide on request to the Company or any designated third party a paper copy of any documents delivered electronically if electronic delivery fails. Also, Participant understands that Participant's consent may be revoked or changed, including any change in the electronic mail address to which documents are delivered (if Participant has provided an electronic mail address), at any time by notifying the Company of such revised or revoked consent by telephone, postal service or electronic mail to Stock Administration.

20. Insider Trading Restrictions/Market Abuse Laws. Participant acknowledges that, depending on Participant's country of residence, the broker's country, or the country in which the Shares are listed, Participant may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions, which may affect Participant's ability to directly or indirectly, accept, acquire, sell or attempt to sell or otherwise dispose of Shares, or rights to Shares (*e.g.*, RSUs), or rights linked to the value of Shares, during such times as Participant is considered to have "inside information" regarding the Company (as defined by the laws or regulations in the applicable jurisdiction). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders Participant placed before possessing the inside information. Furthermore, Participant may be prohibited from (i) disclosing the inside information to any third party, including fellow employees (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them to otherwise buy or sell securities. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. Participant acknowledges that it is Participant's responsibility to comply with any applicable restrictions and understands that Participant should consult his or her personal legal advisor on such matters. In addition, Participant acknowledges that he or she read the Company's Insider Trading Policy, and agrees to comply with such policy, as it may be amended from time to time, whenever Participant acquires or disposes of the Company's securities.

21. Foreign Asset/Account, Exchange Control and Tax Reporting. Participant may be subject to foreign asset/account, exchange control and/or tax reporting requirements as a result of the acquisition, holding and/or transfer of Shares or cash resulting from his or her participation in the Plan. Participant may be required to report such accounts, assets, the balances therein, the value thereof and/or the transactions related thereto to the applicable authorities in Participant's country and/or repatriate funds received in connection with the Plan within certain time limits or according to specified procedures. Participant acknowledges that he or she is responsible for ensuring compliance with any applicable foreign asset/account, exchange control and tax reporting requirements and should consult his or her personal legal and tax advisors on such matters.

22. Code Section 409A. For purposes of this Agreement, a termination of employment will be determined consistent with the rules relating to a "separation from service" as defined in Section 409A of the Internal Revenue Code and the regulations thereunder ("***Section 409A***"). Notwithstanding anything else provided herein, to the extent any payments provided under this RSU Agreement in connection with Participant's termination of employment constitute deferred compensation subject to Section 409A, and Participant is deemed at the time of such termination of employment to be a "specified employee" under Section 409A, then such payment shall not be made or commence until the earlier of (i) the expiration of the six-month period measured from Participant's separation from service from the Company or (ii) the date of Participant's death following such a separation from service; provided, however, that such deferral shall only be effected to the extent required to avoid adverse tax treatment to Participant including, without limitation, the additional tax for which Participant would otherwise be liable under Section 409A(a)(1)(B) in the absence of such a deferral. To the extent any payment under this RSU Agreement

may be classified as a "short-term deferral" within the meaning of Section 409A, such payment shall be deemed a short-term deferral, even if it may also qualify for an exemption from Section 409A under another provision of Section 409A. Payments pursuant to this section are intended to constitute separate payments for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations.

23. Award Subject to Company Clawback or Recoupment. The RSUs shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of Participant's employment or other Service that is applicable to Participant. In addition to any other remedies available under such policy, applicable law may require the cancellation of Participant's RSUs (whether vested or unvested) and the recoupment of any gains realized with respect to Participant's RSUs.

BY ACCEPTING THIS AWARD OF RSUS, PARTICIPANT AGREES TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.

APPENDIX

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL RESTRICTED STOCK UNIT AWARD AGREEMENT

COUNTRY SPECIFIC PROVISIONS FOR EMPLOYEES OUTSIDE THE U.S.

Terms and Conditions

This Appendix includes additional terms and conditions that govern the RSUs granted to Participant under the Plan if Participant resides and/or works in one of the countries below. This Appendix forms part of the Agreement. Any capitalized term used in this Appendix without definition will have the meaning ascribed to it in the Notice, the Agreement or the Plan, as applicable.

If Participant is a citizen or resident of a country, or is considered resident of a country, other than the one in which Participant is currently working, or Participant transfers employment and/or residency between countries after the Date of Grant, the Company will, in its sole discretion, determine to what extent the additional terms and conditions included herein will apply to Participant under these circumstances.

Notifications

This Appendix also includes information relating to exchange control, securities laws, foreign asset/account reporting and other issues of which Participant should be aware with respect to Participant's participation in the Plan. The information is based on the securities, exchange control, foreign asset/account reporting and other laws in effect in the respective countries as of September, 2018. Such laws are complex and change frequently. As a result, Participant should not rely on the information herein as the only source of information relating to the consequences of Participant's participation in the Plan because the information may be out of date at the time that Participant vests in the RSUs, sells Shares acquired under the Plan or takes any other action in connection with the Plan.

In addition, the information is general in nature and may not apply to Participant's particular situation, and the Company is not in a position to assure Participant of any particular result. Accordingly, Participant should seek appropriate professional advice as to how the relevant laws in Participant's country may apply to Participant's situation.

Finally, if Participant is a citizen or resident of a country, or is considered resident of a country, other than the one in which Participant is currently working and/or residing, or Participant transfers employment and/or residency after the Date of Grant, the information contained herein may not apply to Participant in the same manner.

None.

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL NOTICE OF PERFORMANCE STOCK UNIT AWARD

Unless otherwise defined herein, the terms defined in the Sutro Biopharma, Inc. (the "***Company***") 2018 Equity Incentive Plan (the "***Plan***") will have the same meanings in this Global Notice of Performance Stock Unit Award and the electronic representation of this Global Notice of Performance Stock Unit Award established and maintained by the Company or a third party designated by the Company (this "***Notice***").

Name:

Address:

You ("***Participant***") have been granted an award of Performance Stock Units ("***PSUs***") under the Plan subject to the terms and conditions of the Plan, this Notice and the attached Global Performance Stock Unit Award Agreement (the "***Agreement***"), including any applicable country-specific provisions in the appendix attached hereto (the "***Appendix***"), which constitutes part of the Agreement.

Grant Number:

Number of PSUs:

Date of Grant:

Vesting Commencement Date:

Expiration Date:	The earlier to occur of: (a) the date on which settlement of all PSUs granted hereunder occurs and (b) the tenth anniversary of the Date of Grant. This PSU expires earlier if Participant's Service terminates earlier, as described in the Agreement.
Vesting Schedule:	Subject to the limitations set forth in this Notice, the Plan and the Agreement, the PSUs will vest in accordance with the following schedule: [insert applicable performance metrics and vesting schedule]

By accepting (whether in writing, electronically or otherwise) the PSUs, Participant acknowledges and agrees to the following:

1) Participant understands that Participant's employment or consulting relationship or Service with the Company or a Parent or Subsidiary or Affiliate is for an unspecified duration, can be terminated at any time (*i.e.*, is "at-will"), except where otherwise prohibited by applicable law, and that nothing in this Notice, the Agreement or the Plan changes the nature of that relationship. Participant acknowledges that the vesting of the PSUs pursuant to this Notice is subject to Participant's continuing Service as an Employee, Director or Consultant. Participant agrees and acknowledges that the Vesting Schedule may change prospectively in the event that Participant's service status changes between full- and part-time and/or in the event Participant is on a leave of absence, in accordance with Company policies relating to work schedules and vesting of Awards or as determined by the Committee.

2) This grant is made under and governed by the Plan, the Agreement and this Notice, and this Notice is subject to the terms and conditions of the Agreement and the Plan, both of which are incorporated herein by reference. Participant has read the Notice, the Agreement and the Plan.

3) Participant has read the Company's Insider Trading Policy, and agrees to comply with such policy, as it may be amended from time to time, whenever Participant acquires or disposes of the Company's securities.

4) By accepting the PSUs, Participant consents to electronic delivery and participation as set forth in the Agreement.

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL PERFORMANCE STOCK UNIT AWARD AGREEMENT

Unless otherwise defined in this Global Performance Stock Unit Award Agreement (this "***Agreement***"), any capitalized terms used herein will have the same meaning ascribed to them in the Sutro Biopharma, Inc. 2018 Equity Incentive Plan (the "***Plan***").

Participant has been granted Performance Stock Units ("***PSUs***") subject to the terms, restrictions and conditions of the Plan, the Global Notice of Performance Stock Unit Award (the "***Notice***") and this Agreement, including any applicable country-specific provisions in the appendix attached hereto (the "***Appendix***"), which constitutes part of this Agreement. In the event of a conflict between the terms and conditions of the Plan and the terms and conditions of the Notice or this Agreement, the terms and conditions of the Plan shall prevail.

1. Settlement. Settlement of PSUs will be made within 30 days following the applicable date of vesting under the Vesting Schedule set forth in the Notice. Settlement of PSUs will be in Shares. No fractional PSUs or rights for fractional Shares shall be created pursuant to this Agreement.

2. No Stockholder Rights. Unless and until such time as Shares are issued in settlement of vested PSUs, Participant will have no ownership of the Shares allocated to the PSUs and will have no rights to dividends or to vote such Shares.

3. Dividend Equivalents. Dividends, if any (whether in cash or Shares), will not be credited to Participant.

4. Non-Transferability of PSUs. The PSUs and any interest therein will not be sold, assigned, transferred, pledged, hypothecated, or otherwise disposed of in any manner other than by will or by the laws of descent or distribution or court order or unless otherwise permitted by the Committee on a case-by-case basis.

5. Termination. If Participant's Service terminates for any reason, all unvested PSUs will be forfeited to the Company forthwith, and all rights of Participant to such PSUs will immediately terminate without payment of any consideration to Participant. Participant's Service will be considered terminated (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any) as of the date Participant is no longer actively providing services and Participant's Service will not be extended by any notice period (e.g., Participant's Service would not include a period of "garden leave" or similar period mandated under employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any). Participant acknowledges and agrees that the Vesting Schedule may change prospectively in the event Participant's service status changes between full- and part-time and/or in the event Participant is on a leave of absence, in accordance with Company policies relating to work schedules and vesting of awards or as determined by the Committee. In case of any dispute as to whether and when a termination of Service has occurred, the Committee will have sole discretion to determine whether such termination of Service has occurred and the effective date of such termination (including whether Participant may still be considered to be actively providing Services while on a leave of absence).

6. Taxes.

(a) Responsibility for Taxes. Participant acknowledges that, regardless of any action taken by the Company or a Parent, Subsidiary or Affiliate employing or retaining Participant (the "***Employer***"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax-related items related to Participant's participation in the Plan and legally applicable to Participant ("***Tax-Related Items***") is and remains Participant's responsibility and may exceed the amount actually withheld by the Company or the Employer, if any. Participant further acknowledges that the Company and/or the Employer (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the PSUs, including, but not limited to, the grant, vesting or settlement of the PSUs and the subsequent sale of Shares acquired pursuant to such settlement and the receipt of any dividends, and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the PSUs to reduce or eliminate Participant's liability for Tax-Related Items or achieve any particular tax result. Further, if Participant is subject to Tax-Related Items in more than one jurisdiction, Participant acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction. *PARTICIPANT SHOULD CONSULT A TAX ADVISER APPROPRIATELY QUALIFIED IN EACH OF THE JURISDICTIONS, INCLUDING COUNTRY OR COUNTRIES IN WHICH PARTICIPANT RESIDES OR IS SUBJECT TO TAXATION.*

(b) Withholding. Prior to any relevant taxable or tax withholding event, as applicable, Participant agrees to make arrangements satisfactory to the Company and/or the Employer to fulfill all Tax-Related Items. In this regard, Participant authorizes the Company and/or the Employer, or their respective agents, at their discretion, to satisfy any withholding obligations for Tax-Related Items by one or a combination of the following:

(i) withholding from Participant's wages or other cash compensation paid to Participant by the Company and/or the Employer or any Parent, Subsidiary or Affiliate; or

(ii) withholding from proceeds of the sale of Shares acquired upon settlement of the PSUs either through a voluntary sale or through a mandatory sale arranged by the Company (on Participant's behalf pursuant to this authorization and without further consent); or

(iii) withholding Shares to be issued upon settlement of the PSUs, provided the Company only withholds the number of Shares necessary to satisfy no more than the maximum statutory withholding amounts; or

(iv) Participant's payment of a cash amount (including by check representing readily available funds or a wire transfer); or

(v) any other arrangement approved by the Committee and permitted under applicable law;

all under such rules as may be established by the Committee and in compliance with the Company's Insider Trading Policy andl0b5-1 Trading Plan Policy, if applicable; provided however, that if Participant is a Section 16 officer of the Company under the Exchange Act, then unless determined otherwise by the Committee in advance of a Tax-Related Items withholding event, the method of withholding for this PSU will be (ii) above.

Depending on the withholding method, the Company may withhold or account forTax-Related Items by considering applicable statutory withholding rates or other applicable withholding rates, including up to the maximum permissible statutory rate for Participant's tax jurisdiction(s) in which case Participant will have no entitlement to the equivalent amount in Shares and may receive a refund of any over-withheld amount in cash in accordance with applicable law. If the obligation for Tax-Related Items is satisfied by withholding in Shares, for tax purposes, Participant is deemed to have been issued the full number of Shares subject to the vested PSUs, notwithstanding that a number of the Shares are held back solely for the purpose of satisfying the withholding obligation for Tax-Related Items.

Finally, Participant agrees to pay to the Company or the Employer any amount ofTax-Related Items that the Company or the Employer may be required to withhold or account for as a result of Participant's participation in the Plan that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares, if Participant fails to comply with Participant's obligations in connection with the Tax-Related Items.

7. Nature of Grant. By accepting the PSUs, Participant acknowledges, understands and agrees that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be modified, amended, suspended or terminated by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the PSUs is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of PSUs, or benefits in lieu of PSUs, even if PSUs have been granted in the past;

(c) all decisions with respect to future PSUs or other grants, if any, will be at the sole discretion of the Company;

(d) Participant is voluntarily participating in the Plan;

(e) the PSUs and Participant's participation in the Plan will not create a right to employment or be interpreted as forming or amending an employment or service contract with the Company, the Employer or any Parent, Subsidiary or Affiliate and shall not interfere with the ability of the Company, the Employer or any Parent, Subsidiary or Affiliate, as applicable, to terminate Participant's employment or service relationship (if any);

(f) the PSUs and the Shares subject to the PSUs, and the income from and value of same, are not intended to replace any pension rights or compensation;

(g) the PSUs and the Shares subject to the PSUs, and the income from and value of same, are not part of normal or expected compensation for any purpose, including, but not limited to, calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

(h) unless otherwise agreed with the Company, the PSUs and the Shares subject to the PSUs, and the income from and value of same, are not granted as consideration for, or in connection with, the service Participant may provide as a director of a Parent, Subsidiary or Affiliate;

(i) the future value of the underlying Shares is unknown, indeterminable and cannot be predicted with certainty;

(j) no claim or entitlement to compensation or damages will arise from forfeiture of the PSUs resulting from Participant's termination of Service (regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where Participant is employed or the terms of Participant's employment agreement, if any); and

(k) neither the Company, the Employer nor any Parent, Subsidiary or Affiliate will be liable for any foreign exchange rate fluctuation between Participant's local currency and the United States Dollar that may affect the value of the PSUs or of any amounts due to Participant pursuant to the settlement of the PSUs or the subsequent sale of any Shares acquired upon settlement.

8. No Advice Regarding Grant. The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding Participant's participation in the Plan, or Participant's acquisition or sale of the underlying Shares. Participant acknowledges, understands and agrees he or she should consult with his or her own personal tax, legal and financial advisors regarding his or her participation in the Plan before taking any action related to the Plan.

9. *Data Privacy.* ***Participant hereby explicitly and unambiguously consents to the collection, use and transfer, in electronic or other form, of Participant's personal data as described in this Agreement and any other PSU grant materials by and among, as applicable, the Employer, the Company and any Parent, Subsidiary or Affiliate for the exclusive purpose of implementing, administering and managing Participant's participation in the Plan.***

Participant understands that the Company and the Employer may hold certain personal information about Participant, including, but not limited to, Participant's name, home address, email address and telephone number, date of birth, social insurance number, passport number or other identification number (e.g., resident registration number), salary, nationality, job title, any shares of stock or directorships held in the Company, details of all PSUs or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in Participant's favor ("Data"), for the exclusive purpose of implementing, administering and managing the Plan.

Participant understands that Data will be transferred to E*TRADE Financial Services, Solium-Shareworks, or other third party ("Online Administrator") and its affiliated companies or such other stock plan service provider as may be designated by the Company from time to time, which is assisting the Company with the implementation, administration and management of the Plan. Participant understands that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country may have different data privacy laws and protections than Participant's country. Participant understands that if he or she resides outside the United States, he or she may request a list with the names and addresses of any potential recipients of Data by contacting his or her local human resources representative. Participant authorizes the Company, [Online Administrator], or such other stock plan service provider as may be designated by the Company from time to time, and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the Plan to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing his or her participation in the Plan. Participant understands that Data will be held only as long as is necessary to implement, administer and manage Participant's participation in the Plan. Participant understands if he or she resides outside the United States, he or she may, at any time, view Data, request information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting his or her local human resources representative. Further, Participant understands that he or she is providing the consents herein on a purely voluntary basis. If Participant does not consent, or if Participant later seeks to revoke his or her consent, his or her employment status or service with the

Employer will not be affected; the only consequence of refusing or withdrawing Participant's consent is that the Company would not be able to grant PSUs or other equity awards to Participant or administer or maintain such awards. Therefore, Participant understands that refusing or withdrawing his or her consent may affect Participant's ability to participate in the Plan. For more information on the consequences of Participant's refusal to consent or withdrawal of consent, Participant understands that he or she may contact his or her local human resources representative.

Finally, upon request of the Company or the Employer, Participant agrees to provide an executed data privacy consent form (or any other agreements or consents) that the Company or the Employer may deem necessary to obtain from Participant for the purpose of administering Participant's participation in the Plan in compliance with the data privacy laws in Participant's country, either now or in the future. Participant understands and agrees that Participant will not be able to participate in the Plan if Participant fails to provide any such consent or agreement requested by the Company and/or the Employer.

10. Language. Participant acknowledges that he or she is sufficiently proficient in English to understand the terms and conditions of this Agreement. Furthermore, if Participant has received this Agreement or any other document related to the PSU and/or the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

11. Appendix. Notwithstanding any provisions in this Agreement, the PSUs will be subject to any special terms and conditions set forth in any appendix to this Agreement for Participant's country. Moreover, if Participant relocates to one of the countries included in the Appendix, the special terms and conditions for such country will apply to Participant, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

12. Imposition of Other Requirements. The Company reserves the right to impose other requirements on Participant's participation in the Plan, on the PSUs and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require Participant to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

13. Acknowledgement. The Company and Participant agree that the PSUs are granted under and governed by the Notice, this Agreement and the provisions of the Plan (incorporated herein by reference). Participant: (a) acknowledges receipt of a copy of the Plan and the Plan prospectus, (b) represents that Participant has carefully read and is familiar with their provisions, and (c) hereby accepts the PSUs subject to all of the terms and conditions set forth herein and those set forth in the Plan and the Notice.

14. Entire Agreement; Enforcement of Rights. This Agreement, the Plan and the Notice constitute the entire agreement and understanding of the parties relating to the subject matter herein and supersede all prior discussions between them. Any prior agreements, commitments or negotiations concerning the purchase of the Shares hereunder are superseded. No adverse modification of or adverse amendment to this Agreement, nor any waiver of any rights under this Agreement, will be effective unless in writing and signed by the parties to this Agreement (which writing and signing may be electronic). The failure by either party to enforce any rights under this Agreement will not be construed as a waiver of any rights of such party.

15. Compliance with Laws and Regulations. The issuance of Shares will be subject to and conditioned upon compliance by the Company and Participant with all applicable state, federal and foreign laws and regulations and with all applicable requirements of any stock exchange or automated quotation system on which the Company's Shares may be listed or quoted at the time of such issuance or transfer. Participant understands that the Company is under no obligation to register or qualify the Shares with any state, federal or foreign securities commission or to seek approval or clearance from any governmental authority for the issuance or sale of the Shares. Further, Participant agrees that the Company shall have unilateral authority to amend the Plan and this PSU Agreement without Participant's consent to the extent necessary to comply with securities or other laws applicable to issuance of Shares. Finally, the Shares issued pursuant to this PSU Agreement shall be endorsed with appropriate legends, if any, determined by the Company.

16. Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, then such provision will be enforced to the maximum extent possible given the intent of the parties hereto. If such clause or provision cannot be so enforced, then (a) such provision will be excluded from this Agreement, (b) the balance of this Agreement will be interpreted as if such provision were so excluded and (c) the balance of this Agreement will be enforceable in accordance with its terms.

17. Governing Law and Venue. This Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto will be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to such state's conflict of laws rules.

Any and all disputes relating to, concerning or arising from this Agreement, or relating to, concerning or arising from the relationship between the parties evidenced by the Plan or this Agreement, will be brought and heard exclusively in the United States District Court for the District of Northern California or the Superior Court of California, County of San Mateo. Each of the parties hereby represents and agrees that such party is subject to the personal jurisdiction of said courts; hereby irrevocably consents to the jurisdiction of such courts in any legal or equitable proceedings related to, concerning or arising from such dispute, and waives, to the fullest extent permitted by law, any objection which such party may now or hereafter have that the laying of the venue of any legal or equitable proceedings related to, concerning or arising from such dispute which is brought in such courts is improper or that such proceedings have been brought in an inconvenient forum.

18. No Rights as Employee, Director or Consultant. Nothing in this Agreement will affect in any manner whatsoever any right or power of the Company, or a Parent, Subsidiary or Affiliate, to terminate Participant's Service, for any reason, with or without Cause.

19. Consent to Electronic Delivery of All Plan Documents and Disclosures. By Participant's acceptance of the Notice (whether in writing or electronically), Participant and the Company agree that the PSUs are granted under and governed by the terms and conditions of the Plan, the Notice and this Agreement. Participant has reviewed the Plan, the Notice and this Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Notice and Agreement, and fully understands all provisions of the Plan, the Notice and this Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Committee upon any questions relating to the Plan, the Notice and this Agreement. Participant further agrees to notify the Company upon any change in Participant's residence address. By acceptance of the PSUs, Participant agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or a third party designated by the Company and consents to the electronic delivery of the Notice, this Agreement, the Plan, account statements, Plan prospectuses required by the SEC, U.S. financial reports of the Company, and all other documents that the Company is required to deliver to its security holders (including, without limitation, annual reports and proxy statements) or other

communications or information related to the PSUs and current or future participation in the Plan. Electronic delivery may include the delivery of a link to the Company intranet or the internet site of a third party involved in administering the Plan, the delivery of the document via e-mail or such other delivery determined at the Company's discretion. Participant acknowledges that Participant may receive from the Company a paper copy of any documents delivered electronically at no cost if Participant contacts the Company by telephone, through a postal service or electronic mail to Stock Administration. Participant further acknowledges that Participant will be provided with a paper copy of any documents delivered electronically if electronic delivery fails; similarly, Participant understands that Participant must provide on request to the Company or any designated third party a paper copy of any documents delivered electronically if electronic delivery fails. Also, Participant understands that Participant's consent may be revoked or changed, including any change in the electronic mail address to which documents are delivered (if Participant has provided an electronic mail address), at any time by notifying the Company of such revised or revoked consent by telephone, postal service or electronic mail to Stock Administration.

20. Insider Trading Restrictions/Market Abuse Laws. Participant acknowledges that, depending on Participant's country of residence, the broker's country, or the country in which the Shares are listed, Participant may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions, which may affect Participant's ability to directly or indirectly, accept, acquire, sell or attempt to sell or otherwise dispose of Shares, or rights to Shares (*e.g.*, PSUs), or rights linked to the value of Shares, during such times as Participant is considered to have "inside information" regarding the Company (as defined by the laws or regulations in the applicable jurisdiction). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders Participant placed before possessing the inside information. Furthermore, Participant may be prohibited from (i) disclosing the inside information to any third party, including fellow employees (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them to otherwise buy or sell securities. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. Participant acknowledges that it is Participant's responsibility to comply with any applicable restrictions and understands that Participant should consult his or her personal legal advisor on such matters. In addition, Participant acknowledges that he or she read the Company's Insider Trading Policy, and agrees to comply with such policy, as it may be amended from time to time, whenever Participant acquires or disposes of the Company's securities.

21. Foreign Asset/Account, Exchange Control and Tax Reporting Participant may be subject to foreign asset/account, exchange control and/or tax reporting requirements as a result of the acquisition, holding and/or transfer of Shares or cash resulting from his or her participation in the Plan. Participant may be required to report such accounts, assets, the balances therein, the value thereof and/or the transactions related thereto to the applicable authorities in Participant's country and/or repatriate funds received in connection with the Plan within certain time limits or according to specified procedures. Participant acknowledges that he or she is responsible for ensuring compliance with any applicable foreign asset/account, exchange control and tax reporting requirements and should consult his or her personal legal and tax advisors on such matters.

22. Code Section 409A. For purposes of this Agreement, a termination of employment will be determined consistent with the rules relating to a "separation from service" as defined in Section 409A of the Internal Revenue Code and the regulations thereunder ("***Section 409A***"). Notwithstanding anything else provided herein, to the extent any payments provided under this PSU Agreement in connection with Participant's termination of employment constitute deferred compensation subject to Section 409A, and Participant is deemed at the time of such termination of employment to be a "specified employee" under Section 409A, then such payment shall not be made or commence until the earlier of (i) the expiration of the six-month period measured from Participant's separation from service from the Company or (ii) the

date of Participant's death following such a separation from service; provided, however, that such deferral shall only be effected to the extent required to avoid adverse tax treatment to Participant including, without limitation, the additional tax for which Participant would otherwise be liable under Section 409A(a)(1)(B) in the absence of such a deferral. To the extent any payment under this PSU Agreement may be classified as a "short-term deferral" within the meaning of Section 409A, such payment shall be deemed a short-term deferral, even if it may also qualify for an exemption from Section 409A under another provision of Section 409A. Payments pursuant to this section are intended to constitute separate payments for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations.

23. Award Subject to Company Clawback or Recoupment. The PSUs shall be subject to clawback or recoupment pursuant to any compensation clawback or recoupment policy adopted by the Board or required by law during the term of Participant's employment or other Service that is applicable to Participant. In addition to any other remedies available under such policy, applicable law may require the cancellation of Participant's PSUs (whether vested or unvested) and the recoupment of any gains realized with respect to Participant's PSUs.

BY ACCEPTING THIS AWARD OF PSUS, PARTICIPANT AGREES TO ALL OF THE TERMS AND CONDITIONS DESCRIBED ABOVE AND IN THE PLAN.

APPENDIX

SUTRO BIOPHARMA, INC.
2018 EQUITY INCENTIVE PLAN
GLOBAL PERFORMANCE STOCK UNIT AWARD AGREEMENT

COUNTRY SPECIFIC PROVISIONS FOR EMPLOYEES OUTSIDE THE U.S.

Terms and Conditions

This Appendix includes additional terms and conditions that govern the PSUs granted to Participant under the Plan if Participant resides and/or works in one of the countries below. This Appendix forms part of the Agreement. Any capitalized term used in this Appendix without definition will have the meaning ascribed to it in the Notice, the Agreement or the Plan, as applicable.

If Participant is a citizen or resident of a country, or is considered resident of a country, other than the one in which Participant is currently working, or Participant transfers employment and/or residency between countries after the Date of Grant, the Company will, in its sole discretion, determine to what extent the additional terms and conditions included herein will apply to Participant under these circumstances.

Notifications

This Appendix also includes information relating to exchange control, securities laws, foreign asset/account reporting and other issues of which Participant should be aware with respect to Participant's participation in the Plan. The information is based on the securities, exchange control, foreign asset/account reporting and other laws in effect in the respective countries as of September, 2018. Such laws are complex and change frequently. As a result, Participant should not rely on the information herein as the only source of information relating to the consequences of Participant's participation in the Plan because the information may be out of date at the time that Participant vests in the PSUs, sells Shares acquired under the Plan or takes any other action in connection with the Plan.

In addition, the information is general in nature and may not apply to Participant's particular situation, and the Company is not in a position to assure Participant of any particular result. Accordingly, Participant should seek appropriate professional advice as to how the relevant laws in Participant's country may apply to Participant's situation.

Finally, if Participant is a citizen or resident of a country, or is considered resident of a country, other than the one in which Participant is currently working and/or residing, or Participant transfers employment and/or residency after the Date of Grant, the information contained herein may not apply to Participant in the same manner.

None.

SUTRO BIOPHARMA, INC.
2018 EMPLOYEE STOCK PURCHASE PLAN

1. PURPOSE. Sutro Biopharma, Inc. adopted the Plan effective as of the date of the IPO. The purpose of this Plan is to provide eligible employees of the Company and the Participating Corporations with a means of acquiring an equity interest in the Company through payroll deductions, to enhance such employees' sense of participation in the affairs of the Company and to provide an incentive for continued employment. Capitalized terms not defined elsewhere in the text are defined in Section 28.

2. ESTABLISHMENT OF PLAN. The Company proposes to grant rights to purchase Shares to eligible employees of the Company and its Participating Corporations pursuant to this Plan. The Company intends this Plan to qualify as an "employee stock purchase plan" under Section 423 of the Code (including any amendments to or replacements of such Section), and this Plan shall be so construed. Any term not expressly defined in this Plan but defined for purposes of Section 423 of the Code shall have the same definition herein. In addition, with regard to offers of options to purchase Shares under the Plan to employees working for a Subsidiary or an Affiliate outside the United States, this Plan authorizes the grant of options that are not intended to meet Section 423 requirements, provided, if necessary under Section 423 of the Code, the other terms and conditions of the Plan are met.

Subject to Section 14, a total of Two Hundred Thirty Thousand (230,000) Shares is reserved for issuance under this Plan. In addition, on each January 1 for the first ten (10) calendar years after the Effective Date, the aggregate number of Shares reserved for issuance under the Plan shall be increased automatically by the number of Shares equal to one percent (1%) of the total number of outstanding Shares outstanding on the immediately preceding December 31 (rounded down to the nearest whole share); provided, that the Board or the Committee may in its sole discretion reduce the amount of the increase in any particular year. Subject to Section 14, no more than Two Million Three Hundred Thousand (2,300,000) Shares may be issued over the term of this Plan. The number of Shares initially reserved for issuance under this Plan and the maximum number of Shares that may be issued under this Plan shall be subject to adjustments effected in accordance with Section 14.

3. ADMINISTRATION. The Plan will be administered by the Committee. Subject to the provisions of this Plan and the limitations of Section 423 of the Code or any successor provision in the Code, all questions of interpretation or application of this Plan shall be determined by the Committee and its decisions shall be final and binding upon all Participants. The Committee will have full and exclusive discretionary authority to construe, interpret and apply the terms of the Plan, to determine eligibility, to designate the Participating Corporations, to determine when to grant options which are not intended to meet the Code Section 423 requirements and to decide upon any and all claims filed under the Plan. Every finding, decision and determination made by the Committee will, to the full extent permitted by law, be final and binding upon all parties. Notwithstanding any provision to the contrary in this Plan, the Committee may adopt rules, sub-plans, and/or procedures relating to the operation and administration of the Plan designed to comply with local laws, regulations or customs or to achieve tax, securities law or other objectives for eligible employees outside of the United States. The Committee will have the authority to determine the Fair Market Value of the Shares (which determination shall be final, binding and conclusive for all purposes) in accordance with Section 8 below and to interpret Section 8 of the Plan in connection with circumstances that impact the Fair Market Value. Members of the Committee shall receive no compensation for their services in connection with the administration of this Plan, other than standard fees as established from time to time by the Board for services rendered by Board members serving on Board committees. All expenses incurred in connection with the administration of this Plan shall be paid by the Company. For purposes of this Plan, the Committee may designate separate offerings under the Plan (the terms of which need not be identical) in which eligible employees of one or more

Participating Corporations will participate, even if the dates of the applicable Offering Periods of each such offering are identical.

4. ELIGIBILITY.

(a) Any employee of the Company or the Participating Corporations is eligible to participate in an Offering Period under this Plan, except that one or more of the following categories of employees may be excluded from coverage under the Plan by the Committee (other than where prohibited by applicable law):

(i) employees who are customarily employed for twenty (20) hours or less per week;

(ii) employees who are customarily employed for five (5) months or less in a calendar year;

(iii) individuals who provide services to the Company or any of its Participating Corporations as independent contractors who are reclassified as common law employees for any reason except for federal income and employment tax purposes; and

(iv) employees who do not meet any other eligibility requirements that the Committee may choose to impose (within the limits permitted by the Code).

The foregoing notwithstanding, an individual shall not be eligible if his or her participation in the Plan is prohibited by the law of any country that has jurisdiction over him or her, if complying with the laws of the applicable country would cause the Plan to violate Section 423 of the Code, or if he or she is subject to a collective bargaining agreement that does not provide for participation in the Plan.

(b) No employee who, together with any other person whose stock would be attributed to such employee pursuant to Section 424(d) of the Code, owns stock or holds options to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or its Parent or Subsidiary or who, as a result of being granted an option under this Plan with respect to such Offering Period, would own stock or hold options to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or its Parent or Subsidiary shall be granted an option to purchase Shares under the Plan.

5. OFFERING DATES.

(a) Each Offering Period of this Plan may be of up to twenty-seven (27) months duration and shall commence and end at the times designated by the Committee. Each Offering Period may consist of one or more Purchase Periods during which payroll deductions of Participants are accumulated under this Plan.

(b) The initial Offering Period shall commence on the Effective Date and shall end with the Purchase Date that occurs on March 15, 2019 or another date selected by the Committee which is more or less than six (6) months after the commencement of the initial Offering Period, but in any event no more than twenty-seven (27) months after the commencement of the initial Offering period (the "***Initial Offering Period***"). The Initial Offering Period shall consist of one Purchase Period. Thereafter, a six (6) month Offering Period shall commence on each March 16th and September 16th, with each such Offering Period also consisting of one six-month Purchase Period, except as otherwise provided by an applicable subplan, or on such other date determined by the Committee. The Committee may at any time establish a different duration for any subsequent Offering Period or Purchase Period.

6. PARTICIPATION IN THIS PLAN.

(a) **Enrollment in Initial Offering Period**. Any employee who is an eligible employee determined in accordance with Section 4 immediately prior to the Initial Offering Period will be automatically enrolled in the Initial Offering Period under this Plan at a contribution level equal to fifteen percent (15%) of Compensation. A Participant that is automatically enrolled in the Initial Offering Period pursuant to this section will be entitled to continue to participate in the Initial Offering Period if such Participant submits a subscription agreement in a form determined by the Administrator, or electronic representation thereof, to the Company and/or an authorized third party administrator confirming or changing his or her contribution rate (i) no earlier than the date on which an effective registration statement pursuant to Form S-8 is filed with respect to the issuance of Shares under this Plan, and (ii) within thirty (30) days after such filing of an effective registration statement pursuant to Form S-8, or such longer time as may be determined by the Committee.

(b) **Enrollment in Subsequent Offering Periods**. With respect to subsequent Offering Periods, any eligible employee determined in accordance with Section 4 will be eligible to participate in this Plan, subject to the requirements of Section 6(b) hereof and the other terms and provisions of this Plan. With respect to Offering Periods after the Initial Offering Period, a Participant may elect to participate in this Plan by submitting an enrollment agreement prior to the commencement of the Offering Period (or such earlier date as the Committee may determine) to which such agreement relates.

(c) **Continued Enrollment in Offering Periods**. Once an employee becomes a Participant in an Offering Period, then such Participant will automatically participate in each subsequent Offering Period commencing immediately following the last day of the prior Offering Period unless the Participant withdraws or is deemed to withdraw from this Plan or terminates further participation in an Offering Period as set forth in Section 11 below. A Participant who is continuing participation pursuant to the preceding sentence is not required to file any additional enrollment agreement in order to continue participation in this Plan; a Participant who is not continuing participation pursuant to the preceding sentence is required to file an enrollment agreement prior to the commencement of the Offering Period (or such earlier date as the Committee may determine) to which such agreement relates.

7. GRANT OF OPTION ON ENROLLMENT. Becoming a Participant with respect to an Offering Period will constitute the grant (as of the Offering Date) by the Company to such Participant of an option to purchase on the Purchase Date up to that number of Shares determined by a fraction, the numerator of which is the amount accumulated in such Participant's payroll deduction account during such Purchase Period and the denominator of which is the lower of (i) eighty-five percent (85%) of the Fair Market Value of a Share on the Offering Date (but in no event less than the par value of such Share), or (ii) eighty-five percent (85%) of the Fair Market Value of a Share on the Purchase Date provided, however, that for the Purchase Period within the Initial Offering Period the numerator shall be fifteen percent (15%) of the Participant's Compensation for such Purchase Period, or such lower percentage as determined by the Committee prior to the start of the Initial Offering Period or pursuant to Participant's election to decrease the amount pursuant Section 6(a) above, and provided, further, that the number of Shares subject to any option granted pursuant to this Plan shall not exceed the lesser of (x) the maximum number of Shares set by the Committee pursuant to Section 10(b) below with respect to the applicable Purchase Date, or (y) the maximum number of Shares which may be purchased pursuant to Section 10(a) below with respect to the applicable Purchase Date.

8. PURCHASE PRICE. The Purchase Price at which a Share will be sold in any Offering Period shall be eighty-five percent (85%) of the lesser of:

(a) The Fair Market Value on the Offering Date; or

(b) The Fair Market Value on the Purchase Date.

9. PAYMENT OF PURCHASE PRICE; PAYROLL DEDUCTION CHANGES; SHARE ISSUANCES.

(a) The Purchase Price shall be accumulated by regular payroll deductions made during each Offering Period, unless the Company determines that contributions may be made in another form due to local legal or other requirements. The deductions are made as a percentage of the Participant's Compensation in one percent (1%) increments not less than one percent (1%), nor greater than fifteen percent (15%) or such lower limit set by the Committee. "***Compensation***" shall mean base salary (or in foreign jurisdictions, equivalent cash compensation); however, the Committee may at any time prior to the beginning of an Offering Period determine that for that and future Offering Periods, Compensation shall mean all W-2 cash compensation, including without limitation base salary or regular hourly wages, bonuses, incentive compensation, commissions, overtime, shift premiums, plus draws against commissions (or in foreign jurisdictions, equivalent cash compensation). For purposes of determining a Participant's Compensation, any election by such Participant to reduce his or her regular cash remuneration under Sections 125 or 401(k) of the Code (or in foreign jurisdictions, equivalent salary deductions) shall be treated as if the Participant did not make such election. Payroll deductions shall commence (i) for the Initial Offering Period, as soon as practicable following the Participant's submission of a subscription agreement confirming or changing his or her contribution rate following the effective date of filing with the U.S. Securities and Exchange Commission a securities registration statement for the Plan (and, the payroll deductions for each of the remaining payroll periods in the Initial Offering Period may be increased by the amount of the payroll deductions that would have been made prior to the commencement of such deductions for the Initial Offering Period) and (ii) for subsequent Offering Periods, on the first payday following the last Purchase Date , and in either case shall continue to the end of the applicable Offering Period unless sooner altered or terminated as provided in this Plan. Notwithstanding the foregoing, the terms of any sub-plan may permit matching Shares without the payment of any purchase price.

(b) A Participant may decrease the rate of payroll deductions during an Offering Period by filing with the Company a new authorization for payroll deductions, with the new rate to become effective as soon as administratively practicable after the Company's receipt of the authorization and continuing for the remainder of the Offering Period unless changed as described below. A decrease in the rate of payroll deductions may be made up to twice during the Initial Offering Period and no more than once during any subsequent Offering Period, or more or less frequently under rules determined by the Committee. An increase in the rate of payroll deductions may not be made with respect to an on-going Offering Period unless otherwise determined by the Committee. A Participant may increase or decrease the rate of payroll deductions for any subsequent Offering Period by filing with the Company a new authorization for payroll deductions prior to the beginning of such Offering Period, or such other time period as specified by the Committee.

(c) A Participant may reduce his or her payroll deduction percentage to zero during an Offering Period by filing with the Company a request for cessation of payroll deductions. Such reduction shall be effective as soon as administratively practicable after the Company's receipt of the request and no further payroll deductions will be made for the duration of the Offering Period. Payroll deductions credited to the Participant's account prior to the effective date of the request shall be used to purchase Shares in accordance with Subsection (e) below. A reduction of the payroll deduction percentage to zero shall be treated as such Participant's withdrawal from the Plan, effective as of the day after the next Purchase Date following the filing date of such request with the Company.

(d) All payroll deductions made for a Participant are credited to his or her account under this Plan and are deposited with the general funds of the Company, except to the extent local legal restrictions outside the United States require segregation of such payroll deductions. No interest accrues on the payroll deductions, except to the extent required due to local legal requirements. All payroll deductions received or held by the Company may be used by the Company for any corporate purpose, and the Company shall not be obligated to segregate such payroll deductions, except to the extent necessary to comply with local legal requirements outside the United States.

(e) On each Purchase Date, so long as this Plan remains in effect and provided that the Participant has not submitted a signed and completed withdrawal form before that date which notifies the Company that the Participant wishes to withdraw from that Offering Period under this Plan and have all payroll deductions accumulated in the account maintained on behalf of the Participant as of that date returned to the Participant, the Company shall apply the funds then in the Participant's account to the purchase of whole Shares reserved under the option granted to such Participant with respect to the Offering Period to the extent that such option is exercisable on the Purchase Date. The Purchase Price per share shall be as specified in Section 8 of this Plan. Any fractional share, as calculated under this Subsection (e), shall be rounded down to the next lower whole share, unless the Committee determines with respect to all Participants that any fractional share shall be credited as a fractional share. Any amount remaining in a Participant's account on a Purchase Date which is less than the amount necessary to purchase a full Share shall be carried forward, without interest (except to the extent necessary to comply with local legal requirements outside the United States), into the next Purchase Period or Offering Period, as the case may be. In the event that this Plan has been oversubscribed, all funds not used to purchase Shares on the Purchase Date shall be returned to the Participant, without interest (except to the extent required due to local legal requirements outside the United States). No Shares shall be purchased on a Purchase Date on behalf of any employee whose participation in this Plan has terminated prior to such Purchase Date, except to the extent required due to local legal requirements outside the United States.

(f) As promptly as practicable after the Purchase Date, the Company shall issue Shares for the Participant's benefit representing the Shares purchased upon exercise of his or her option.

(g) During a Participant's lifetime, his or her option to purchase Shares hereunder is exercisable only by him or her. The Participant will have no interest or voting right in Shares covered by his or her option until such option has been exercised.

(h) To the extent required by applicable federal, state, local or foreign law, a Participant shall make arrangements satisfactory to the Company for the satisfaction of any withholding tax obligations that arise in connection with the Plan. The Company or any Subsidiary or Affiliate, as applicable, may withhold, by any method permissible under the applicable law, the amount necessary for the Company or Subsidiary or Affiliate, as applicable, to meet applicable withholding obligations, including any withholding required to make available to the Company or Subsidiary or Affiliate, as applicable, any tax deductions or benefits attributable to the sale or early disposition of Shares by a Participant. The Company shall not be required to issue any Shares under the Plan until such obligations are satisfied.

10. LIMITATIONS ON SHARES TO BE PURCHASED.

(a) Any other provision of the Plan notwithstanding, no Participant shall purchase Shares with a Fair Market Value in excess of the following limit:

(i) In the case of Shares purchased during an Offering Period that commenced in the current calendar year, the limit shall be equal to (A) $25,000 minus (B) the Fair Market Value of the Shares that the Participant previously purchased in the current calendar year (under this Plan and all other employee stock purchase plans of the Company or any parent or Subsidiary of the Company).

(ii) In the case of Shares purchased during an Offering Period that commenced in the immediately preceding calendar year, the limit shall be equal to (A) $50,000 minus (B) the Fair Market Value of the Shares that the Participant previously purchased (under this Plan and all other employee stock purchase plans of the Company or any parent or Subsidiary of the Company) in the current calendar year and in the immediately preceding calendar year.

For purposes of this Subsection (a), the Fair Market Value of Shares shall be determined in each case as of the beginning of the Offering Period in which such Shares are purchased. Employee stock purchase plans not described in Section 423 of the Code shall be disregarded. If a Participant is precluded by this Subsection (a) from purchasing additional Shares under the Plan, then his or her employee contributions shall automatically be discontinued and shall automatically resume at the beginning of the earliest Purchase Period that will end in the next calendar year (if he or she then is an eligible employee), provided that when the Company automatically resumes such payroll deductions, the Company must apply the rate in effect immediately prior to such suspension.

(b) The Committee may, in its sole discretion, set a lower maximum number of Shares that may be purchased by any Participant during any Offering Period than that determined under Section 10(a); provided, however, in no event shall a Participant be permitted to purchase more than 2,500 Shares on any one Purchase Date or such greater or lesser number as the Committee shall determine. If a greater or lower limit is set under this Subsection (b), then all Participants will be notified of such limit prior to the commencement of the next Offering Period for which it is to be effective.

(c) If the number of Shares to be purchased on a Purchase Date by all Participants exceeds the number of Shares then available for issuance under this Plan, then the Company will make a pro rata allocation of the remaining Shares in as uniform a manner as shall be reasonably practicable and as the Committee shall determine to be equitable. In such event, the Company will give notice of such reduction of the number of Shares to be purchased under a Participant's option to each Participant affected.

(d) Any payroll deductions accumulated in a Participant's account that are not used to purchase Shares due to the limitations in this Section 10, and not covered by Section 9(e), shall be returned to the Participant as soon as practicable after the end of the applicable Purchase Period, without interest (except to the extent required due to local legal requirements outside the United States).

11. WITHDRAWAL.

(a) Each Participant may withdraw from an Offering Period under this Plan pursuant to a method specified for such purpose by the Company. Such withdrawal may be elected at any time prior to the end of an Offering Period, or such other time period as specified by the Committee.

(b) Upon withdrawal from this Plan, the accumulated payroll deductions shall be returned to the withdrawn Participant, without interest (except to the extent required due to local legal requirements outside the United States), and his or her interest in this Plan shall terminate. In the event a Participant voluntarily elects to withdraw from this Plan, he or she may not resume his or her participation

in this Plan during the same Offering Period, but he or she may participate in any Offering Period under this Plan which commences on a date subsequent to such withdrawal by filing a new authorization for payroll deductions in the same manner as set forth in Section 6 above for initial participation in this Plan

(c) To the extent applicable, if the Fair Market Value on the first day of the current Offering Period in which a participant is enrolled is higher than the Fair Market Value on the first day of any subsequent Offering Period, the Company will automatically enroll such participant in the subsequent Offering Period. Any funds accumulated in a Participant's account prior to the first day of such subsequent Offering Period will be applied to the purchase of Shares on the Purchase Date immediately prior to the first day of such subsequent Offering Period, if any.

12. TERMINATION OF EMPLOYMENT. Termination of a Participant's employment for any reason, including retirement, death, disability, or the failure of a Participant to remain an eligible employee of the Company or of a Participating Corporation, immediately terminates his or her participation in this Plan. In such event, accumulated payroll deductions credited to the Participant's account will be returned to him or her or, in the case of his or her death, to his or her legal representative, without interest (except to the extent required due to local legal requirements outside the United States). For purposes of this Section 12, an employee will not be deemed to have terminated employment or failed to remain in the continuous employ of the Company or of a Participating Corporation in the case of sick leave, military leave, or any other leave of absence approved by the Company; provided that such leave is for a period of not more than ninety (90) days or reemployment upon the expiration of such leave is guaranteed by contract or statute. The Company will have sole discretion to determine whether a Participant has terminated employment and the effective date on which the Participant terminated employment, regardless of any notice period or garden leave required under local law.

13. RETURN OF PAYROLL DEDUCTIONS. In the event a Participant's interest in this Plan is terminated by withdrawal, termination of employment or otherwise, or in the event this Plan is terminated by the Board, the Company shall deliver to the Participant all accumulated payroll deductions credited to such Participant's account. No interest shall accrue on the payroll deductions of a Participant in this Plan (except to the extent required due to local legal requirements outside the United States).

14. CAPITAL CHANGES. If the number of outstanding shares is changed by a stock dividend, recapitalization, stock split, reverse stock split, subdivision, combination, reclassification or similar change in the capital structure of the Company, without consideration, then the Committee shall adjust the number and class of Shares that may be delivered under the Plan, the Purchase Price per share and the number of Shares covered by each option under the Plan which has not yet been exercised, and the numerical limits of Sections 2 and 10 shall be proportionately adjusted, subject to any required action by the Board or the stockholders of the Company and in compliance with the applicable securities laws; provided that fractions of a share will not be issued.

15. NONASSIGNABILITY. Neither payroll deductions credited to a Participant's account nor any rights with regard to the exercise of an option or to receive Shares under this Plan may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 22 below) by the Participant. Any such attempt at assignment, transfer, pledge or other disposition shall be void and without effect.

16. USE OF PARTICIPANT FUNDS AND REPORTS. The Company may use all payroll deductions received or held by it under the Plan for any corporate purpose, and the Company will not be required to segregate Participant payroll deductions (except to the extent required due to local legal requirements outside the United States). Until Shares are issued, Participants will only have the rights of an unsecured creditor unless otherwise required under local law. Each Participant shall receive promptly

after the end of each Purchase Period a report of his or her account setting forth the total payroll deductions accumulated, the number of Shares purchased, the per share price thereof and the remaining cash balance, if any, carried forward to the next Purchase Period or Offering Period, as the case may be.

17. NOTICE OF DISPOSITION. Each U.S. taxpayer Participant shall notify the Company in writing if the Participant disposes of any of the Shares purchased in any Offering Period pursuant to this Plan if such disposition occurs within two (2) years from the Offering Date or within one (1) year from the Purchase Date on which such Shares were purchased (the "***Notice Period***"). The Company may, at any time during the Notice Period, place a legend or legends on any certificate representing Shares acquired pursuant to this Plan requesting the Company's transfer agent to notify the Company of any transfer of the Shares. The obligation of the Participant to provide such notice shall continue notwithstanding the placement of any such legend on the certificates.

18. NO RIGHTS TO CONTINUED EMPLOYMENT. Neither this Plan nor the grant of any option hereunder shall confer any right on any employee to remain in the employ of the Company or any Participating Corporation, or restrict the right of the Company or any Participating Corporation to terminate such employee's employment.

19. EQUAL RIGHTS AND PRIVILEGES. All eligible employees granted an option under this Plan that is intended to meet the Code Section 423 requirements shall have equal rights and privileges with respect to this Plan or within any separate offering under the Plan so that this Plan qualifies as an "employee stock purchase plan" within the meaning of Section 423 or any successor provision of the Code and the related regulations. Any provision of this Plan which is inconsistent with Section 423 or any successor provision of the Code, without further act or amendment by the Company, the Committee or the Board, shall be reformed to comply with the requirements of Section 423. This Section 19 shall take precedence over all other provisions in this Plan.

20. NOTICES. All notices or other communications by a Participant to the Company under or in connection with this Plan shall be deemed to have been duly given when received in the form specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

21. TERM; STOCKHOLDER APPROVAL. This Plan will become effective on the Effective Date. This Plan shall be approved by the stockholders of the Company, in any manner permitted by applicable corporate law, within twelve (12) months before or after the date this Plan is adopted by the Board. No purchase of Shares that are subject to such stockholder approval before becoming available under this Plan shall occur prior to stockholder approval of such Shares and the Board or Committee may delay any Purchase Date and postpone the commencement of any Offering Period subsequent to such Purchase Date as deemed necessary or desirable to obtain such approval (provided that if a Purchase Date would occur more than twenty-four (24) months after commencement of the Offering Period to which it relates, then such Purchase Date shall not occur and instead such Offering Period shall terminate without the purchase of such Shares and Participants in such Offering Period shall be refunded their contributions without interest). This Plan shall continue until the earlier to occur of (a) termination of this Plan by the Board (which termination may be effected by the Board at any time pursuant to Section 25 below), (b) issuance of all of the Shares reserved for issuance under this Plan, or (c) the tenth anniversary of the Effective Date under the Plan.

22. DESIGNATION OF BENEFICIARY.

(a) Unless otherwise determined by the Committee, a Participant may file a written designation of a beneficiary who is to receive any cash from the Participant's account under this Plan in

the event of such Participant's death prior to a Purchase Date. Such form shall be valid only if it was filed with the Company at the prescribed location before the Participant's death.

(b) Such designation of beneficiary may be changed by the Participant at any time by written notice filed with the Company at the prescribed location before the Participant's death. In the event of the death of a Participant and in the absence of a beneficiary validly designated under this Plan who is living at the time of such Participant's death, the Company shall deliver such cash to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such cash to the spouse or, if no spouse is known to the Company, then to any one or more dependents or relatives of the Participant, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

23. CONDITIONS UPON ISSUANCE OF SHARES; LIMITATION ON SALE OF SHARES. Shares shall not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such Shares pursuant thereto shall comply with all applicable provisions of law, domestic or foreign, including, without limitation, the Securities Act of 1933, the Securities Exchange Act of 1934, as amended, the rules and regulations promulgated thereunder, and the requirements of any stock exchange or automated quotation system upon which the Shares may then be listed, exchange control restrictions and/or securities law restrictions outside the United States, and shall be further subject to the approval of counsel for the Company with respect to such compliance. Shares may be held in trust or subject to further restrictions as permitted by any subplan or as permitted by the Committee from time to time.

24. APPLICABLE LAW. The Plan shall be governed by the substantive laws (excluding the conflict of laws rules) of the State of Delaware.

25. AMENDMENT OR TERMINATION. The Committee, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Committee, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of Shares on the next Purchase Date (which may be sooner than originally scheduled, if determined by the Committee in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 14). If an Offering Period is terminated prior to its previously-scheduled expiration, all amounts then credited to Participants' accounts for such Offering Period, which have not been used to purchase Shares, shall be returned to those Participants (without interest thereon, except as otherwise required under local laws) as soon as administratively practicable. Further, the Committee will be entitled to change the Purchase Periods and Offering Periods, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld or contributed in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the administration of the Plan, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Shares for each Participant properly correspond with amounts withheld from the Participant's base salary and other eligible compensation, and establish such other limitations or procedures as the Committee determines in its sole discretion advisable which are consistent with the Plan. Such actions will not require stockholder approval or the consent of any Participants. However, no amendment shall be made without approval of the stockholders of the Company (obtained in accordance with Section 21 above) within twelve (12) months of the adoption of such amendment (or earlier if required by Section 21) if such amendment would: (a) increase the number of Shares that may be issued under this Plan; or (b) change the designation of the employees (or class of employees) eligible for participation in this Plan. In addition, in the event the Board or Committee

determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Board or Committee may, in its discretion and, to the extent necessary or desirable, modify, amend or terminate the Plan to reduce or eliminate such accounting consequences including, but not limited to: (i) amending the definition of Compensation, including with respect to an Offering Period underway at the time; (ii) altering the Purchase Price for any Offering Period including an Offering Period underway at the time of the change in Purchase Price; (iii) shortening any Offering Period by setting a Purchase Date, including an Offering Period underway at the time of the Committee's action; (iv) reducing the maximum percentage of Compensation a participant may elect to set aside as payroll deductions; and (v) reducing the maximum number of Shares a Participant may purchase during any Offering Period. Such modifications or amendments will not require approval of the stockholders of the Company or the consent of any Participants.

26. CORPORATE TRANSACTIONS. In the event of a Corporate Transaction, the Offering Period for each outstanding right to purchase Shares will be shortened by setting a new Purchase Date and will end on the new Purchase Date. The new Purchase Date shall occur on or prior to the consummation of the Corporate Transaction, as determined by the Board or Committee, and the Plan shall terminate on the consummation of the Corporate Transaction.

27. CODE SECTION 409A; TAX QUALIFICATION.

(a) Options granted under the Plan generally are exempt from the application of Section 409A of the Code. However, options granted to U.S. taxpayers which are not intended to meet the Code Section 423 requirements are intended to be exempt from the application of Section 409A of the Code under the short-term deferral exception and any ambiguities shall be construed and interpreted in accordance with such intent. Subject to Subsection (b), options granted to U.S. taxpayers outside of the Code Section 423 requirements shall be subject to such terms and conditions that will permit such options to satisfy the requirements of the short-term deferral exception available under Section 409A of the Code, including the requirement that the Shares subject to an option be delivered within the short-term deferral period. Subject to Subsection (b), in the case of a Participant who would otherwise be subject to Section 409A of the Code, to the extent the Committee determines that an option or the exercise, payment, settlement or deferral thereof is subject to Section 409A of the Code, the option shall be granted, exercised, paid, settled or deferred in a manner that will comply with Section 409A of the Code, including Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the Effective Date. Notwithstanding the foregoing, the Company shall have no liability to a Participant or any other party if the option that is intended to be exempt from or compliant with Section 409A of the Code is not so exempt or compliant or for any action taken by the Committee with respect thereto.

(b) Although the Company may endeavor to (i) qualify an option for favorable tax treatment under the laws of the United States or jurisdictions outside of the United States or (ii) avoid adverse tax treatment (*e.g.*, under Section 409A of the Code), the Company makes no representation to that effect and expressly disavows any covenant to maintain favorable or avoid unfavorable tax treatment, notwithstanding anything to the contrary in this Plan, including Subsection (a). The Company shall be unconstrained in its corporate activities without regard to the potential negative tax impact on Participants under the Plan.

28. DEFINITIONS.

(a) "***Affiliate***" means (i) any entity that, directly or indirectly, is controlled by, controls or is under common control with, the Company and (ii) any entity in which the Company has a

significant equity interest, in either case as determined by the Committee, whether now or hereafter existing.

(b) "***Board***" means the Board of Directors of the Company.

(c) "***Code***" means the Internal Revenue Code of 1986, as amended.

(d) "***Committee***" means the Compensation Committee of the Board that consists exclusively or one or more members of the Board appointed by the Board.

(e) "***Company***" means Sutro Biopharma, Inc., a Delaware corporation.

(f) "***Corporate Transaction***" means the occurrence of any of the following events: (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the "beneficial owner" (as defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities; or (ii) the consummation of the sale or disposition by the Company of all or substantially all of the Company's assets; or (iii) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or its parent) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or its parent outstanding immediately after such merger or consolidation.

(g) "***Effective Date***" means the date on which the Registration Statement covering the initial public offering of Shares is declared effective by the U.S. Securities and Exchange Commission.

(h) "***Fair Market Value***" means, as of any date, the value of Shares determined as follows:

(1) if such Shares are then quoted on the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market (collectively, the "***Nasdaq Market***"), the closing price on the Nasdaq Market on the date of determination, or if there are no sales for such date, then the last preceding business day on which there were sales, as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable; or

(2) if such Shares are publicly traded and are then listed on a national securities exchange, the closing price of such Shares on the date of determination on the principal national securities exchange on which the Shares are listed or admitted to trading as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable; or

(3) if such Shares are publicly traded but are neither quoted on the Nasdaq Market nor listed or admitted to trading on a national securities exchange, the average of the closing bid and asked prices on the date of determination as reported in *The Wall Street Journal* or such other source as the Board or the Committee deems reliable; or

(4) with respect to the Initial Offering Period, Fair Market Value on the Offering Date shall be the price at which Shares are offered to the public pursuant to the Registration Statement covering the initial public offering of the Shares; and

(5) if none of the foregoing is applicable, by the Board or the Committee in good faith.

(i) "***IPO***" means the initial public offering of Company's common stock.

(j) "***Offering Date***" means the first business day of each Offering Period. However, for the Initial Offering Period the Offering Date shall be the Effective Date.

(k) "***Offering Period***" means a period with respect to which the right to purchase Shares may be granted under the Plan, as determined by the Committee pursuant to Section 5(a).

(l) "***Parent***" has the same meaning as "parent corporation" in Sections 424(e) and 424(f) of the Code.

(m) "***Participant***" means an eligible employee who meets the eligibility requirements set forth in Section 4 and who is either automatically enrolled in the Initial Offering Period or who elects to participate in this Plan pursuant to Section 6(b).

(n) "***Participating Corporation***" means any Parent, Subsidiary or Affiliate that the Committee designates from time to time as eligible to participate in this Plan, provided, however, that employees of Affiliates that are designated for participation may be granted only options that do not intend to comply with the Code Section 423 requirements.

(o) "***Plan***" means this Sutro Biopharma, Inc. 2018 Employee Stock Purchase Plan.

(p) "***Purchase Date***" means the last business day of each Purchase Period.

(q) "***Purchase Period***" means a period during which contributions may be made toward the purchase of Shares under the Plan, as determined by the Committee pursuant to Section 5(b).

(r) "***Purchase Price***" means the price at which Participants may purchase Shares under the Plan, as determined pursuant to Section 8.

(s) "***Shares***" means shares of the Company's common stock.

(t) "***Subsidiary***" has the same meaning as "subsidiary corporation" in Sections 424(e) and 424(f) of the Code.

SUTRO BIOPHARMA, INC. (THE "COMPANY")
2018 EMPLOYEE STOCK PURCHASE PLAN ("ESPP")

Capitalized terms used but not otherwise defined herein shall have the meanings given to them in the ESPP.

INITIAL OFFERING PERIOD
CONFIRMATION & CHANGE FORM AND AGREEMENT
(THE "AGREEMENT")

SECTION 1:	**CHECK DESIRED ACTION**:	**AND COMPLETE SECTIONS**:
ACTIONS	☐ Confirm / Change Contribution Percentage ☐ Withdraw from ESPP	2 + 4 + 19 2 + 5 + 19
SECTION 2:	Name: _____	
PERSONAL DATA	Home Address: _____	
	_____	
	Social Security No. or Employee ID No.: _____	

SECTION 3:

ENROLLMENT CONFIRMED

I understand that I have been automatically enrolled in the ESPP, and I hereby elect to continue to participate in the ESPP. I understand that my enrollment was effective at the beginning of the Initial Offering Period and as a result of that enrollment I am electing to purchase shares of the common stock of the Company pursuant to the ESPP. I understand that the stock certificate(s) for the Shares purchased on my behalf will be issued in street name and deposited directly into my brokerage account at the Company's captive broker. I hereby agree to take all steps, and sign all forms, required to establish an account with the Company's captive broker for this purpose.

My participation will continue as long as the Company offers the ESPP and I remain eligible, unless I withdraw from the ESPP by filing a new Enrollment/Change Form with the Company. I understand that I must notify the Company of any disposition of Shares purchased under the ESPP.

SECTION 4:

CHANGE CONTRIBUTION PERCENTAGE

I understand that I am currently enrolled in the ESPP at a contribution of 15% of my Compensation (as defined in the ESPP).

I hereby authorize the Company to either (a) continue the automatic enrollment at the 15% contribution level, or (b) continue the automatic enrollment but decrease the contribution level, in either case, by withholding from each of my paychecks such amount as is necessary to equal at the end of the applicable Offering Period the percentage of my Compensation (as defined in the ESPP) paid to me during such Offering Period as indicated below, so long as I continue to participate in the ESPP. The percentage must be a whole number (from 1% up to a maximum of 15%).

☐-continue my contribution at 1**5%**

☐-decrease my contribution percentage to ____% **(must be a whole number from 1% up to a maximum of 14%).**

For the Initial Offering Period (provided you have timely submitted this Confirmation/Change Form to continue your participation in the ESPP), the withholding from your paychecks may be increased by the Company to achieve the designated contribution percentage for the full Offering Period.

SECTION 5:

WITHDRAW

DO NOT CHECK ANY OF THE BOXES BELOW IF YOU WISH TO CONTINUE TO PARTICIPATE IN THE ESPP

☐-I understand that my enrollment in the ESPP was effective at the beginning of the Initial Offering Period**I hereby elect to withdraw from, and discontinue my participation in, the ESPP**, effective as soon as reasonably practicable after this form is received by the Company. Accumulated contributions will be returned to me without interest (except to the extent required due to local legal requirements outside the United States), pursuant to Section 11 of the ESPP.

Note: No contributions will be made if you elect to withdraw of the ESPP. **I understand that I cannot resume participation until the start of the next Offering Period and must timely file a new enrollment form to do so.**

SECTION 6:

ELECTRONIC DELIVERY AND ACCEPTANCE

The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the ESPP by electronic means. I hereby consent to receive such documents by electronic delivery and agree to participate in the ESPP through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

SECTION 7:

NO ADVICE REGARDING PARTICIPATION

The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding my participation in the ESPP or my acquisition or sale of Shares. I acknowledge, understand and agree that I should consult with my own personal tax, legal and financial advisors regarding my participation in the ESPP before taking any action related to the ESPP.

SECTION 8:

APPENDIX

Notwithstanding any provisions of the Agreement, my participation in the ESPP will be subject to any special terms and conditions set forth in the appendix to this Agreement for employees outside the United States (the "***Appendix***"). Moreover, if I relocate to one of the countries included in the Appendix, the special terms and conditions for such country will apply to me, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of the Agreement.

SECTION 9:

TERMINATION, MODIFICATION AND IMPOSITION OF OTHER REQUIREMENTS

The Company, at its option, may elect to terminate, suspend or modify the terms of the ESPP at any time, to the extent permitted by the ESPP. I agree to be bound by such termination, suspension or modification regardless of whether notice is given to me of such event, subject in any case to my right to timely withdraw from the ESPP in accordance with the ESPP withdrawal procedures then in effect. The Company reserves the right to impose other requirements on my participation in the ESPP, to the extent the Company determines it is necessary or advisable for legal or administrative reasons and to require me to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

SECTION 10:

SEVERABILITY

If one or more provisions of this Agreement are held to be unenforceable under applicable law, then such provision will be enforced to the maximum extent possible given the intent of the parties hereto. If such clause or provision cannot be so enforced, then (i) such provision will be excluded from the Agreement, (ii) the balance of the Agreement will be interpreted as if such provision were so excluded and (iii) the balance of the Agreement will be enforceable in accordance with its terms.

SECTION 11:

WAIVER

I acknowledge that a waiver by the Company of breach of any provision of the Agreement shall not operate or be construed as a waiver of any other provision of the Agreement, or any subsequent breach by any Participant.

SECTION 12:

GOVERNING LAW AND VENUE

The Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto will be governed, construed and interpreted in accordance with the substantive laws of the State of Delaware, without giving effect to such state's conflict of laws rules. Any and all disputes relating to, concerning or arising from the Agreement, or relating to, concerning or arising from the relationship between the parties evidenced by the ESPP or this Agreement, will be brought and heard exclusively in the United States District Court for the District of Northern California or the Superior Court of California, County of San Mateo. Each of the parties hereby (i) represents and agrees that such party is subject to the personal jurisdiction of said courts; (ii) irrevocably consents to the jurisdiction of such courts in any legal or equitable proceedings related to, concerning or arising from such dispute; and (iii) waives, to the fullest extent permitted by law, any objection which such party may now or hereafter have that the laying of the venue of any legal or equitable proceedings related to, concerning or arising from such dispute which is brought in such courts is improper or that such proceedings have been brought in an inconvenient forum.

SECTION 13:

RESPONSIBILITY FOR TAXES

I acknowledge that, regardless of any action taken by the Company or the Parent or Subsidiary employing me (the "***Employer***"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax related items related to my participation in the ESPP and legally applicable to me ("***Tax-Related Items***") is and remains my responsibility and may exceed the amount withheld by the Company or the Employer, if any. I further acknowledge that the Company and/or the Employer (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the purchase rights granted pursuant to the ESPP, including, but not limited to, the purchase of Shares, the subsequent sale of Shares acquired pursuant to such purchase and the receipt of any dividends (if any); and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of my participation to reduce or eliminate my liability for Tax-Related Items or achieve any particular tax result. Further, if I am subject to Tax-Related Items in more than one jurisdiction, I acknowledge that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to any relevant taxable or tax withholding event, as applicable, I agree to make arrangements satisfactory to the Company and/or the Employer to fulfill all Tax-Related Items. In this regard, I authorize the Company and/or the Employer, or their respective agents, at their discretion, to satisfy any withholding obligations for Tax-Related Items by one or a combination of the following:

a. withholding from my wages or other cash compensation paid to me by the Company and/or the Employer or any Parent or Subsidiary;

b. withholding from proceeds of the sale of Shares acquired upon purchase either through a voluntary sale or through a mandatory sale arranged by the Company (on my behalf pursuant to this authorization and without further consent);

c. my payment of a cash amount (including by check representing readily available funds or a wire transfer) to the Company or Employer; or

d. any other arrangement approved by the Committee and permitted under applicable law,

all under such rules as may be established by the Committee and in compliance with the Company's Insider Trading Policy and 10b5-1 Trading Plan Policy, if applicable.

Depending on the withholding method, the Company may withhold or account forTax-Related Items by considering applicable statutory withholding rates or other applicable withholding rates, including up to the maximum permissible statutory rate for my tax jurisdiction(s) in which case I will have no entitlement to the equivalent amount in Shares and may receive a refund of any over-withheld amount in cash in accordance with applicable law.

Finally, I agree to pay to the Company or the Employer any amount ofTax-Related Items that the Company or the Employer may be required to withhold or account for as a result of my participation in the ESPP that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares, if I fail to comply with my obligations in connection with the Tax-Related Items.

SECTION 14:

NATURE OF GRANT

By enrolling and participating in the ESPP, I acknowledge, understand and agree that:

a. the ESPP is established voluntarily by the Company and it is discretionary in nature;

b. all decisions with respect to future offers to participate in the ESPP, if any, will be at the sole discretion of the Committee;

c. I am voluntarily participating in the ESPP;

d. the purchase rights and Shares subject to the purchase rights, and the income from and value of same, are not intended to replace any pension rights or compensation;

e. the purchase rights and the Shares subject to the purchase rights, and the income from and value of same, are not part of normal or expected compensation for any purpose, including, but not limited to calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

f. unless otherwise agreed with the Company, the purchase rights and the Shares subject to the purchase rights, and the income from and value of same, are not granted as consideration for or in connection with the service I may provide as a director of any parent or Subsidiary; and

g. neither the Company, the Employer nor any Parent or Subsidiary will be liable for any foreign exchange rate fluctuation between my local currency and the United States Dollar that may affect the value of the purchase rights or of any amounts due to me pursuant to purchase or sale of Shares under the ESPP.

SECTION 15:

DATA PRIVACY

I hereby explicitly and unambiguously consent to the collection, use and transfer, in electronic or other form, of my personal data as described in the Agreement and any other grant materials by and among, as applicable, the Employer, the Company and any Parent or Subsidiary for the exclusive purpose of implementing, administering and managing my participation in the ESPP.

I understand that the Company and the Employer may hold certain personal information about me, including, but not limited to, my name, home address, email address and telephone number, date of birth, social insurance number, passport number or other identification number (e.g., resident registration number), salary, nationality, job title, any shares of stock or directorships held in the Company, details of all purchase rights or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in my favor ("Data"), for the exclusive purpose of implementing, administering and managing the ESPP.

I understand that Data will be transferred to E*TRADE Financial Services, Solium-Shareworks, or other third party ("Online Administrator") and its affiliated companies or such other stock plan service provider as may be designated by the Company from time to time, which is assisting the Company with the implementation, administration and management of the ESPP. I understand that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country may have different data privacy laws and protections than my country. I understand that if I reside outside the United States, I may request a list with the names and addresses of any potential recipients of Data by contacting my local human resources representative. I authorize the Company, Online Administrator, or such other stock plan service provider as may be designated by the Company from time to time, and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the ESPP to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing my participation in the ESPP. I understand that Data will be held only as long as is necessary to implement, administer and manage my participation in the ESPP. I understand if I reside outside the United States, I may, at any time, view Data, request information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting my local human resources representative. Further, I understand that I am providing the consents herein on a purely voluntary basis. If I do not consent, or if I later seek to revoke my consent, my employment status or service with the Employer will not be affected; the only consequence of refusing or withdrawing my consent is that the Company would not be able to grant purchase rights or other equity awards to me or administer or maintain such awards. Therefore, I understand that refusing or withdrawing my consent may affect my ability to participate in the ESPP. For more information on the consequences of my refusal to consent or withdrawal of consent, I understand that I may contact my local human resources representative.

Finally, upon request of the Company or the Employer, I agree to provide an executed data privacy consent form (or any other agreements or consents) that the Company or the Employer may deem necessary to obtain from me for the purpose of administering my participation in the ESPP in compliance with the data privacy laws in my country, either now or in the future. I understand and agree that I will not be able to participate in the ESPP if I fail to provide any such consent or agreement requested by the Company and/or the Employer.

SECTION 16:

INSIDER TRADING RESTRICTIONS/MARKET ABUSE LAWS

I acknowledge that, depending on my country of residence, the broker's country, or the country in which the Shares are listed, I may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions, which may affect my ability to directly or indirectly, accept, acquire, sell or attempt to sell or otherwise dispose of Shares, or rights to Shares (*e.g.,* purchase rights), or rights linked to the value of Shares, during such times as I am considered to have "inside information" regarding the Company (as defined by the laws or regulations in the applicable jurisdiction). Local insider trading laws and regulations may prohibit the cancellation or amendment of orders I placed before possessing the inside information. Furthermore, I may be prohibited from (i) disclosing the inside information to any third party, including fellow employees (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them to otherwise buy or sell securities. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. I acknowledge that it is my responsibility to comply with any applicable restrictions and understand that I should consult my personal legal advisor on such matters. In addition, I acknowledge having read the Company's Insider Trading Policy, and agree to comply with such policy, as it may be amended from time to time, whenever I acquire or dispose of the Company's securities.

SECTION 17:

FOREIGN ASSET/ACCOUNT, EXCHANGE CONTROL AND TAX REPORTING

I may be subject to foreign asset/account, exchange control and/or tax reporting requirements as a result of the acquisition, holding and/or transfer of Shares or cash resulting from my participation in the ESPP. I may be required to report such accounts, assets, the balances therein, the value thereof and/or the transactions related thereto to the applicable authorities in my country and/or to repatriate funds received in connection with the ESPP within certain time limits or according to specified procedures. I acknowledge that I am responsible for ensuring compliance with any applicable foreign asset/account, exchange control and tax reporting requirements and should consult my personal legal and tax advisors on such matters.

SECTION 18:

LANGUAGE

I acknowledge that I am sufficiently proficient in English to understand the terms and conditions of the Agreement and the ESPP. Furthermore, if I have received this Agreement, or any other document related to the purchase rights and/or the ESPP translated into a language other than English and if the meaning of the translated version is different from the English version, the English version will control.

SECTION 19:

ACKNOWLEDGMENT AND SIGNATURE

I acknowledge that I have received and read a copy of the ESPP Prospectus (which summarizes the features of the ESPP). My signature below (or my clicking on the Accept box if this is an electronic form) indicates that I hereby agree to be bound by the terms of the ESPP.

Signature: _____ Date: _____

APPENDIX

SUTRO BIOPHARMA, INC.
2018 EMPLOYEE STOCK PURCHASE PLAN
INITIAL OFFERING PERIOD GLOBAL ENROLLMENT CONFIRMATION FORM AND AGREEMENT

COUNTRY SPECIFIC PROVISIONS FOR EMPLOYEES OUTSIDE THE U.S.

None

SUTRO BIOPHARMA, INC. (THE "COMPANY")
2018 EMPLOYEE STOCK PURCHASE PLAN ("ESPP")

GLOBAL ENROLLMENT/CHANGE FORM AND AGREEMENT (THE "AGREEMENT")

Capitalized terms used but not otherwise defined herein shall have the meanings given to them in the ESPP.

SECTION 1:	**CHECK DESIRED ACTION**:	**AND COMPLETE SECTIONS**:
ACTIONS	☐ Enroll in the ESPP	2 + 3 + 4 + 19
	☐ Change Contribution Percentage *(for next Offering Period)*	2 + 4 + 19
	☐ Withdraw from ESPP	2 + 5 + 19

SECTION 2:

PERSONAL DATA

Name: _____

Home Address: _____

_____

Social Security No. or Employee ID No.: _____

SECTION 3:

ENROLL

☐ I hereby elect to participate in the ESPP, effective at the beginning of the next Offering Period. I elect to purchase shares of the common stock of the Company pursuant to the ESPP. I understand that the stock certificate(s) for the Shares purchased on my behalf will be issued in street name and deposited directly into my brokerage account at the Company's captive broker. I hereby agree to take all steps, and sign all forms, required to establish an account with the Company's captive broker for this purpose.

My participation will continue as long as the Company offers the ESPP and I remain eligible, unless I withdraw from the ESPP by filing a new Enrollment/Change Form with the Company. I understand that I must notify the Company of any disposition of Shares purchased under the ESPP.

SECTION 4:

ELECT/CHANGE CONTRIBUTION PERCENTAGE

I hereby authorize the Company to withhold from each of my paychecks such amount as is necessary to equal at the end of the applicable Offering Period the percentage of my Compensation (as defined in the ESPP) paid to me during such Offering Period as indicated below, so long as I continue to participate in the ESPP. **The percentage must be a whole number (from 1% up to a maximum of 15%). This change will be effective for the Next Offering Period.**

Designated contribution percentage: ____%

If this is a change to my current enrollment, this represents an ☐ increase ☐ decrease to my contribution percentage.

Note: You may not increase your contributions at any time within an ongoing Offering Period. An increase in your contribution percentage can only take effect with the next Offering Period. You may decrease your Contribution percentage to a percentage other than 0% only once within an ongoing Offering Period to be effective during that Offering Period. If you decrease your percentage to 0%, any previously accumulated contributions will be used to purchase shares on the next Purchase Date pursuant to Section 9 of the ESPP. A change will become effective as soon as reasonably practicable after the form is received by the Company.

SECTION 5:

WITHDRAW FROM PLAN

DO NOT CHECK ANY OF THE BOXES BELOW IF YOU WISH TO CONTINUE TO PARTICIPATE IN THE ESPP

☐ **I hereby elect to withdraw from, and discontinue my participation in, the ESPP**, effective as soon as reasonably practicable after this form is received by the Company. Accumulated contributions will be returned to me without interest (except to the extent required due to local legal requirements outside the United States), pursuant to Section 11 of the ESPP.

Note: I understand that I cannot resume participation until the start of the next Offering Period and must timely file a new enrollment form to do so.

SECTION 6:

ELECTRONIC DELIVERY AND ACCEPTANCE

The Company may, in its sole discretion, decide to deliver any documents related to current or future participation in the ESPP by electronic means. I hereby consent to receive such documents by electronic delivery and agree to participate in the ESPP through an on-line or electronic system established and maintained by the Company or a third party designated by the Company.

SECTION 7:

NO ADVICE REGARDING PARTICIPATION

The Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding my participation in the ESPP or my acquisition or sale of Shares. I acknowledge, understand and agree that I should consult with my own personal tax, legal and financial advisors regarding my participation in the ESPP before taking any action related to the ESPP.

SECTION 8:

APPENDIX

Notwithstanding any provisions of the Agreement, my participation in the ESPP will be subject to any special terms and conditions set forth in the appendix to this Agreement for employees outside the United States (the "***Appendix***"). Moreover, if I relocate to one of the countries included in the Appendix, the special terms and conditions for such country will apply to me, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of the Agreement.

SECTION 9:

TERMINATION, MODIFICATION AND IMPOSITION OF OTHER REQUIREMENTS

The Company, at its option, may elect to terminate, suspend or modify the terms of the ESPP at any time, to the extent permitted by the ESPP. I agree to be bound by such termination, suspension or modification regardless of whether notice is given to me of such event, subject in any case to my right to timely withdraw from the ESPP in accordance with the ESPP withdrawal procedures then in effect. The Company reserves the right to impose other requirements on my participation in the ESPP, to the extent the Company determines it is necessary or advisable for legal or administrative reasons and to require me to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

SECTION 10:

SEVERABILITY

If one or more provisions of this Agreement are held to be unenforceable under applicable law, then such provision will be enforced to the maximum extent possible given the intent of the parties hereto. If such clause or provision cannot be so enforced, then (i) such provision will be excluded from the Agreement, (ii) the balance of the Agreement will be interpreted as if such provision were so excluded and (iii) the balance of the Agreement will be enforceable in accordance with its terms.

SECTION 11:

WAIVER

I acknowledge that a waiver by the Company of breach of any provision of the Agreement shall not operate or be construed as a waiver of any other provision of the Agreement, or any subsequent breach by any Participant.

SECTION 12:

GOVERNING LAW AND VENUE

The Agreement and all acts and transactions pursuant hereto and the rights and obligations of the parties hereto will be governed, construed and interpreted in accordance with the substantive laws of the State of Delaware, without giving effect to such state's conflict of laws rules. Any and all disputes relating to, concerning or arising from the Agreement, or relating to, concerning or arising from the relationship between the parties evidenced by the ESPP or this Agreement, will be brought and heard exclusively in the United States District Court for the District of Northern California or the Superior Court of California, County of San Mateo. Each of the parties hereby (i) represents and agrees that such party is subject to the personal jurisdiction of said courts; (ii) irrevocably consents to the jurisdiction of such courts in any legal or equitable proceedings related to, concerning or arising from such dispute, and (iii) waives, to the fullest extent permitted by law, any objection which such party may now or hereafter have that the laying of the venue of any legal or equitable proceedings related to, concerning or arising from such dispute which is brought in such courts is improper or that such proceedings have been brought in an inconvenient forum.

SECTION 13:

RESPONSIBILITY FOR TAXES

I acknowledge that, regardless of any action taken by the Company or the Parent or Subsidiary employing me (the "***Employer***"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax related items related to my participation in the ESPP and legally applicable to me ("***Tax-Related Items***") is and remains my responsibility and may exceed the amount withheld by the Company or the Employer, if any. I further acknowledge that the Company and/or the Employer (i) make no representations or undertakings regarding the treatment of any Tax-Related Items in connection with any aspect of the purchase rights granted pursuant to the ESPP, including, but not limited to, the purchase of Shares, the subsequent sale of Shares acquired pursuant to such purchase and the receipt of any

dividends (if any); and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of my participation to reduce or eliminate my liability for Tax-Related Items or achieve any particular tax result. Further, if I am subject to Tax-Related Items in more than one jurisdiction, I acknowledge that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Prior to any relevant taxable or tax withholding event, as applicable, I agree to make arrangements satisfactory to the Company and/or the Employer to fulfill all Tax-Related Items. In this regard, I authorize the Company and/or the Employer, or their respective agents, at their discretion, to satisfy any withholding obligations for Tax-Related Items by one or a combination of the following:

a. withholding from my wages or other cash compensation paid to me by the Company and/or the Employer or any Parent or Subsidiary;

b. withholding from proceeds of the sale of Shares acquired upon purchase either through a voluntary sale or through a mandatory sale arranged by the Company (on my behalf pursuant to this authorization and without further consent);

c. my payment of a cash amount (including by check representing readily available funds or a wire transfer) to the Company or Employer; or

d. any other arrangement approved by the Committee and permitted under applicable law,

all under such rules as may be established by the Committee and in compliance with the Company's Insider Trading Policy and 10b5-1 Trading Plan Policy, if applicable.

Depending on the withholding method, the Company may withhold or account forTax-Related Items by considering applicable statutory withholding rates or other applicable withholding rates, including up to the maximum permissible statutory rate for my tax jurisdiction(s) in which case I will have no entitlement to the equivalent amount in Shares and may receive a refund of any over-withheld amount in cash in accordance with applicable law.

Finally, I agree to pay to the Company or the Employer any amount ofTax-Related Items that the Company or the Employer may be required to withhold or account for as a result of my participation in the ESPP that cannot be satisfied by the means previously described. The Company may refuse to issue or deliver the Shares or the proceeds of the sale of Shares, if I fail to comply with my obligations in connection with the Tax-Related Items.

SECTION 14:

NATURE OF GRANT

By enrolling and participating in the ESPP, I acknowledge, understand and agree that:

a. the ESPP is established voluntarily by the Company and it is discretionary in nature;

b. all decisions with respect to future offers to participate in the ESPP, if any, will be at the sole discretion of the Committee;

c. I am voluntarily participating in the ESPP;

d. the purchase rights and Shares subject to the purchase rights, and the income from and value of same, are not intended to replace any pension rights or compensation;

e. the purchase rights and the Shares subject to the purchase rights, and the income from and value of same, are not part of normal or expected compensation for any purpose, including, but not limited to calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, bonuses, long-service awards, pension or retirement or welfare benefits or similar payments;

f. unless otherwise agreed with the Company, the purchase rights and the Shares subject to the purchase rights, and the income from and value of same, are not granted as consideration for or in connection with the service I may provide as a director of any parent or Subsidiary; and

g. neither the Company, the Employer nor any Parent or Subsidiary will be liable for any foreign exchange rate fluctuation between my local currency and the United States Dollar that may affect the value of the purchase rights or of any amounts due to me pursuant to purchase or sale of Shares under the ESPP.

SECTION 15:

DATA PRIVACY

I hereby explicitly and unambiguously consent to the collection, use and transfer, in electronic or other form, of my personal data as described in the Agreement and any other grant materials by and among, as applicable, the Employer, the Company and any Parent or Subsidiary for the exclusive purpose of implementing, administering and managing my participation in the ESPP.

I understand that the Company and the Employer may hold certain personal information about me, including, but not limited to, my name, home address, email address and telephone number, date of birth, social insurance number, passport number or other identification number (e.g., resident registration number), salary, nationality, job title, any shares of stock or directorships held in the Company, details of all purchase rights or any other entitlement to shares of stock awarded, canceled, exercised, vested, unvested or outstanding in my favor ("Data"), for the exclusive purpose of implementing, administering and managing the ESPP.

I understand that Data will be transferred to E*TRADE Financial Services, Solium-Shareworks, or other third party ("Online Administrator") and its affiliated companies or such other stock plan service provider as may be designated by the Company from time to time, which is assisting the Company with the implementation, administration and management of the ESPP. I understand that the recipients of Data may be located in the United States or elsewhere, and that the recipients' country may have different data privacy laws and protections than my country. I understand that if I reside outside the United States, I may request a list with the names and addresses of any potential recipients of Data by contacting my local human resources representative. I authorize the Company, Online Administrator, or such other stock plan service provider as may be designated by the Company from time to time, and any other possible recipients which may assist the Company (presently or in the future) with implementing, administering and managing the ESPP to receive, possess, use, retain and transfer Data, in electronic or other form, for the sole purpose of implementing, administering and managing my participation in the ESPP. I understand that Data will be held only as long as is necessary to implement, administer and manage my participation in the ESPP. I understand if I reside outside the United States, I may, at any time, view Data, request information about the storage and processing of Data, require any necessary amendments to Data or refuse or withdraw the consents herein, in any case without cost, by contacting my local human resources representative. Further, I understand that I am providing the consents herein on a purely voluntary basis. If I do not consent, or if I later seek to revoke my consent, my employment status or service with the Employer will not be affected; the only consequence of refusing or withdrawing my consent is that the Company would not be able to grant purchase rights or other equity awards to me or administer or maintain such awards. Therefore, I understand that refusing or withdrawing my consent may affect my ability to participate in the ESPP. For more information on the consequences of my refusal to consent or withdrawal of consent, I understand that I may contact my local human resources representative.

Finally, upon request of the Company or the Employer, I agree to provide an executed data privacy consent form (or any other agreements or consents) that the Company or the Employer may deem necessary to obtain from me for the purpose of administering my participation in the ESPP in compliance with the data privacy laws in my country, either now or in the future. I understand and agree that I will not be able to participate in the ESPP if I fail to provide any such consent or agreement requested by the Company and/or the Employer.

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INSIDER TRADING RESTRICTIONS/MARKET ABUSE LAWS

I acknowledge that, depending on my country of residence, the broker's country, or the country in which the Shares are listed, I may be subject to insider trading restrictions and/or market abuse laws in applicable jurisdictions, which may affect my ability to directly or indirectly, accept, acquire, sell or attempt to sell or otherwise dispose of Shares, or rights to Shares (*e.g.,* purchase rights), or rights linked to the value of Shares, during such times as I am considered to have "inside information" regarding the Company (as defined by the laws or regulations in the applicable jurisdiction). Local insider trading laws and regulations may prohibit the cancellation

or amendment of orders I placed before possessing the inside information. Furthermore, I may be prohibited from (i) disclosing the inside information to any third party, including fellow employees (other than on a "need to know" basis) and (ii) "tipping" third parties or causing them to otherwise buy or sell securities. Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under any applicable Company insider trading policy. I acknowledge that it is my responsibility to comply with any applicable restrictions and understand that I should consult my personal legal advisor on such matters. In addition, I acknowledge having read the Company's Insider Trading Policy, and agree to comply with such policy, as it may be amended from time to time, whenever I acquire or dispose of the Company's securities.

SECTION 17:

FOREIGN ASSET/ACCOUNT, EXCHANGE CONTROL AND TAX REPORTING

I may be subject to foreign asset/account, exchange control and/or tax reporting requirements as a result of the acquisition, holding and/or transfer of Shares or cash resulting from my participation in the ESPP. I may be required to report such accounts, assets, the balances therein, the value thereof and/or the transactions related thereto to the applicable authorities in my country and/or to repatriate funds received in connection with the ESPP within certain time limits or according to specified procedures. I acknowledge that I am responsible for ensuring compliance with any applicable foreign asset/account, exchange control and tax reporting requirements and should consult my personal legal and tax advisors on such matters.

SECTION 18:

LANGUAGE

I acknowledge that I am sufficiently proficient in English to understand the terms and conditions of the Agreement and the ESPP. Furthermore, if I have received this Agreement, or any other document related to the purchase rights and/or the ESPP translated into a language other than English and if the meaning of the translated version is different from the English version, the English version will control.

SECTION 19:

ACKNOWLEDGMENT AND SIGNATURE

I acknowledge that I have received and read a copy of the ESPP Prospectus (which summarizes the features of the ESPP). My signature below (or my clicking on the Accept box if this is an electronic form) indicates that I hereby agree to be bound by the terms of the ESPP.

Signature: _____ Date: _____

APPENDIX

SUTRO BIOPHARMA INC.
2018 EMPLOYEE STOCK PURCHASE PLAN
GLOBAL ENROLLMENT/CHANGE FORM AND AGREEMENT

COUNTRY SPECIFIC PROVISIONS FOR EMPLOYEES OUTSIDE THE U.S.

None

EXHIBIT 10.11

[*] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Execution Version

AMENDED AND RESTATED

COLLABORATION AND LICENSE AGREEMENT

by and among

CELGENE CORPORATION,

CELGENE ALPINE INVESTMENT COMPANY II, LLC,

and

SUTRO BIOPHARMA, INC.

Dated as of August 2, 2017

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***Confidential Treatment Requested.**

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List of Schedules

AMENDED AND RESTATED COLLABORATION AND LICENSE AGREEMENT

This AMENDED AND RESTATED COLLABORATION AND LICENSE AGREEMENT (this "Agreement") is entered into on the 2nd day of August, 2017 (the "Amendment Effective Date") by and among Celgene Corporation, a Delaware corporation ("Celgene Corp."), with respect to all rights and obligations under this Agreement in the United States (subject to Section 14.14), Celgene Alpine Investment Company II, LLC, a Delaware limited liability company ("Celgene Alpine"), with respect to all rights and obligations under this Agreement outside of the United States (subject to Section 14.14) (Celgene Corp. and Celgene Alpine together, "CELGENE") and Sutro Biopharma, Inc., a Delaware corporation ("SUTRO"). CELGENE and SUTRO are each referred to herein by name or as a "Party" or, collectively, as the "Parties."

RECITALS

WHEREAS, SUTRO and CELGENE are parties to that certain Collaboration and License Agreement, entered into on September 26, 2014 (the "Original Effective Date"), as amended by Amendment No. 1 to Collaboration and License Agreement dated April 18, 2016 ("Original Agreement"); and

WHEREAS, the Parties desire to amend and restate the Original Agreement in its entirety as set forth herein;

WHEREAS, the Research Term will end on September 26, 2017;

WHEREAS, CELGENE has identified four (4) Prioritized BAC/ADC Programs, as described below;

WHEREAS, the Parties may collaborate after September 26, 2017 on the conduct of certainpre-development activities with respect to the BAC/ADC Programs so identified by CELGENE, as the Parties may agree from time to time;

WHEREAS, immediately prior to the Amendment Effective Date, CELGENE had certain worldwide development and commercialization rights with respect to the first Development Candidate to achieve IND Clearance in the U.S. in which none of the binding domains is Directed to [*];

WHEREAS, it is currently the Parties' intention that SUTRO will sell certain equity securities of SUTRO pursuant to, and CELGENE currently intends to participate in, offerings within the time periods and as further specified in Sections 7.2.2 and 7.8; and

WHEREAS, CELGENE wishes to receive an option to obtain U.S. development and commercialization rights (in addition to CELGENE's existing development and commercialization rights outside of the U.S.) with respect to the second Development Candidate to achieve IND clearance in the U.S. in which none of the binding domains is Directed to [*], and SUTRO wishes to grant such option to CELGENE, in consideration for certain payments by CELGENE to SUTRO, all as set forth in more detail below.

***Confidential Treatment Requested.**

NOW, THEREFORE, in consideration of the promises and mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

ARTICLE I
DEFINITIONS

As used in this Agreement, the following terms will have the meanings set forth in this Article 1 unless the context dictates otherwise.

1.1. "Accounting Principles" means either U.S. generally accepted accounting principles ("GAAP") or International Financial Reporting Standards ("IFRS"), as designated and used by the applicable Party in preparing its financial statements from time to time.

1.2. "ADC" means any antibody drug conjugate consisting of an Antibody to which at least one (1) Payload is attached by a Linker, and that contains, uses or is made using SUTRO IP. The term "ADC" includes the nucleic acid sequence encoding the amino acid sequence (including NNAA) of such ADC.

1.3. "Affiliate" means any Person which, directly or indirectly through one or more intermediaries, controls, is controlled by or is under common control with a Party to this Agreement, for so long as such control exists, whether such Person is or becomes an Affiliate on or after the Original Effective Date. A Person shall be deemed to "control" another Person if it: (a) with respect to such other Person that is a corporation, owns, directly or indirectly, beneficially or legally, at least fifty percent (50%) of the outstanding voting securities or capital stock (or such lesser percentage which is the maximum allowed to be owned by such Person in a particular jurisdiction) of such other Person, or, with respect to such other Person that is not a corporation, has other comparable ownership interest; or (b) has the power, whether pursuant to contract, ownership of securities or otherwise, to direct the management and policies of such other Person.

1.4. "Annual Net Sales" means with respect to a particular Licensed Product, total Net Sales by CELGENE, its Affiliates and Sublicensees in the CELGENE Territory of such Licensed Product in a particular Calendar Year.

1.5. "Antibody" means an antibody, whether designed, identified, generated or developed by a Party, its Affiliates, or any Third Party, prior to or during the Term, and any antigen binding domain or sequence or portion, fragment, variant, modification or derivative thereof. For clarity, an "Antibody" includes the nucleic acid sequence encoding the amino acid sequence of such Antibody, and may be a monoclonal or monospecific antibody or a bispecific or multispecific antibody. For the avoidance of doubt, the term "Antibody" does not include any linking technology, including any Linker or any Payload, which may be conjugated with such Antibody.

1.6. "Antibody Base" means, with respect to an ADC, the Antibody to which the Payload is conjugated. Such Antibody may be a monoclonal or monospecific antibody or a bispecific or multispecific antibody (including a BAC).

1.7. "Antitrust Law" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976 and the rules promulgated thereunder (the "HSR Act"), the Sherman Act, as amended, the Clayton

Act, as amended, the Federal Trade Commission Act, as amended, and any other Laws of the United States, a state or territory thereof, or any foreign government that are designed to prohibit, restrict or regulate actions having the purpose or effect of monopolization or restraint of trade.

1.8. "BAC" means any construct with bi- or multispecific binding capabilities generally consisting of at least two (2) binding domains, one (1) of which may be an Antibody, which binding domains recognize distinct epitopes, and that contains, uses or is made using SUTRO IP. For clarity, a BAC may (a) recognize epitopes on the same protein, on different proteins on the same cell, or on different protein targets on different cells, or, if applicable, (b) include one (1) or more non-natural amino acids ("NNAAs"), and a "BAC" includes the nucleic acid sequence encoding the amino acid sequence of such BAC. For the avoidance of doubt, (i) the term "BAC" does not include any linking technology, including any Linker or Payload, which may be conjugated with such BAC, and (ii) a BAC is an Antibody.

1.9. "Binder" means the variable region of an Antibody (i.e., the amino acid sequence of such Antibody that confers specificity for a target, including the paratope), and any portion, fragment, variant, modification or derivative thereof, so long as such portion, fragment, variant, modification or derivative continues to confer specificity for the same target. For clarity, a "Binder" includes the nucleic acid sequence encoding the amino acid sequence of such Binder. A "Binder" is an Antibody. The term "Binder" may be, but is not limited to, any of the following:

1.9.1 "CELGENE Binder", which means a Binder that is (a) Controlled by CELGENE or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by CELGENE to the Collaboration pursuant to Section 2.2.3(c)(i); or

1.9.2 "PD Binder", which means a Binder that is in the public domain, as agreed by the Parties pursuant to Section 2.2.3(e); or

1.9.3 "SUTRO Binder", which means a Binder that is (a) Controlled by SUTRO or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by SUTRO to the Collaboration pursuant to Section 2.2.3(a)(i).

1.10. "BLA" means a Biologics License Application (as more fully described in 21 C.F.R. 601.20 et seq. or its successor regulation) and all amendments and supplements thereto submitted to the FDA, or any equivalent filing, including an MAA, in a country or regulatory jurisdiction other than the United States with the applicable Regulatory Authority, or any similar application or submission for Regulatory Approval filed with a Regulatory Authority to obtain marketing approval for a biologic product in a country or in a group of countries.

1.11. "Business Combination" means with respect to a Party, any of the following events:

(a) any Third Party (or group of Third Parties acting in concert) acquires, directly or indirectly, shares of such Party representing fifty percent (50%) or more of the voting shares (where voting includes being entitled to vote for the election of directors) then outstanding of such Party;

(b) such Party consolidates with or merges into another corporation or entity which is a Third Party, or any corporation or entity which is a Third Party consolidates with

or merges into such Party, in either event pursuant to a transaction in which more than fifty percent (50%) of the voting shares of the acquiring or resulting entity (including, in the event of a transaction in which such Party becomes a wholly-owned subsidiary of another entity, the parent entity of such acquiring or resulting entity) outstanding immediately after such consolidation or merger are not held by the holders of the outstanding voting shares of such Party immediately preceding such consolidation or merger; or

(c) such Party conveys, transfers or leases all or substantially all of its assets to a Third Party.

1.12. "Business Day" means a day on which banking institutions in New York City, New York are open for business, excluding any Saturday or Sunday.

1.13. "Calendar Quarter" means the period beginning on the Original Effective Date and ending on the last day of the calendar quarter in which the Original Effective Date falls, and thereafter each successive period of three (3) consecutive calendar months ending on the last day of March, June, September, or December, respectively; provided that, the final Calendar Quarter shall end on the last day of the Term or, in the event an applicable Royalty Term extends beyond the last day of the Term pursuant to Section 13.6.3, the last day of such Royalty Term.

1.14. "Calendar Year" means the period beginning on the Original Effective Date and ending on December 31 of the calendar year in which the Original Effective Date falls, and thereafter each successive period of twelve (12) consecutive calendar months beginning on January 1 and ending on December 31; provided that, the final Calendar Year shall end on the last day of the Term or, in the event an applicable Royalty Term extends beyond the last day of the Term pursuant to Section 13.6.3, the last day of such Royalty Term.

1.15. "[*] DC" means each and every Development Candidate in which at least one (1) binding domain is Directed to [*]. In addition, notwithstanding anything to the contrary in this Agreement, each (if any) of the following Development Candidates shall be deemed a "[*] DC", and shall not be deemed a "Non-[*] DC" for purposes of this Agreement: (a) the first Development Candidate to have achieved IND Clearance in the U.S. in which none of the binding domains is Directed to [*], and (b) any WRDC. For clarity, the immediately preceding sentence is not intended to limit in any way the number of [*] DCs under this Agreement.

1.16. "CELGENE Background IP" means, collectively:

(a) "CELGENE Background Know-How," which means Know-How that (i) is Controlled by CELGENE or any of its Affiliates as of the Original Effective Date or thereafter during the Term, (ii) arises outside of the Collaboration, (iii) is provided by CELGENE to the Collaboration pursuant to Section 2.2.3(c)(i) for the Parties' research, development, manufacture or commercialization of a Collaboration BAC or Collaboration ADC Directed to a Target Combination, and (iv) is necessary or reasonably useful for the research, development, manufacture or commercialization of any Collaboration BAC or Collaboration ADC Directed to a Target Combination or its corresponding Development Candidate, Licensed Products or Diagnostic Products, as applicable, in the Field; and

(b) "CELGENE Background Patents," which means Patents Controlled by CELGENE or any of its Affiliates as of the Original Effective Date or thereafter during the Term that (i) Cover CELGENE Background Know-How or (ii) are provided by CELGENE to the Collaboration pursuant to Section 2.2.3(c)(i) for the Parties' research, development, manufacture or commercialization of a Collaboration BAC or Collaboration ADC Directed to a Target Combination.

1.17. "CELGENE IP" means CELGENE Background IP and CELGENE Core Technology. For the avoidance of doubt, CELGENE IP includes all CELGENE Patents.

1.18. "CELGENE Patent" means any Patent Controlled by CELGENE or any of its Affiliates (a) that solely Covers the composition of matter, method of use, or formulation of any BAC or ADC Directed to a Target Combination or its corresponding Development Candidate, Licensed Products or Diagnostic Products, including any Permitted Modifications, and (b) for which SUTRO is a sole or joint inventor and for which such Patent is assigned by SUTRO to CELGENE under Section 9.4.1(c) with respect to Inventions described in Section 9.4.1(b)(iii).

1.19. "CELGENE Territory" means (a) with respect to each [*] DC and its corresponding Licensed Products and Diagnostic Products, the entire world, and (b) with respect to each Non-[*] DC and its corresponding Licensed Products and Diagnostic Products, the entire world except the United States.

1.20. "cGMP" means all applicable standards relating to manufacturing practices for fine chemicals, intermediates, bulk products and/or finished pharmaceutical products, including (a) all applicable requirements detailed in the FDA's current Good Manufacturing Practices regulations, 21 CFR Parts 210 and 211 and The Rules Governing Medicinal Products in the European Community, Volume IV, Good Manufacturing Practice for Medicinal Products, as each may be amended from time to time, and (b) all applicable Laws promulgated by any governmental authority having jurisdiction over the manufacture of any Collaboration BAC, Collaboration ADC, Development Candidate, Licensed Product or Diagnostic Product.

1.21. "Clinical Trial" means a human clinical trial, including any Phase 1 Clinical Trial, Phase 2 Clinical Trial, Phase 3 Clinical Trial, study incorporating more than one of these phases, or post-Regulatory Approval clinical trial.

1.22. "CMO" means a CELGENE CMO or a CELGENE Cell-Based CMO, as applicable.

1.23. "Collaboration ADC" means any BAC in a BAC/ADC Program which CELGENE, by written notice to SUTRO, elects to modify to include the design, identification, generation, development and characterization of ADCs in which the Antibody Base of any such ADC is a BAC from the applicable BAC/ADC Program.

1.24. "Collaboration BAC" means a BAC first identified, discovered, generated or developed either (a) during the conduct of the Collaboration in accordance with this Agreement or (b) (to the extent included in a BAC/ADC Program in accordance with this Agreement) in any Internal Program of SUTRO (whether prior to or during the Research Term).

1.25. "Commercially Reasonable Efforts" means, with respect to a Party's obligations under this Agreement, including the [*], [*] (including [*]), [*] and [*] of [*] and [*], as applicable, the level of efforts used by such Party (or with respect to [*], the [*] of [*] by [*], [*], [*] or [*], provided that in no event shall such [*] be [*] than [*]), with respect to a [*] or [*], as applicable, at a [*], [*] or [*] as the relevant [*] or [*], as applicable, and that, with respect to [*] (including [*]), and [*], has [*] and [*] similar to the relevant [*] or [*], taking into account [*] of [*], [*] and [*] and [*], [*] of [*], [*] of the [*], [*], [*], [*] or [*], [*], the likelihood of [*] of [*] (including [*] and [*] or [*] to be [*]), [*] of the [*] to the applicable Party (including the [*] to [*] of [*] or other [*]), [*], [*] and other [*]. Commercially Reasonable Efforts shall be determined on a [*], [*] and [*] for a [*], and it is [*] that the level of effort will be [*] for [*], and will [*], [*] in the [*] of the [*] and the [*], [*] and [*].

1.26. "Control", "Controls" or "Controlled" means, with respect to any intellectual property, material or item of a Person, the ability of such Person (whether through ownership or license (other than a license granted in this Agreement)) to grant to the other Party and/or its Affiliates, as applicable, the licenses or sublicenses as provided herein without violating the terms of any then-existing agreement with any Third Party and (subject to the immediately succeeding sentence) without creating or increasing any payment obligation to a Third Party, including any royalty or milestone payment (the "Additional Payments"). Notwithstanding the foregoing, if on or after the Original Effective Date and for such time as the other Party agrees to pay and does in fact pay all Additional Payments (subject to Section 7.5.5, as applicable) with respect to such Party's use of or license to such intellectual property, such intellectual property shall be deemed to be included in the definition of "Control", if it otherwise satisfies such definition. Furthermore, notwithstanding anything to the contrary, but subject to the immediately succeeding sentence of this Section, with specific respect to Patents and Know-How, if a Business Combination occurs with respect to a Person after the Original Effective Date, then and thereafter such Person's Controlled Patents and Controlled Know-How shall not include any previously unlicensed Patents or Know-How, respectively, owned or controlled by (a) the Third Party or Third Parties involved in such Business Combination or (b) any of such Third Party or Third Parties' respective Affiliates, other than the acquired Party and its direct and indirect subsidiaries. For the avoidance of doubt, (i) any CELGENE Core Technology, SUTRO Core Technology and Joint Inventions discovered, developed, invented, conceived or reduced to practice in connection with the activities performed pursuant to this Agreement, no matter when Controlled, will be Controlled by the applicable Party for purposes of this Agreement; and (ii) any Patent that claims priority to any other Patent first Controlled before such Business Combination will be Controlled thereafter no matter when such Patent is filed or issued.

1.27. "Cover", "Covering" or "Covered", with reference to (a) a Patent, means that the making, using, selling, offering for sale or importing of a product (including a Collaboration BAC or Collaboration ADC) or practice of a method would infringe a Valid Claim (or, in the case of a Valid Claim that has not yet issued, would infringe such Valid Claim if it were to issue), and (b) Know-How, means that the research, manufacture, development or commercialization of a product (including a Collaboration BAC or Collaboration ADC) incorporates, embodies or otherwise make use of such Know-How.

1.28. "Development Candidate" means any Collaboration BAC or Collaboration ADC included in any BAC/ADC Program (on a molecule-by-molecule basis and including any back-up

compounds, BACs, ADCs, Antibodies and/or antibody drug conjugates) Directed to a Target Combination that CELGENE decides in its sole discretion through its Candidate Development Committee, or its respective equivalent, to (a) advance to IND-Enabling Studies or (b) designate as a "Development Candidate". For further clarity, a Development Candidate comprising or containing a Permitted Modification shall be deemed a Development Candidate for all purposes under this Agreement, including for the purpose of milestone and royalty payments pursuant to Sections 7.4 and 7.5. A list of Development Candidates is set forth on Exhibit C, which may be amended from time to time by CELGENE pursuant to Section 2.2.6.

1.29. "Diagnostic Product(s)" means any product, kit or other similar application containing, or based upon, a Development Candidate, and designed for the diagnosis of diseases or disorders in humans and/or the screening and/or monitoring of medical conditions in patients for the treatment and/or prevention of such diseases or disorders and/or the effects thereof.

1.30. "Directed to" means "directed to, and specifically binding to".

1.31. "Dollars" or "$" means the legal tender of the U.S.

1.32. "EMA" means the European Medicines Agency, and any successor entity thereto.

1.33. "EU" means all countries that are officially recognized as member states of the European Union at any particular time during the Term.

1.34. "Executive Officers" means SUTRO's Chief Executive Officer and CELGENE's President, Global Research and Early Development (or CELGENE's respective designee).

1.35. "FDA" means the U.S. Food and Drug Administration, and any successor entity thereto.

1.36. "Field" means any use or purpose, including the treatment, palliation, diagnosis or prevention of any human disease, disorder or condition (but excluding any animal disease, disorder or condition).

1.37. "First Collaboration Agreement" means that certain Collaboration and License Agreement, dated as of December 7, 2012, by and between Celgene Corp. and SUTRO, as amended from time to time, and "First Collaboration" means the "Collaboration" as defined in the First Collaboration Agreement.

1.38. "First Commercial Sale" means, with respect to each Licensed Product, the first sale for which revenue has been recognized by CELGENE, its Affiliates or Sublicensees or SUTRO, its Affiliates or licensees to any Third Party for use or consumption by the general public of such Licensed Product in any country in the CELGENE Territory or SUTRO Territory, respectively, for which all Regulatory Approvals (including pricing and reimbursement approvals), whether or not legally required in order to sell such Licensed Products in such country, have been granted; in each case provided however that the following shall not constitute a First Commercial Sale:

(a) any sale to an Affiliate or Sublicensee (in the case of CELGENE) or licensee (in the case of SUTRO) unless such Affiliate or Sublicensee or licensee is the last entity in the distribution chain of the Licensed Product;

(b) any use of such Licensed Product in Clinical Trials (including post-Regulatory Approval clinical trials),non-clinical development activities or other development activities with respect to such Licensed Product by or on behalf of a Party, or disposal or transfer of such Licensed Product for a bona fide charitable purpose; and

(c) compassionate use.

1.39. "First DC IND Clearance Date" means the date, if any, on which the first Development Candidate from any of the Identified BAC/ADC Programs achieves IND Clearance anywhere in the world.

1.40. "Format" means the constant region of an Antibody (i.e., the amino acid sequence of such Antibody that does not confer specificity for a target) that could promote the assembly of such Antibody, and any portion, fragment, variant, modification or derivative thereof, so long as such portion, fragment, variant, modification or derivative does not confer specificity for the same target. For clarity, a "Format" includes the nucleic acid sequence encoding the amino acid sequence of such Format. The term "Format" may be, but is not limited to, any of the following:

1.40.1 "CELGENE Format", which means a Format that is (a) Controlled by CELGENE or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by CELGENE to the Collaboration pursuant to Section 2.2.3(c)(i); or

1.40.2 "PD Format", which means a Format that is in the public domain, as agreed by the Parties pursuant to Section 2.2.3(e); or

1.40.3 "SUTRO Format", which means a Format that is (a) Controlled by SUTRO or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by SUTRO to the Collaboration pursuant to Section 2.2.3(a)(i).

1.41. "FPFV" means, with respect to a Clinical Trial, the first visit by the first subject enrolled in such Clinical Trial for dosing with a Licensed Product.

1.42. "FTE Rate" means an hourly charge of $[*] for each full-time scientific or technical person of SUTRO, which amount is based on an annual cost of $[*] per full-time person and [*] person-hours performed.

1.43. "Fully Burdened Manufacturing Costs" means costs to supply applicable active pharmaceutical ingredients, finished products, related inputs and services (including BACs, ADCs, Development Candidates and Licensed Products) (a) supplied by an unaffiliated Third Party, or (b) manufactured directly by SUTRO; it being understood and agreed that (i) in the case of costs referred to in clause (a) of this sentence where an unaffiliated Third Party is the manufacturer, Fully Burdened Manufacturing Costs shall equal [*] percent ([*]%) of the amount invoiced by such unaffiliated Third Party, plus any reasonable direct and identifiable internal costs and out-of-pocket costs, actually incurred by SUTRO and/or its Affiliates in connection with the oversight

(as reasonably agreed in advance by the Parties) of the manufacturing process of the Third Party, and (ii) in the case of costs referred to in clause (b) of this sentence where SUTRO is the manufacturer, Fully Burdened Manufacturing Costs shall equal [*] percent ([*]%) of the fully burdened costs of manufacturing the applicable product, which manufacturing costs: (x) shall include the cost of raw materials, direct and identifiable labor costs, and other direct and identifiable variable costs and appropriate direct and identifiable costs (or appropriate allocation thereof) for equipment pools, plant operations, yield losses (to the extent consistent with industry practice) and plant support services (including utilities, maintenance, engineering, safety, human resources, finance, plant management and other similar activities), and (y) shall be calculated in accordance with GAAP and SUTRO's policies and procedures for its other products, in each case consistently applied (and such plant operations and support services costs shall be allocated consistent with GAAP and the other SUTRO products in that facility), and (z) notwithstanding anything to the contrary, shall exclude all costs which cannot be linked to a specific manufacturing activity such as charges for corporate overhead which are not controllable by the manufacturing plant.

1.44. "GCP" means the ethical and scientific quality standards for designing, conducting, recording, and reporting trials that involve the participation of human subjects as are required by applicable Regulatory Authorities or Law in the relevant jurisdiction. In the United States, GCP shall be based on Good Clinical Practices established through FDA guidances (including Guideline for Good Clinical Practice – ICH Harmonized Tripartite Guideline (ICH E6), as amended from time to time), and, outside the United States, GCP shall be based on Guideline for Good Clinical Practice – ICH Harmonized Tripartite Guideline (ICH E6), as amended from time to time.

1.45. "GLP" means the then-current good laboratory practice standards promulgated or endorsed by the FDA, as defined in U.S. 21 C.F.R. Part 58 (or such other comparable regulatory standards in jurisdictions outside the U.S. to the extent applicable to the relevant toxicology and/or safety study, as they may be updated from time to time).

1.46. "Identified BAC/ADC Program" means the following BAC/ADC Programs: BCMA ADC Program, [*] Program, [*] Program, and [*] Program, each as described in the applicable subsection of Exhibit J. Each BAC/ADC Identified Program only includes the molecules identified in the applicable subsection of Exhibit J, as may be updated from time to time as mutually agreed by the Parties.

1.47. "Immuno-Oncology Target" means any antigens that are expressed on the cell surface of immune effector cells or tumor cells that can form specific interactions between the cognate receptor-ligand pair(s) for the purpose of immune modulation and that can also be presented on the surface of antigen presenting cells.

1.48. "IND" means an investigational new drug application (including any amendment or supplement thereto) submitted to the FDA pursuant to Part 312 of Title 21 of the U.S. Code of Federal Regulations, including any amendments thereto. References herein to IND shall include, to the extent applicable, any comparable filing(s) outside the U.S. for the investigation of any product in any other country or group of countries (such as a Clinical Trial Application ("CTA") in the EU).

1.49. "IND Clearance" means acceptance of an IND by the FDA to conduct clinical testing of the applicable pharmaceutical product.

1.50. "IND-Enabling Study" means any study with the goal of using the results of such study to support the filing of an IND for a Development Candidate or Licensed Product, including any in vivo animal toxicology study conducted pursuant to GLP.

1.51. "Indication" means any human disease or condition, or sign or symptom of a human disease or condition.

1.52. "Internal Program of SUTRO" means any research and/or development (but not commercialization) program engaged in by or on behalf of SUTRO or (subject to Section 8.1.3) its Affiliates, solely for its or such Affiliates' own accord and not with, for or on behalf of any Third Party, relating to BACs, ADCs, Antibodies and/or antibody drug conjugates.

1.53. "Invention" means any (a) Know-How (including inventions) discovered, developed, invented, conceived or reduced to practice, whether or not patentable, by or on behalf of either Party or its respective Affiliates or Sublicensees (in the case of CELGENE) or licensees (in the case of SUTRO), whether solely or jointly with the other Party or its Affiliates or any Third Party, pursuant to the conduct of activities under the Collaboration (including development and commercialization of [*] DCs and Non-[*] DCs) and (b) intellectual property rights in any of the foregoing.

1.54. "Know-How" means all tangible and intangible:

(a) information, techniques, technology, practices, trade secrets, inventions (whether patentable or not), methods, knowledge, know-how, skill, experience, data, results (including pharmacological, toxicological and clinical test data and results, research data, reports and batch records), analytical and quality control data, analytical methods (including applicable reference standards), full batch documentation, packaging records, release, stability, storage and shelf-life data, and manufacturing process information, results or descriptions, software and algorithms; and

(b) compositions of matter, cells, cell lines, assays, animal models and physical, biological or chemical material, including Antibodies, Binders, Formats, Linkers, Payloads, BACs, ADCs, Development Candidates, Licensed Products and Diagnostic Products.

(c) As used in this Agreement, "clinical test data" shall be deemed to include all information related to clinical or non-clinical testing, including patient report forms, investigators' reports, biostatistical, pharmaco-economic and other related analyses, regulatory filings and communications, and the like.

1.55. "Law" or "Laws" means all laws, statutes, rules, regulations, orders, judgments, or ordinances having the effect of law of any national, multinational, federal, state, provincial, county, city or other political subdivision.

1.56. "Licensed Product" means any pharmaceutical product comprising or containing a Development Candidate, whether or not as the sole active ingredient and in any dosage form or formulation. For clarity, a Diagnostic Product is not a Licensed Product.

1.57. "Linker" means any chemical composition or method, including methods of manufacture, that attaches a Payload to a binding domain (including any Antibody). The term "Linker" may be, but is not limited to, any of the following:

1.57.1 "CELGENE Linker", which means a Linker that is (a) Controlled by CELGENE or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by CELGENE to the Collaboration pursuant to Section 2.2.3(c)(i); or

1.57.2 "PD Linker", which means a Linker that is in the public domain, as agreed by the Parties pursuant to Section 2.2.3(e); or

1.57.3 "SUTRO Linker", which means a Linker that is (a) Controlled by SUTRO or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by SUTRO to the Collaboration pursuant to Section 2.2.3(a)(i).

1.58. "MAA" means a regulatory application filed with the EMA or MHLW seeking Regulatory Approval of a Licensed Product, and all amendments and supplements thereto filed with the EMA or MHLW.

1.59. "Major EU Country" means any of the following countries: France, Germany, Italy, Spain or the United Kingdom.

1.60. "MHLW" means the Ministry of Health, Labour and Welfare of Japan, or the Pharmaceuticals and Medical Devices Agency, or any successor to either of them, as the case may be.

1.61. "Net Sales" means with respect to any Licensed Product, the gross amounts invoiced by CELGENE, its Affiliates and Sublicensees (each, a "Selling Party") to Third Party customers for sales of such Licensed Product, less the following deductions actually incurred, allowed, paid, or accrued, or specifically allocated in its financial statements in accordance with (as applicable to the Selling Party) Accounting Principles, for:

(a) discounts (including trade, quantity and cash discounts) actually allowed, cash andnon-cash coupons, retroactive price reductions, and charge-back payments and rebates granted to any Third Party (including to governmental entities or agencies, purchasers, reimbursers, customers, distributors, wholesalers, and group purchasing and managed care organizations or entities (and other similar entities and institutions));

(b) credits or allowances, if any, on account of price adjustments, recalls, claims, damaged goods, rejections or returns of items previously sold (including Licensed Product returned in connection with recalls or withdrawals) and amounts written off by reason of uncollectible debt, provided that if the debt is thereafter paid, the corresponding amount shall be added to the Net Sales of the period during which it is paid;

(c) rebates (or their equivalent), administrative fees, chargebacks and retroactive price adjustments and any other similar allowances granted by a Selling Party (including to governmental authorities, purchasers, reimburses, customers, distributors, wholesalers, and managed care organizations and entities (and other similar entities and institutions)) which effectively reduce the selling price or gross sales of the Licensed Product;

(d) insurance, customs charges, freight, postage, shipping, handling, and other transportation costs incurred by a Selling Party in shipping Licensed Product to a Third Party;

(e) import taxes, export taxes, excise taxes (including annual fees due under Section 9008 of the United States Patient Protection and Affordable Care Act of 2010 (Pub. L. No. 111-48) and other comparable Laws), sales taxes, value-added taxes, consumption taxes, duties or other taxes levied on, absorbed, determined and/or imposed with respect to such sales (excluding income or net profit taxes or franchise taxes of any kind); and

(f) reasonable discounts due to factoring of receivables that are incurred consistent with its other pharmaceutical products of like character in a given country.

There should be no double counting in determining the foregoing deductions from gross amounts invoiced to calculate "Net Sales" hereunder. The calculations set forth in this definition shall be determined in accordance with Accounting Principles consistently applied.

If non-monetary consideration is received by a Selling Party for any Licensed Product, Net Sales will be calculated based on the average price charged for such Licensed Product, as applicable, during the preceding royalty period, or in the absence of such sales, the fair market value of the Licensed Product, as applicable, as determined by the Parties in good faith. Notwithstanding the foregoing, Net Sales shall not be imputed to transfers of Licensed Products, as applicable, for use in Clinical Trials, non-clinical development activities or other development activities with respect to Licensed Products by or on behalf of the Parties, for bona fide charitable purposes or for compassionate use or for Licensed Product samples, if no monetary consideration is received for such transfers.

Net Sales shall be determined on, and only on, the first sale by CELGENE or any of its Affiliates or Sublicensees to a non-Sublicensee Third Party.

If a Licensed Product is sold as part of a Combination Product (defined below), Net Sales will be the product of (i) Net Sales of the Combination Product calculated as above (i.e., calculated as for a non-Combination Product) and (ii) the fraction [*], where:

[*]

If [*] cannot be determined by reference to a non-Combination Product sales as described above, then Net Sales will be calculated as above, but the gross invoice price in the above equation shall be determined by mutual agreement reached in good faith by the Parties prior to the end of the accounting period in question based on an equitable method of determining the same that takes into account, in the applicable country, variations in dosage units and the relative fair market value of each therapeutically active ingredient in the Combination Product.

As used in this Section, "Combination Product" means a Licensed Product that contains one or more additional active ingredients (whether coformulated or copackaged) that are neither Development Candidates nor generic or other non-proprietary compositions of matter. Pharmaceutical dosage from vehicles, adjuvants and excipients shall be deemed not to be "active ingredients".

1.62. "Nomination" or "Nominate" means, with respect to a Collaboration BAC or Collaboration ADC, the nomination by CELGENE, in its sole discretion, of such Collaboration BAC or Collaboration ADC as a Development Candidate pursuant to Section 2.2.6.

1.63. "Non-[*] DC" means, except as set forth in the next sentence, each and every Development Candidate in which none of the binding domains is Directed to [*]. For the avoidance of doubt, notwithstanding anything to the contrary in this Agreement, (a) the first Development Candidate to have achieved IND Clearance in the U.S. in which none of the binding domains is Directed to [*] and (b) any WRDC shall, in the case of (a) and (b), each be deemed a "[*] DC" and shall not be deemed a "Non-[*] DC" for purposes of this Agreement.

1.64. "Option Exercise Fee" has the meaning set forth in Section 7.3.2.

1.65. "[*]" means the period commencing on the Amendment Effective Date and ending on [*].

1.66. "Patent" means (a) all patents and patent applications in any country or supranational jurisdiction worldwide, (b) any substitutions, divisionals, continuations, continuations-in-part, reissues, renewals, registrations, confirmations,re-examinations, extensions, supplementary protection certificates and the like of any such patents or patent applications, and (c) foreign counterparts of any of the foregoing.

1.67. "Payload" means, with respect to an ADC, any molecular entity, polypeptide, protein or other molecular or chemical species, other than (a) the binding domain (including any Antibody) to which such entity, polypeptide, protein or species is attached and (b) any Linker used in such attachment. The term "Payload" may be, but is not limited to, any of the following:

1.67.1 "CELGENE Payload", which means a Payload that is (a) Controlled by CELGENE or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by CELGENE to the Collaboration pursuant to Section 2.2.3(c)(i); or

1.67.2 "PD Payload", which means a Payload that is in the public domain, as agreed by the Parties pursuant to Section 2.2.3(e); or

1.67.3 "SUTRO Payload", which means a Payload that is (a) Controlled by SUTRO or any of its Affiliates as of the Original Effective Date or thereafter during the Term and (b) provided by SUTRO to the Collaboration pursuant to Section 2.2.3(a)(i).

1.68. "Person" means any individual, partnership, joint venture, limited liability company, corporation, firm, trust, association, unincorporated organization, governmental authority or agency, or any other entity not specifically listed herein.

1.69. "Phase 1 Clinical Trial" means a human clinical trial of a product in any country, the principal purpose of which is to determine the metabolism and pharmacological actions of the product in humans, the side effects associated with increasing doses and, if possible, to gain early evidence of effectiveness, as described in 21 C.F.R. 312.21(a), or a similar clinical study prescribed by the relevant Regulatory Authorities in a country other than the United States.

1.70. "Phase 2 Clinical Trial" means a human clinical trial of a product in any country that would satisfy the requirements of 21 C.F.R. 312.21(b) and is intended to explore a variety of doses, dose response, and duration of effect, and to generate evidence of clinical safety and effectiveness for a particular Indication or Indications in a target patient population, or a similar clinical study prescribed by the relevant Regulatory Authorities in a country other than the United States. For the avoidance of doubt, if a Clinical Trial is conducted or publicly referred to by CELGENE, its Affiliates or Sublicensee as a "Phase 1/2 Clinical Trial" (or other similar terminology), then for purposes of this Agreement such Clinical Trial shall be deemed a Phase 2 Clinical Trial.

1.71. "Phase 3 Clinical Trial" means a human clinical trial of a product in any country that would satisfy the requirements of 21 C.F.R. 312.21(c) and is intended to (a) establish that the product is safe and efficacious for its intended use, (b) define contraindications, warnings, precautions and adverse reactions that are associated with the product in the dosage range to be prescribed, and (c) support Regulatory Approval for such product; or a similar clinical study prescribed by the relevant Regulatory Authorities in a country other than the United States; it being understood and agreed that any clinical trial is a Phase 3 Clinical Trial if such trial is a registration trial sufficient for filing an application for a Regulatory Approval for such product in the United States or another country or some or all of an extra-national territory, as evidenced by the acceptance of filing for a Regulatory Approval by the applicable Regulatory Authority for such product after the completion of such trial.

1.72. "Potential CMO" means a contract manufacturing organization identified by CELGENE for evaluation purposes pursuant to Section 6.2, Section 9.1.3(c) and/or Section 13.6.3(e).

1.73. "Pre-Development Plan" has the meaning set forth in Section 2.2.

1.74. "Pre-Existing Licenses" has the meaning set forth in Section 2.15 of the StanfordIn-License.

1.75. "Product Liability" means any product liability claims asserted or filed by a Third Party (without regard to their merit or lack thereof), seeking damages or equitable relief of any kind, relating to personal injury, wrongful death, medical expenses, an alleged need for medical monitoring, consumer fraud or other alleged economic losses, allegedly caused by any Licensed Product, and including claims by or on behalf of users of any Licensed Product (including spouses, family members and personal representatives of such users) relating to the use, sale, distribution or purchase of any Licensed Product sold by CELGENE, its Affiliates, Sublicensees or distributors, or by SUTRO, its Affiliates, licensees or distributors, as applicable, including claims by Third Party payers, such as insurance carriers and unions.

1.76. "Prosecution and Maintenance" or "Prosecute and Maintain" means, with regard to a Patent, the preparation, filing, prosecution and maintenance of such Patent, as well as re-examinations, reissues, appeals, and requests for patent term adjustments and patent term extensions with respect to such Patent, together with the initiation or defense of interferences, oppositions and other similar proceedings with respect to the particular Patent, and any appeals therefrom. For clarification, "Prosecution and Maintenance" or "Prosecute and Maintain" shall not include any other enforcement actions taken with respect to a Patent.

1.77. "Regulatory Approval" means the approval, license or authorization of the applicable Regulatory Authority necessary for the marketing and sale of a product for a particular Indication in a country in the world, including separate pricing or reimbursement approvals legally required in order to sell the product in such country, and including the approval by the applicable Regulatory Authority of any expansion or modification of the label for such Indication.

1.78. "Regulatory Authority" means the FDA in the U.S. or any health regulatory authority in any other country that is a counterpart to the FDA and holds responsibility for granting Regulatory Approval for a product in such country, including the EMA and the MHLW, and any successor(s) thereto.

1.79. "Regulatory Materials" means the regulatory registrations, applications, authorizations and approvals (including approvals of NDAs, BLAs, 510(k)s, PMAs, supplements and amendments, pre- and post-approvals, pricing and Third Party reimbursement approvals, and labeling approvals), Regulatory Approvals or other submissions made to or with any Regulatory Authority necessary for the research, development (including the conduct of clinical studies), manufacture, or commercialization of a Development Candidate, Licensed Product or Diagnostic Product in a regulatory jurisdiction, together with all related correspondence to or from any Regulatory Authority and all documents referenced in the complete regulatory chronology for each NDA, including all Drug Master File(s) (if any), IND, CTA, MAA and supplemental new drug applications (sNDAs) or foreign equivalents of any of the foregoing.

1.80. "Research Plan" means the research plan existing as of the Amendment Effective Date and attached as Exhibit A-1 hereto.

1.81. "Research Term" means the period of time commencing on the Original Effective Date and ending on (and including) September 26, 2017.

1.82. "Royalty Term" means, on a country-by-country (in the CELGENE Territory) and Licensed Product-by-Licensed Product basis, the longer of (a) the expiration of the last Valid Claim of any CELGENE Patent which Covers the composition of matter, method of use or formulation of any Licensed Product in such country, or (b) ten (10) years following the First Commercial Sale of any such Licensed Product in such country.

1.83. "Scripps In-License" means that certain license agreement by and between SUTRO and The Scripps Research Institute dated May 30, 2012.

1.84. "Scripps Know-How" means the Know-How, if any, licensed to SUTRO pursuant to the Scripps In-License.

1.85. "Scripps Patents" means the Patents licensed to SUTRO pursuant to the Scripps In-License.

1.86. "Scripps Technology" means the Scripps Patents and the Scripps Know-How.

1.87. "Second IND" means the second IND filed anywhere in the world by or on behalf of CELGENE and/or its Affiliates with respect to a Development Candidate from any of the Identified BAC/ADC Programs in which none of the binding domains is Directed to [*], excluding any Development Candidate included in the Identified BAC/ADC Program from which the first Development Candidate arises which has achieved the First DC IND Clearance Date and in which none of the binding domains is Directed to [*].

1.88. "Second IND Clearance Date" means the date, if any, on which the second Development Candidate from any of the Identified BAC/ADC Programs achieves IND Clearance anywhere in the world.

1.89. "Stanford In-License" means that certain license agreement by and between SUTRO and The Board Of Trustees of the Leland Stanford Junior University, dated October 3, 2007, as may be amended from time to time.

1.90. "Stanford Know-How" means the Know-How, if any, licensed to SUTRO pursuant to the Stanford In-License.

1.91. "Stanford Patents" means the Patents licensed to SUTRO pursuant to the Stanford In-License.

1.92. "Stanford Technology" means the Stanford Patents and the Stanford Know-How.

1.93. "Sublicensee" means a Third Party to whom CELGENE has granted a license under Know-How or Patents Controlled by CELGENE in connection with CELGENE's exercise of the rights or performance of the obligations under this Agreement, or a sublicense under Know-How or Patents licensed to CELGENE pursuant to this Agreement, to research, develop, manufacture or commercialize any Collaboration BAC or Collaboration ADC, or its corresponding Development Candidate or Licensed Products, in the Field, but excluding any Third Party acting solely as a distributor. For purposes of further clarity, none of SUTRO or its Affiliates shall be deemed a Sublicensee of CELGENE.

1.94. "SUTRO Background IP" means any and all SUTRO Binders, SUTRO Formats, SUTRO Linkers and SUTRO Payloads provided by SUTRO to the Collaboration pursuant to Section 2.2.3(a)(i), and any and all Patents and Know-How Controlled by SUTRO and/or its Affiliates as of the Original Effective Date or thereafter during the Term that Cover such SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload, as applicable, or any other Know-How Controlled by SUTRO and/or its Affiliates that is otherwise contributed or used by or on behalf of SUTRO to or in the Collaboration.

1.95. "SUTRO Expression Know-How" means the Know-How Controlled by SUTRO and/or its Affiliates as of the Original Effective Date or thereafter during the Term that relates to the in vitro expression of proteins and/or peptides, including any Stanford Know-How.

1.96. "SUTRO Expression Patents" means the Patents Controlled by SUTRO and/or its Affiliates as of the Original Effective Date or thereafter during the Term that Cover the in vitro expression of proteins and/or peptides or the SUTRO Expression Know-How, including any Stanford Patents.

1.97. "SUTRO Expression Technology" means the SUTRO Expression Patents and the SUTRO Expression Know-How, including any Stanford Technology.

1.98. "SUTRO IP" means, collectively:

(a) "SUTRO Know-How", which means Know-How that (i) is Controlled by SUTRO and/or its Affiliates as of the Original Effective Date or thereafter during the Term, and (ii) is necessary or reasonably useful for the research, development, manufacture or commercialization of any Collaboration BAC or Collaboration ADC Directed to a Target Combination or its corresponding Development Candidate, Licensed Products or Diagnostic Products, as applicable, in the Field, provided, however, that the SUTRO Know-How shall in no event include the SUTRO Expression Know-How or the Scripps Know-How; and

(b) "SUTRO Patents", which means Patents Controlled by SUTRO and/or its Affiliates as of the Original Effective Date or thereafter during the Term that (i) Cover the SUTRO Know-How; or (ii) are necessary or reasonably useful (A) for the conduct of the research activities set forth in the Research Plan and/or the Pre-Development Plan, as applicable, or (B) the development, manufacture or commercialization of any Collaboration BAC or Collaboration ADC Directed to a Target Combination or its corresponding Development Candidate, Licensed Products or Diagnostic Products, provided, however, that the SUTRO Patents shall in no event include the SUTRO Expression Patents or Scripps Patents. The Patents set forth in Schedule 1.98(b) attached hereto, which are in existence as of the Original Effective Date, are SUTRO Patents.

(c) For clarity, "SUTRO IP" includes (1) the SUTRO Background IP and (2) the SUTRO Core Technology, other than with respect to the SUTRO Expression Technology.

1.99. "SUTRO Territory" means with respect to each Non-[*] DC and its corresponding Licensed Products and Diagnostic Products, the United States. For clarity, there is no SUTRO Territory with respect to any and all [*] DCs and their corresponding Licensed Products and Diagnostic Products.

1.100. "Target" means any antigen, including any antigen expressed either on a tumor cell or immune effector cell that can be utilized for potential therapeutic benefit.

1.101. "Target Combination" means, subject to the proviso to this sentence, any combination of two (2) or more Targets; it being understood that, solely with respect to the BCMA ADC Program, "Target Combination" shall be deemed to refer to BCMA (as a single Target).

1.102. "Third Party" means any Person other than SUTRO or CELGENE that is not an Affiliate of SUTRO or of CELGENE.

1.103. "Tumor Target" means any antigen expressed on a tumor cell, which can include any immuno-therapy related antigen that is expressed on a tumor cell, targeted to achieve selective binding by a BAC or ADC to tumor cells.

1.104. "Tumor Targeted Multispecific ADC" means any multispecific ADC or other multispecific antibody drug conjugate Directed solely to Tumor Targets.

1.105. "United States" or "U.S." means the United States of America and all of its territories and possessions.

1.106. "Valid Claim" means a claim of (a) an issued patent in the U.S. or in a jurisdiction outside the U.S., as applicable, that has not expired, lapsed, been cancelled or abandoned, or been dedicated to the public, disclaimed, or held unenforceable, invalid, revoked or cancelled by a court or administrative agency of competent jurisdiction in an order or decision from which no appeal has been or can be taken, including through opposition, reexamination, reissue or disclaimer; or (b) a pending patent application that has not been finally abandoned or finally rejected or expired and which has been pending for no more than five (5) years from the date of filing of the earliest priority patent application to which such pending patent application is entitled to claim benefit.

1.107. "WRDC" has the meaning set forth in Section 7.3.4.

1.108. Additional Definitions. Each of the following terms has the meaning described in the corresponding section of this Agreement indicated below:

Definition:	Section:
AAA Expedited Rules	14.1.2
Abandoned ADCs	2.2.6(b)(ii)
Abandoned BACs	2.2.6(b)(ii)
Abandoned Non-[*] DC	2.2.6(b)(iii)
Abandoned Target/Target Combinations	2.2.6(b)(ii)
Additional Payments	1.26
Agreement	Preamble
Alliance Manager	5.1.3
Antitrust Filing	8.2.2
BAC/ADC Program	2.1
BAC Tox Testing	7.4.2
Bankruptcy Code	9.3
Business Program	8.1.3
CELGENE	Preamble
Celgene Alpine	Preamble
CELGENE Background IP Transfer Agreement	2.2.3(c)(i)(2)
CELGENE Background Know-How	1.16(a)
CELGENE Background Patents	1.16(b)
CELGENE Binder	1.9.1
CELGENE Cell-Based CMO	6.5

Definition:	Section:
CELGENE CMO	6.2
CELGENE Core Technology	9.4.1(b)
Celgene Corp.	Preamble
CELGENE Format	1.40.1
CELGENE Indemnitees	12.2
CELGENE Linker	1.57.1
CELGENE Manufacturing Costs	6.5(b)
CELGENE Manufacturing Notice	6.5
CELGENE Payload	1.67.1
Cell-Free Extract	2.2.6(a)
Claims	12.1
Collaboration	2.1
Collaboration ADC	1.23
Combination Product	1.61
Comparable Third Party Product	7.5.4
Competitive Infringement	9.7.1
Confidential Information	10.1
Conjugation Chemistry	9.4.1(b)
Conjugation Chemistry Improvements	9.1.6
CTA	1.48
Defense Materials	9.9
Disclosing Party	10.1
Discontinuation Date	2.7.2(b)
Exception	9.9(a)
First Collaboration	1.37
GAAP	1.1
HSR Act	1.7
IFRS	1.1
Joint Inventions	9.4.3(b)(i)
Joint Patents	9.4.3(b)(i)
JSC	5.2.1
Liquidated Damages Alternative	13.6.3(d)
Litigation Conditions	12.3
Losses	12.1
Material Receiving Party	2.7.1
Materials	2.7.1
New Committee	5.1.1(a)
NNAA	1.8
Notifying Party	4.1.1(d)(ii)
Other Scripps Patents	9.1.7
Party or Parties	Preamble
Patent Committee	5.3.1
Patent Liaison	5.3.7
Patent Strategy	5.3.6(b)
PD Binder	1.9.2

Definition:	Section:
PD Format	1.40.2
PD Linker	1.57.2
PD Payload	1.67
Permitted Modification	9.4.1(b)
Post-Regulatory Approval Opt-Out Period	4.6.1(b)
Pre-Regulatory Approval Opt-Out Period	4.6.1(a)
Prioritized BAC/ADC Programs	2.2.1(a)
Product-Specific SUTRO Patent	9.5.1(a)
Production Issue	6.5(a)
Purpose	2.7.1
Qualified Recipient	9.9(a)
Received Materials	9.9(a)
Receiving Party	10.1
Residual Information	10.2
Second Indication	7.4.3(d)
Selling Party	1.61
Specifications	6.1.2
Subcommittee	5.1.1(b)
SUTRO	Preamble
SUTRO Background IP Transfer Agreement	2.2.3(a)(i)(2)
SUTRO Binder	1.9.3
SUTRO Core Technology	9.4.2(b)
SUTRO Expression DMF	4.1.1(b)
SUTRO Format	1.40.3
SUTRO In-Licenses	11.2(b)
SUTRO Indemnitees	12.1
SUTRO Linker	1.57.3
SUTRO Know-How	1.98(a)
SUTRO Opt-Out	4.6.1
SUTRO Opt-Out Date	4.6.1
SUTRO Patents	1.98(b)
SUTRO Payload	1.67
T2 Period	7.4.2(a)
Term	13.1
Third Party Technology	9.1.7
Transfer Record	2.7.1
Transferring Party	2.7.1

ARTICLE II
COLLABORATION; RESEARCH PLAN AND PRE-DEVELOPMENT PLAN

2.1. Collaboration Overview. Pursuant to this Agreement (including the Research Plan) and as further provided in this Article 2, the Parties may collaborate on the conduct of research and development activities, with the following goals: (a) designing, identifying, generating and developing BACs and ADCs and, in either case, Directed to a Target Combination (each program to design, identify, generate and/or develop BACs and/or ADCs Directed to a Target Combination pursuant to this Agreement and/or the Research Plan, on a per-Target Combination, a "BAC/ADC Program") during the Research Term, (b) the conduct of in vitro and in vivo studies and toxicology studies for each BAC/ADC Program in accordance with this Agreement and the Research Plan, (c) Nomination by CELGENE of Development Candidates from BAC/ADC Programs during the Research Term, and (d) the further development and commercialization of Development Candidates during the Term (the "Collaboration"). The Parties acknowledge and agree that the Research Term will end on September 26, 2017, and that after the end of the Research Term the Parties may further collaborate on the conduct of certain pre-development activities with respect to one or more Identified BAC/ADC Program(s), as described in more detail in Section 2.2. For clarity, a BAC or ADC first identified, discovered, generated or developed in any Internal Program of SUTRO (whether prior to or during the Research Term), will be made available for research and development activities as part of a BAC/ADC Program if so desired by either CELGENE or SUTRO. SUTRO shall report in reasonable detail on all BACs and ADCs first identified, discovered, generated or developed in any Internal Program of SUTRO (whether prior to or during the Research Term) to the JSC at the JSC's regularly scheduled meetings.

2.2. Research Plan and Pre-Development Plan.

2.2.1 Generally. The Parties acknowledge and agree that as of the Amendment Effective Date, the only prioritized BAC/ADC Programs are the Identified BAC/ADC Programs ("Prioritized BAC/ADC Programs"). On or before September 26, 2017, the JSC may unanimously approve a plan describing certain pre-development activities that SUTRO may conduct with respect to one or more Identified BAC/ADC Program(s) ("Pre-Development Plan"). Upon such approval by the JSC, the Pre-Development Plan shall be included as Exhibit A-2 hereto, and shall replace in entirety the Research Plan. The Pre-Development Plan may be amended only upon the Parties' mutual written agreement.

(a) The term of the Pre-Development Plan shall begin on the date of the JSC's approval and shall continue as decided by the JSC (but in no event later September 26, 2020 unless otherwise mutually agreed upon in writing by the Parties) ("Pre-Development Term").

(b) The list of Target Combinations as of Amendment Effective Date with respect to each of the Prioritized BAC/ADC Programs is set forth on Exhibit B, which list may be amended only upon the Parties' mutual written agreement.

(c) From the Amendment Effective Date until the end of the Research Term, the Parties' activities under the Collaboration shall continue to be governed by the Research Plan.

(d) The Parties will regularly report on the activities contemplated under the Research Plan and thePre-Development Plan to the JSC for the JSC's review in accordance with Section 5.2.4.

2.2.2 FTE Rate. Following expiration of the Research Term, the activities performed by SUTRO under thePre-Development Plan shall be compensated by CELGENE at the FTE Rate, it being understood that such FTE Rate does not include any external costs (including without limitation exploratory toxicology studies, and any costs related to contract research organizations and/or other vendors or subcontractors), all of which will be reimbursed by CELGENE within thirty (30) days of receipt by CELGENE of SUTRO's invoice rendered on a quarterly basis.

2.2.3 Responsibilities.

(a) SUTRO Responsibilities. During the Research Term, SUTRO may perform the activities assigned to SUTRO under the Research Plan. As between the Parties, SUTRO shall be primarily responsible for the design, identification, generation and development of BACs and ADCs. It is also anticipated that SUTRO would be primarily responsible for exploratory toxicology studies. In addition, during the Pre-Development Term, SUTRO may perform the activities assigned to SUTRO under the Pre-Development Plan.

(i) SUTRO Background IP. As of the Original Effective Date, SUTRO Background IP does not contain any Antibodies, SUTRO Binders, SUTRO Formats, SUTRO Linkers or SUTRO Payloads. During the Research Term, SUTRO may elect to contribute Antibodies, SUTRO Binders, SUTRO Formats, SUTRO Linkers and SUTRO Payloads (which, if contributed, shall include Patents and Know-How Controlled by SUTRO and/or its Affiliates Covering such Antibodies, SUTRO Binders, SUTRO Formats, SUTRO Linkers and SUTRO Payloads) to the Collaboration as follows:

(1) SUTRO shall notify CELGENE of its desire to contribute such Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload by issuing a written notice to CELGENE, which shall identify such Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload.

(2) Within ten (10) Business Days after receipt of such notice by CELGENE, the Parties shall discuss the implications of inclusion of such Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload. Upon the Parties' mutual agreement on the inclusion of such Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload, the Parties shall execute a transfer agreement substantially in the form of Exhibit D (each, a "SUTRO Background IP Transfer Agreement"), which shall list the Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload (and the Patents Controlled by SUTRO and/or its Affiliates Covering such Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload) to be contributed to the Collaboration. The identity and/or structure of such Antibody, Binder, Format, Linker or Payload shall be listed as well as the BAC/ADC Program(s) to which such Antibody, Binder, Format, Linker or Payload is primarily being contributed. Upon execution of the SUTRO Background IP Transfer Agreement, (A) such Patents shall be deemed to be "SUTRO Background Patents" and any Know-How Controlled by

SUTRO and/or its Affiliates Covering such Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker and/or SUTRO Payload shall be deemed "SUTRO Background Know-How", and (B) such Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker and/or SUTRO Payload shall be subject to the license set forth in Section 9.1.1(a)(ii).

(b) For the avoidance of doubt, (x) any Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload provided by SUTRO to CELGENE for use in the Collaboration may only be used by CELGENE to conduct the Collaboration in accordance with the Research Plan or with respect to any and all BAC/ADC Program(s), unless otherwise expressly limited to one or more particular BAC/ADC Program(s) in the SUTRO Background IP Transfer Agreement, and (y) any Antibody, Binder, Format, Linker or Payload Controlled by SUTRO or any of its Affiliates as of the Original Effective Date or thereafter during the Term shall not be subject to the license set forth in Section 9.1.1(a)(ii), other than an Antibody, SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload that is (I) provided to the Collaboration in accordance with Section 2.2.3(a)(i), (II) used by SUTRO in a Collaboration ADC or Collaboration BAC (whether or not contributed to the Collaboration in accordance with Section 2.2.3(a)(i)), or (III) based upon or derived from an Antibody, Binder, Format, Linker or Payload described in subclause (I) or subclause (II) and that is identified, discovered, generated or developed during the conduct of the Collaboration in accordance with this Agreement.

(c) CELGENE Responsibilities. During the Research Term, CELGENE may perform the activities assigned to CELGENE under the Research Plan. It is anticipated that CELGENE would be primarily responsible for GLP toxicology studies.

(i) CELGENE Background IP and Initial Transfer Option. As of the Original Effective Date, CELGENE Background IP does not contain any Patents, Know-How, Antibodies, CELGENE Binders, CELGENE Formats, CELGENE Linkers or CELGENE Payloads. During the Research Term, CELGENE may elect to contribute Patents, Know-How, Antibodies, CELGENE Binders, CELGENE Formats, CELGENE Linkers and CELGENE Payloads to the Collaboration as follows:

(1) CELGENE shall notify SUTRO of its desire to contribute such Patents, Know-How, Antibodies, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload by issuing a written notice to SUTRO, which shall identify such Patents, Know-How, Antibodies, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload.

(2) Within ten (10) Business Days after receipt of such notice by SUTRO, the Parties shall discuss the implications of inclusion of such Patents, Know-How, Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload. Upon the Parties' mutual agreement on the inclusion of such Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload, CELGENE shall have the option to make such contribution on the following terms and conditions: (x) if the Parties are in mutual agreement, the Parties shall execute, as and to the extent applicable, an initial transfer agreement substantially in the form of Exhibit E and, for each contribution thereafter, a subsequent transfer agreement substantially in the form of Exhibit F (each, a "CELGENE Background IP Transfer Agreement"), with regard to each relevant contribution, (y) within five (5) Business Days

following the execution by both Parties of the initial transfer agreement substantially in the form of Exhibit E, CELGENE shall pay to SUTRO a one-time payment of Fifteen Million Dollars ($15,000,000), with [*] as consideration for SUTRO's agreement to perform under such agreement; and (z) each CELGENE Background IP Transfer Agreement shall list the Patents or describe the Know-How or list the Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload (and the Patents and Know-How Controlled by CELGENE and/or its Affiliates Covering such Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload) to be contributed to the Collaboration. If an Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload is listed, then the identity and/or structure of such Antibody, Binder, Format, Linker or Payload shall be listed as well as the BAC/ADC Program(s) to which such Antibody, Binder, Format, Linker or Payload is primarily being contributed; it being understood and agreed that, subject to the immediately preceding sentence, no information or data relating to such Antibody, Binder, Format, Linker or Payload other than its identity and/or structure as set forth on the CELGENE Background IP Transfer Agreement is required to be disclosed or provided by CELGENE under this Agreement. Upon execution of the applicable CELGENE Background IP Transfer Agreement, (A) such Patents shall be deemed to be "CELGENE Background Patents" and such Know-How shall be deemed "CELGENE Background Know-How", and (B) such CELGENE Background Patents, CELGENE Background Know-How, Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload shall be subject to the license set forth in Section 9.1.1(b)(ii). The Parties acknowledge and agree that, as of the Amendment Effective Date, the Parties have executed that certain Subsequent CELGENE Background IP Transfer Agreement, dated as of March 4, 2016, with respect to the use of certain intellectual property licensed to Celgene by [*] which agreement shall continue until expiration of the Option Term with respect to the Identified BAC/ADC Programs (unless any such Program is abandoned by Celgene during the Option Term), subject to certain SUTRO opt-in rights as set forth therein. SUTRO hereby confirms and agrees that it shall not, following expiration of the Research Term, utilize any intellectual property under that certain Initial CELGENE Background IP Transfer Agreement, dated as of February 28, 2015 (as amended March 4, 2016) with respect to the use of certain intellectual property licensed to Celgene by [*] or that certain Subsequent CELGENE Background IP Transfer Agreement, dated as of March 4, 2016, with respect to the use of certain intellectual property licensed to Celgene by [*].

(d) For the avoidance of doubt, (x) any Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload provided by CELGENE to SUTRO for use in the Collaboration may only be used by SUTRO to conduct the Collaboration in accordance with the Research Plan (and/or the Pre-Development Plan, as applicable) or with respect to any and all BAC/ADC Program(s), unless otherwise expressly limited to one or more particular BAC/ADC Program(s) in the applicable CELGENE Background IP Transfer Agreement, and (y) any Antibody, Binder, Format, Linker or Payload Controlled by CELGENE or any of its Affiliates as of the Original Effective Date or thereafter during the Term shall not be subject to the licenses set forth in Section 9.1.1(b)(ii), other than an Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload that is (I) provided to the Collaboration in accordance with Section 2.2.3(c)(i) or (II) based upon or derived from an Antibody, Binder, Format, Linker or Payload described in subclause (I) and that is identified, discovered, generated or developed during the conduct of the Collaboration in accordance with this Agreement.

(e) Public Domain. In the event a Party wishes to contribute a PD Binder, PD Format, PD Linker or PD Payload, the contributing Party shall follow the procedures outlined in Section 2.2.3(a)(i) or 2.2.3(c)(i), as applicable; provided that the non-contributing Party agrees that such Binder, Format, Linker or Payload is in the public domain prior to such contribution (and execution by both Parties of the SUTRO Background IP Transfer Agreement or CELGENE Background IP Transfer Agreement, as applicable, shall signify such agreement). Further, it is understood and agreed that (i) subject to Section 8.1, this Agreement does not prevent either Party in any way from making or using anything that is in the public domain, including any PD Binder, PD Format, PD Linker or PD Payload, at any time before or after the Original Effective Date, and (ii) in the event any Invention arises from the making or using in accordance with the Research Plan of any PD Binder, PD Format, PD Linker or PD Payload that is in the public domain and that is contributed by a Party pursuant to 2.2.3(a)(i) or 2.2.3(c)(i), as applicable, Section 9.4 shall apply to such Invention. For the avoidance of doubt, any PD Binder, PD Format, PD Linker or PD Payload contributed by CELGENE under Section 2.2.3(c)(i) shall not be deemed a CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload for purposes of this Agreement (including Section 9.4.1), and any PD Binder, PD Format, PD Linker or PD Payload contributed by SUTRO under Section 2.2.3(a)(i) shall not be deemed a SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload for purposes of this Agreement (including Section 9.4.2)).

(f) Third Party Sourced IP.

(i) Mechanism. In the event a Binder, Format, Linker or Payload contributed by a Party isin-licensed from a Third Party, then such Third Party shall be indicated on the applicable SUTRO Background IP Transfer Agreement or CELGENE Background IP Transfer Agreement, as applicable. Further, in the event that:

(1) CELGENE would be a sublicensee of the rights to anin-licensed SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload in the event a BAC or ADC incorporating the foregoing (as applicable) becomes a Development Candidate and CELGENE would be developing and/or commercializing such Development Candidate in the CELGENE Territory; or

(2) SUTRO would be a sublicensee of the rights to anin-licensed CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload in the event a BAC or ADC incorporating the foregoing (as applicable) becomes a Development Candidate and SUTRO would be developing and/or commercializing such Development Candidate in the SUTRO Territory;

then the Parties shall attach as a schedule to this Agreement the terms and conditions applicable to thenon-contributing Party in order of contribution (e.g., Schedule 2.2.3 – A, Schedule 2.2.3 – B, etc.).

(ii) Compliance. The grant of any and all rights (including the licenses set forth in Section 9.1) to thenon-contributing Party by the contributing Party under this Agreement to a Binder, Format, Linker or Payload that is in-licensed by the contributing Party from a Third Party is subject to, and limited by, the terms of the agreement between the

contributing Party and such Third Party, and the non-contributing Party agrees to comply with all such terms, including those set forth in any Schedule described in this Section 2.2.3(f). Upon the request of the non-contributing Party, the contributing Party shall provide a fully-executed copy of the agreement(s) with such Third Party, which copy may be reasonably redacted as necessary to protect confidential or commercially sensitive information, provided that such copy shall provide the non-contributing Party with sufficient information to enable such Party to ascertain that it is in compliance with such agreement.

2.2.4 Technical Transfer and Disclosure of Know-How.

(a) During the Research Term following commencement of exploratory toxicology studies for the first Collaboration BAC or Collaboration ADC, upon CELGENE's request, SUTRO shall use Commercially Reasonable Efforts to allow certain personnel of CELGENE (to be designated by CELGENE) to participate in one or more sessions at SUTRO's facilities, subject to the confidentiality obligations under Section 10, to allow such personnel to observe and obtain a reasonable understanding of the SUTRO Expression Know-How and SUTRO expression system (and, for clarity, no tangible embodiments of SUTRO Expression Know-How shall be transferred to CELGENE under this Section 2.2.4 and any access to the SUTRO Expression Know-How in connection with this Section 2.2.4 shall not constitute a license to such SUTRO Expression Know-How). CELGENE shall be responsible for its own expenses in participating in such sessions.

(b) Within (i) sixty (60) days of the Nomination of a Collaboration BAC or Collaboration ADC as a Development Candidate or (ii) thirty (30) days of any reasonable request of CELGENE, SUTRO shall use Commercially Reasonable Efforts to transfer to CELGENE, at CELGENE's expense, access to, and copies of, all documents and materials containing the SUTRO Know-How (excluding any SUTRO Expression Know-How) as shall be reasonably requested by CELGENE as necessary or reasonably useful to develop, manufacture and commercialize such Development Candidate.

2.2.5 Expiration or Termination of Research Term. Subject to Section 2.2.6, upon expiration of the Research Term, (a) the Parties shall no longer have any obligation to conduct any activities set forth in the Research Plan, (b) on a Target Combination-by-Target Combination basis, if no Collaboration BAC or Collaboration ADC Directed to a Target Combination has been Nominated as Development Candidates, SUTRO shall no longer have any obligation to conduct any activities set forth in the Pre-Development Plan with respect to such Target Combination (and any Collaboration BACs or Collaboration ADCs Directed to such Target Combination), (c) each Party shall destroy the Materials (as defined in Section 2.7.1) received from the other Party, in accordance with Section 2.7.3, and (d) on a Target Combination-by-Target Combination basis if at least one (1) Collaboration BAC or Collaboration ADC Directed to such Target Combination has been Nominated as a Development Candidate, then the Parties may continue development and commercialization activities with respect to such Development Candidate as set forth in Article 3. The Parties shall, within twenty (20) Business Days after such expiration or termination of the Research Term, establish a list of Development Candidates for which the Parties may continue development and commercialization activities, shall indicate for each Development Candidate whether at least one (1) binding domain of such Development Candidate is Directed to [*], or whether none of the binding domains of such Development Candidate is Directed to [*], and shall

indicate which Development Candidate is either the first or second Development Candidate in which none of the binding domains is Directed to [*], provided that (i) if no Development Candidate in which none of the binding domains is Directed to [*] has achieved IND Clearance in the U.S. as of such time, such list shall be later updated by the Parties to indicate which Development Candidate is either the first or second Development Candidate in which none of the binding domains is Directed to [*] after IND Clearance in the U.S. is achieved by such Development Candidate and (ii) each Development Candidate included in any Identified BAC/ADC Program shall automatically be deemed included on such list. For clarity, CELGENE shall not have any right to any BAC or ADC first identified, discovered, generated or developed in any Internal Program of SUTRO after the expiration of the Research Term.

2.2.6 Nomination of Development Candidates.

(a) During the Research Term. During the Research Term (and any additional period thereafter permitted under Section 2.2.6(b)), on a BAC/ADC Program-by-BAC/ADC Program basis, in the event CELGENE (through its Candidate Development Committee or its respective equivalent), in its sole discretion, Nominates a Collaboration BAC or Collaboration ADC as a Development Candidate (or a BAC/ADC Program, in which case all Collaboration BACs and/or Collaboration ADCs, including all applicable Development Candidates relating thereto, included in such BAC/ADC Program at such time are deemed Nominated by CELGENE for purposes of this Section 2.2.6(a)), CELGENE shall provide written notice thereof to SUTRO. As of the date of such written notice, (i) the applicable BAC/ADC Program shall no longer be one of the Prioritized BAC/ADC Programs (provided, for clarity, such BAC/ADC Program shall remain an Identified BAC/ADC Program) and the Parties shall cease conduct of activities set forth on the Research Plan with respect to such Prioritized BAC/ADC Program (except as otherwise agreed upon by the Parties (but subject to Section 6.1.1)), (ii) Exhibit C shall be automatically amended to include the applicable Development Candidate(s) and the Parties shall update Exhibit C to indicate the applicable Target Combination and whether each Development Candidate is a [*] DC or may be a Non-[*] DC, (iii) the licenses set forth in Section 9.1.2 shall become effective with respect to such Development Candidate(s), (iv) upon CELGENE's request, SUTRO promptly will provide CELGENE (at SUTRO's cost) with a reasonable quantity of Cell-Free Extract for such Development Candidate(s), all pursuant to a supply agreement to be promptly entered into by the Parties after Nomination of the Collaboration BAC(s) or Collaboration ADC(s) on terms and conditions [*] that are customary for supply arrangements of this type, and (v) the Parties may engage in the development and commercialization activities set forth in Article 3 with respect to such Development Candidate(s). "Cell-Free Extract" means all extract derived from e. coli that contains the translational and transcriptional machinery sufficient to produce a protein or mAb of interest encoded as DNA, and including all reagents necessary for such production. The Parties may, through the JSC, update Exhibit C from time to time during the Research Term to include additional Collaboration BACs and/or Collaboration ADCs as Nominated by Celgene as provided in this Section 2.2.6(a); provided that, for clarity, no such Nomination shall be deemed to modify Exhibit J, or to expand or otherwise modify the Pre-Development Plan. Notwithstanding the foregoing, effective as of the expiration of the Research Term, the Parties understand and agree that the Collaboration BACs and Collaboration ADCs included in any Identified BAC/ADC Programs and identified on Exhibit J shall be deemed to have been Nominated as Development Candidates pursuant to Section 2.2.6(b)(i), and added to Exhibit C.

(b) End of Research Term.

(i) Beginning ninety (90) days prior to the expiration of the Research Term, the Parties will meet to review all Collaboration BACs and Collaboration ADCs ("Collaboration Non-NNAA ADCs") that have not been Nominated as Development Candidates prior to such meeting. CELGENE may request reasonable information and clarifications within twenty (20) Business Days after such meeting, and SUTRO will respond to such requests in good faith within fifteen (15) Business Days after such request. CELGENE may Nominate any such Collaboration BAC or Collaboration Non-NNAA ADC as a Development Candidate in accordance with Section 2.2.6(a) after receipt of SUTRO's response, but in no event after the end of the Research Term unless SUTRO has failed to provide the foregoing information and clarifications requested by CELGENE with respect to a Collaboration BAC or Collaboration Non-NNAA ADC, in which case the time during which CELGENE may Nominate such Collaboration BAC or Collaboration Non-NNAA ADC shall be extended to fifteen (15) Business Days after CELGENE's receipt of such information and clarifications.

(ii) Any and all Collaboration BACs and Collaboration ADCs that are not Nominated by CELGENE pursuant to Section 2.2.6(b)(i) and that are not otherwise Development Candidates (except for Collaboration BACs or Collaboration ADCs previously Nominated by CELGENE in accordance with Section 2.2.6(a)) shall be referred to, collectively, as "Abandoned BACs" and/or "Abandoned ADCs", respectively and, unless the associated Target Combinations, are also associated with any Collaboration BAC or Collaboration ADC Nominated by CELGENE, the associated Target Combinations shall be referred to as "Abandoned Target/Target Combinations". Upon the expiration or termination of the Research Term, (a) the licenses set forth in Section 9.1 shall terminate with respect to any Abandoned BACs and/or Abandoned ADCs, (b) the exclusivity provisions set forth in Section 8.1.1(a) shall terminate with respect to any Abandoned Target/Target Combinations, and (c) CELGENE may not Nominate as a Development Candidate, and neither Party shall be licensed by the other Party under this Agreement to develop, manufacture or commercialize any Abandoned BACs or Abandoned ADCs (or any derivatives or modifications thereof); provided, that each Party shall be free to exercise its rights as provided in Section 9.1.8.

(iii) In the event (A) any Collaboration BAC and/or Collaboration ADC (or a BAC/ADC Program) Nominated by CELGENE pursuant to 2.2.6(b)(i) is a Non-[*] DC for which in vivo efficacy and exploratory toxicology studies have not been completed at the time of such Nomination and is not subsequently deemed to be a [*] DC (in accordance with the second sentence of Section 1.15) at the time of the First DC IND Clearance Date or Second IND Clearance Date, as applicable, and (B) CELGENE does not file an IND with respect to such Non-[*] DC on or before [*], then: (1) such Non-[*] DC shall be referred to as an "Abandoned Non-[*] DC" and, unless the associated Target Combination is also associated with any other Collaboration BAC or Collaboration ADC Nominated by CELGENE, the exclusivity provisions set forth in Section 8.1.1(a) shall terminate with respect to such Target Combination associated with such Abandoned Non-[*] DC, (2) the licenses set forth in Section 9.1 shall terminate with respect to such Abandoned Non-[*] DC, (3) neither Party shall be licensed by the other Party under this Agreement to develop, manufacture or commercialize such Abandoned Non-[*] DC (or any derivatives or modifications thereof); provided, that each Party shall be free to exercise its rights as provided in Section 9.1.8; and provided, further, that if CELGENE does not

file an IND with respect to a Non-[*] DC on or before [*] due to a delay in SUTRO's performance of its obligations under this Agreement, then the timeline for CELGENE to file such IND shall be extended by a period of time reasonably commensurate to the duration of SUTRO's delay, and (4) CELGENE shall assign to SUTRO, at the time such Non-[*] DC(s) become Abandoned Non-[*] DC(s), all rights to any regulatory filings, reports, and documentation relating to such Abandoned Non-[*] DC(s). Furthermore, in the event that all Non-[*] DCs in a BAC/ADC Program containing one or more Non-[*] DC(s) are abandoned (as defined in the next sentence) following Nomination (whether such Nomination occurs pursuant to Section 2.2.6(a) or 2.2.6(b)(i)) but prior to [*], then all such Non-[*] DC(s) and the related BAC/ADC Program shall also be deemed "Abandoned Non-[*] DC(s)", and the foregoing sub-clauses (1) through (4) of this Section 2.2.6(b)(iii) (except for the second proviso of (3)) shall apply to such Abandoned Non-[*] DCs. For purposes of the foregoing two sentences, "abandoned" shall mean that CELGENE has decided to cease any development of all Non-[*] DCs in a BAC/ADC Program prior to the filing of an IND with respect to any Non-[*] DC in such BAC-ADC Program, as set forth in a written notice to SUTRO.

2.3. No Representation. Neither Party provides any representation, warranty or guarantee that the Collaboration will be successful or that any other particular results will be achieved with respect to the Collaboration or any Target Combination, BAC, ADC, Development Candidate, Licensed Product or Diagnostic Product hereunder. Further, failure by either Party to achieve the research goals set forth in the Research Plan (and/or, with respect to SUTRO, the Pre-Development Plan, as applicable) shall not constitute a breach of this Agreement if such Party is otherwise in compliance with this Agreement.

2.4. Reports; Results. During the Research Term and the Pre-Development Term, each Party shall provide written progress reports on the status of its activities under the Research Plan (and/or, with respect to SUTRO, the Pre-Development Plan, as applicable), on a BAC/ADC Program-by-BAC/ADC Program basis, including detailed summaries of data associated with such activities, at least five (5) Business Days in advance of each JSC meeting with respect to matters that are under the purview of the JSC.

2.5. Costs. Subject to Section 2.2.2 and Article 6, each Party shall be responsible for any costs and expenses it incurs with respect to the conduct of any activities allocated to it under the Research Plan (and/or, with respect to SUTRO, the Pre-Development Plan, as applicable).

2.6. Subcontracting.

(a) Subject to the terms of this Agreement, each Party shall have the right to engage Affiliates or Third Party subcontractors to perform certain of its obligations under this Agreement. Any such Affiliate or subcontractor shall meet the qualifications typically required by such Party for the performance of work similar in scope and complexity to the subcontracted activity, comply with the confidentiality and non-use obligations set forth in Article 10, and perform such work consistent with the terms of this Agreement; provided however that any Party engaging an Affiliate or subcontractor hereunder shall remain fully responsible and obligated for such activities. In addition, any Party engaging a subcontractor shall in all cases retain or obtain Control of any and all Know-How or Patents related to the Collaboration, which may be created by, or used with the relevant Party's permission by, such subcontractor in connection with such subcontracted activity (other than Know-How and Patents that are not specific to the Collaboration and that are related to the subcontractor's broader technology platform or business).

(b) Each Party shall have the right to audit and inspect the other Party's activities under the Research Plan (and, with respect to SUTRO, the Pre-Development Plan, as applicable), which shall include the right to access the other Party's records (including records from its Affiliates and major subcontractors regarding work conducted under the Research Plan and/or, with respect to SUTRO, the Pre-Development Plan, as applicable) and facilities during regular business hours as reasonably requested by the requesting Party to confirm the other Party's compliance with the requirements of and performance under this Agreement. Such audit and inspection shall not be performed more than once in any Calendar Year and shall be reasonably coordinated in advance between the Parties. Each Party shall use Commercially Reasonable Efforts to obtain the right for the other Party to audit the facilities of the Party's major subcontractors. If a Party cannot secure such audit rights for the other Party, then to the extent that Party has the right itself to audit its subcontractors' facilities, it shall conduct such audit as reasonably requested by the auditing Party and on the terms agreed with such subcontractor and share the results with the auditing Party.

2.7. Material Transfer.

2.7.1 Transfer. Either Party (the "Transferring Party") may, pursuant to the Research Plan (and/or, with respect to SUTRO, the Pre-Development Plan, as applicable), or as otherwise desired by the Transferring Party, or for purposes of verifying any data or results arising from the Collaboration, provide to the other Party (the "Material Receiving Party") certain biological or chemical materials (the "Materials") for use by the Material Receiving Party in furtherance of its rights and the conduct of its obligations under this Agreement (the "Purpose"). All transfers of such Materials by the Transferring Party to the Material Receiving Party shall be documented in a writing (the "Transfer Record") that sets forth the type and name of the Material transferred, the amount of the Material transferred, the date of the transfer of such Material and the Purpose. The Parties agree that the exchanged Materials shall be used in compliance with applicable Law and shall not be reverse engineered or chemically analyzed, except if specifically provided for in the Research Plan (and/or, with respect to SUTRO, the Pre-Development Plan, as applicable). If applicable, a CELGENE Background IP Transfer Agreement or SUTRO Background IP Transfer Agreement shall be executed separately.

2.7.2 License; Ownership and Destruction.

(a) License. At the time the Transferring Party provides Materials to the Material Receiving Party as provided herein and to the extent not separately licensed under this Agreement, the Transferring Party hereby grants to the other Party a non-exclusive license under the Patents and Know-How Controlled by it to use such Materials solely for the Purpose, and such license, upon termination of this Agreement (subject to Section 13.6.3), completion of the Purpose, or discontinuation of the use of such Materials (whichever occurs first), shall automatically terminate.

(b) Ownership and Destruction. Except as otherwise provided under this Agreement, all such Materials delivered by the Transferring Party to the Material Receiving

Party (and any derivatives or modifications thereof), shall remain the sole property of the Transferring Party and shall only be used by the Material Receiving Party in furtherance of the Purpose. The Material Receiving Party shall return to the Transferring Party or, at the Transferring Party's request, destroy all the Materials (and any derivatives or modifications thereof) promptly upon (and in any case within ten (10) days of) the earliest of (i) termination of this Agreement (subject to Section 13.6.3(c)), (ii) discontinuation of the use of such Materials or (iii) expiration or termination of the Research Term or (limited to Materials delivered in connection with the Pre-Development Plan) the Pre-Development Term (such earliest date, the "Discontinuation Date"), provided that a Party shall not be required to comply with the foregoing for so long as such Party has a license from the other Party to such Materials. The Material Receiving Party shall not cause the Materials to be used by or delivered to or for the benefit of any Third Party without the prior written consent of the Transferring Party unless such Third Party is a Third Party subcontractor as set forth in Section 2.6 or a Sublicensee pursuant to Section 9.1.4.

2.7.3 Destruction of Materials; Restriction on Use by both Parties. Without limiting the foregoing, upon the Discontinuation Date, SUTRO shall promptly, and in any case within ten (10) days of such Discontinuation Date, destroy all quantities of all materials, including all quantities of proprietary CELGENE Binder, CELGENE Format, CELGENE Linker and/or CELGENE Payload and any derivatives or modifications thereof, transferred by CELGENE to SUTRO pursuant to this Agreement; provided that SUTRO shall not be required to comply with the foregoing for so long as SUTRO has a license from CELGENE to such materials. Likewise, upon the Discontinuation Date (subject to Section 13.6.3(c)), CELGENE shall promptly, and in any case within ten (10) days of such Discontinuation Date, destroy all quantities of all materials, including all quantities of proprietary SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload, and any derivatives or modifications thereof, transferred by SUTRO to CELGENE pursuant to this Agreement; provided that CELGENE shall not be required to comply with the foregoing for so long as CELGENE has a license from SUTRO to such materials.

2.7.4 No Warranties; Liability. THE MATERIALS SUPPLIED BY THE TRANSFERRING PARTY UNDER THIS SECTION 2.7 AND ANY QUANTITIES OF NON-GLP TOXICOLOGY MATERIALS SUPPLIED UNDER ARTICLE 6 ARE SUPPLIED "AS IS" AND, EXCEPT AS OTHERWISE SET FORTH IN THIS AGREEMENT, THE TRANSFERRING PARTY MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE MATERIALS OR USE THEREOF DOES NOT INFRINGE ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER PROPRIETARY RIGHTS OF A THIRD PARTY. The Material Receiving Party assumes all liability for damages that may arise from its use, storage or disposal of the Materials. Except as otherwise set forth in this Agreement, the Transferring Party shall not be liable to the Material Receiving Party for any loss, claim or demand made by the Material Receiving Party, or made against the Material Receiving Party by any Third Party, due to or arising from the use of the Materials, except to the extent such loss, claim or demand is caused by the willful misconduct of the Transferring Party.

2.7.5 No Effect on Manufacture and Supply Provisions. For the avoidance of doubt, this Section 2.7 does not apply to any materials manufactured or supplied by SUTRO, its Affiliates or any CELGENE CMO pursuant to Article 6 (except for quantities of non-GLP toxicology materials supplied thereunder).

2.8. Records; Results. During the Term, each Party shall maintain complete, current and accurate records of all research and development activities conducted by it hereunder (including under the Research Plan, the Pre-Development Plan, and any post-Regulatory Approval clinical trials), and all data (including clinical and non-clinical data) and other information resulting from such activities. Such records shall fully and properly reflect all work done and results achieved in the performance of the research and development activities in good scientific manner appropriate for regulatory and patent purposes. Each Party shall document all non-clinical studies and Clinical Trials in formal written study records according to Laws, including applicable national and international guidelines such as ICH, GCP, GLP and cGMP. Each Party shall have the right to review and copy such records maintained by the other Party at reasonable times, as reasonably requested by a Party.

ARTICLE III
DEVELOPMENT; COMMERCIALIZATION

3.1. Development. On a Development Candidate-by-Development Candidate basis, upon Nomination of such Development Candidate, the Parties may engage in the following development activities, as applicable.

3.1.1 CELGENE Territory. As between the Parties, subject to the terms of the Agreement, CELGENE shall have the sole right and responsibility for the development and related manufacturing activities (subject to Sections 4.5 and 6.1.1) in connection with such Development Candidate and its corresponding Licensed Products and Diagnostic Products in the Field in the CELGENE Territory and, with respect to Non-[*] DCs, in the SUTRO Territory through U.S. IND Clearance. CELGENE will, itself or through its Affiliates or Sublicensees, exercise Commercially Reasonable Efforts to clinically develop each such Development Candidate, Licensed Products and Diagnostic Products in the Field in the CELGENE Territory; it being understood and agreed that, as of any time during the Term, the exercise of Commercially Reasonable Efforts by CELGENE (itself or through its Affiliates or Sublicensees) with respect to any Development Candidate and its corresponding Licensed Products and Diagnostic Products included in any BAC/ADC Program shall be deemed to satisfy the requirement to exercise Commercially Reasonable Efforts by CELGENE (itself or through its Affiliates or Sublicensees) with respect to each other Development Candidate and its corresponding Licensed Products and Diagnostic Products included in each such Program. In addition to the reporting requirements set forth in Section 3.1.3, at least once per Calendar Year, CELGENE shall provide to SUTRO a reasonably detailed report regarding CELGENE's development activities, which shall include with respect to the prior twelve (12) month-period an update of any Clinical Trials conducted by CELGENE, its Affiliates or Sublicensees with respect to all Development Candidates and a description of INDs and MAAs filed and Regulatory Approvals obtained by CELGENE, its Affiliates or Sublicensees for all Development Candidates and Licensed Products. Notwithstanding the foregoing, CELGENE's reporting obligations under this Section 3.1.1 shall terminate upon a Business Combination of SUTRO.

3.1.2 SUTRO Territory. As between the Parties, subject to the terms of the Agreement, upon U.S. IND Clearance, SUTRO shall have the sole right and responsibility for the development and related manufacturing activities in connection with any Non-[*] DC and its corresponding Licensed Products and Diagnostic Products in the Field in the SUTRO Territory. SUTRO may, itself or through its Affiliates or licensees, clinically develop such Non-[*] DCs, Licensed Products and Diagnostic Products in the Field in the SUTRO Territory. SUTRO will be subject to the reporting requirements set forth in Section 3.1.3.

3.1.3 Reports. On a Non-[*] DC-by-Non-[*] DC basis, each Party (acting through the JSC) shall provide the other Party with written reports summarizing in reasonable detail (to the extent applicable) the material activities and anticipated plans of such Party, its Affiliates, Sublicensees (in the case of CELGENE) and licensees (in the case of SUTRO) with respect to the development of Non-[*] DCs and their corresponding Licensed Products and Diagnostic Products in the Field in the CELGENE Territory or in the SUTRO Territory, as applicable, reasonably in advance of each quarterly meeting of the JSC. Such reports shall include with respect to such Calendar Quarter, an update of any Clinical Trials conducted by such Party, its Affiliates, Sublicensees or licensees, as applicable, with respect to all Non-[*] DCs and a description of INDs and MAAs filed and Regulatory Approvals obtained by such Party, its Affiliates, Sublicensees or licensees, as applicable, for all Non-[*] DCs and their corresponding Licensed Products. If the receiving Party has any questions with respect to the information set forth in any report provided to it under this Section 3.1.3, the receiving Party shall direct such questions to the other Party's Alliance Manager, who shall make reasonably available to the receiving Party appropriate technical or scientific personnel who are knowledgeable about the development activities conducted by such other Party to respond to such questions in a timely manner, via teleconference, in person or such other mode of communications as the Parties may mutually agree. Notwithstanding the foregoing, CELGENE's reporting obligations under this Section 3.1.3 shall terminate upon a Business Combination of SUTRO, and SUTRO's reporting obligations under this Section 3.1.3 shall terminate upon a Business Combination of CELGENE.

3.1.4 Records; Costs. The recording requirements set forth in Section 2.8 shall apply to the development activities described in this Section 3.1. Subject to Section 4.1.1(d) and Article 6, each Party shall be responsible for any costs and expenses it incurs with respect to any activities conducted by such Party for the development of Development Candidates, Licensed Products and Diagnostic Products.

3.2. Commercialization. On a Development Candidate-by-Development Candidate basis, upon Regulatory Approval of such Development Candidate in any country in the CELGENE Territory or SUTRO Territory, as applicable, CELGENE and SUTRO, respectively, may engage in the following commercialization activities, as applicable.

3.2.1 CELGENE Territory. As between the Parties, subject to the terms of the Agreement, CELGENE shall have the sole right and responsibility for the commercialization and related manufacturing activities (subject to Article 6) in connection with such Development Candidate and its corresponding Licensed Products and Diagnostic Products in the Field in the CELGENE Territory. CELGENE will, itself or through its Affiliates or Sublicensees, exercise Commercially Reasonable Efforts to commercialize such Development Candidate, Licensed Products and Diagnostic Products in the Field in the CELGENE Territory; it being understood and

agreed that, as of any time during the Term, the exercise of Commercially Reasonable Efforts by CELGENE (itself or through its Affiliates or Sublicensees) with respect to any Development Candidate and its corresponding Licensed Products and Diagnostic Products included in any BAC/ADC Program shall be deemed to satisfy the requirement to exercise Commercially Reasonable Efforts by CELGENE (itself or through its Affiliates or Sublicensees) with respect to each other Development Candidate and its corresponding Licensed Products and Diagnostic Products included in each such Program. In addition to the reporting requirements set forth in Section 3.2.3, at least once per Calendar Year, CELGENE shall provide to SUTRO a reasonably detailed report regarding CELGENE's commercialization activities for such prior twelve (12) month-period, including notice of the First Commercial Sale of any Licensed Product by CELGENE, its Affiliates or Sublicensees on a country-by-country basis in the CELGENE Territory.

3.2.2 SUTRO Territory. As between the Parties, subject to the terms of the Agreement, SUTRO shall have the sole right and responsibility for the commercialization and related manufacturing activities in connection with such Development Candidate if it is a Non-[*] DC and its corresponding Licensed Products and Diagnostic Products in the Field in the SUTRO Territory. SUTRO may, itself or through its Affiliates or licensees, commercialize such Non-[*] DC, Licensed Products and Diagnostic Products in the Field in the SUTRO Territory. SUTRO will be subject to the reporting requirements set forth in Section 3.2.3.

3.2.3 Reports. With respect to any Licensed Product comprising or containing a Non-[*] DC, on a LicensedProduct-by-Licensed Product basis, each Party (acting through the JSC) shall provide the other Party with written reports on a semi-annual basis summarizing in reasonable detail (to the extent applicable) the material activities and anticipated plans of such Party, its Affiliates, Sublicensees (in the case of CELGENE) and licensees (in the case of SUTRO) with respect to commercialization of such Licensed Product and related Diagnostic Products in the CELGENE Territory or the SUTRO Territory, as applicable, reasonably in advance of each the second and fourth Calendar Quarter meeting of the JSC each year. Such reports shall include with respect to such six (6) month-period, an update of any post-Regulatory Approval clinical trials conducted by such Party, its Affiliates, Sublicensees or licensees, as applicable, with respect to all Licensed Products and notice of the First Commercial Sale of each Licensed Product on a country-by-country basis in the CELGENE Territory or SUTRO Territory, as applicable. If the receiving Party has any questions with respect to the information set forth in any report provided to it under this Section 3.2.3, the receiving Party shall direct such questions to the other Party's Alliance Manager, who shall make reasonably available to the receiving Party appropriate technical or scientific personnel who are knowledgeable about the development activities conducted by such other Party to respond to such questions in a timely manner, via teleconference, in person or such other mode of communications as the Parties may mutually agree. Notwithstanding the foregoing, CELGENE's reporting obligations under this Section 3.2.3 shall terminate upon a Business Combination of SUTRO, and SUTRO's reporting obligations under this Section 3.2.3 shall terminate upon a Business Combination of CELGENE.

3.2.4 Records; Costs. The recording requirements set forth in Section 2.8 shall apply to the commercialization activities described in this Section 3.2, as applicable. Subject to Section 4.1.1(d) and Article 6, each Party shall be responsible for any costs and expenses it incurs with respect to any activities conducted by such Party for the commercialization of Licensed Products and Diagnostic Products.

3.2.5 Cross-Territorial Restrictions.

(a) CELGENE Territory. Unless otherwise expressly authorized by CELGENE in writing, SUTRO shall not (i) actively seek prospective purchasers for any Licensed Product for use in the CELGENE Territory, (ii) engage in any advertising or promotional activities relating to any Licensed Product directed primarily to prospective purchasers for use in the CELGENE Territory, or (iii) solicit orders from any prospective purchaser for sale and use in the CELGENE Territory. If SUTRO receives any unauthorized order from a prospective purchaser for the CELGENE Territory, SUTRO shall promptly refer that order to CELGENE and shall not accept any such orders. SUTRO shall not sell any Licensed Product to a purchaser if SUTRO knows that such purchaser intends to resell or otherwise distribute or provide such Licensed Product to a prospective purchaser for use in the CELGENE Territory.

(b) SUTRO Territory. Unless otherwise expressly authorized by SUTRO in writing, CELGENE shall not (i) actively seek prospective purchasers for any Licensed Product for use in the SUTRO Territory, (ii) engage in any advertising or promotional activities relating to any Licensed Product directed primarily to prospective purchasers for use in the SUTRO Territory, or (iii) solicit orders from any prospective purchaser for sale and use in the SUTRO Territory. If CELGENE receives any unauthorized order from a prospective purchaser for the SUTRO Territory, CELGENE shall promptly refer that order to SUTRO and shall not accept any such orders. CELGENE shall not sell any Licensed Product to a purchaser if CELGENE knows that such purchaser intends to resell or otherwise distribute or provide such Licensed Product to a prospective purchaser for use in the SUTRO Territory.

ARTICLE IV
REGULATORY MATTERS

4.1. Regulatory Filings; Data and Approvals. For purposes of this Section 4.1, references to each Party shall include (x) Affiliates of such Party designated by such Party, (y) its Sublicensees (in the case of CELGENE) and (z) its licensees (in the case of SUTRO).

4.1.1 Regulatory Filings.

(a) Prior to Nomination as Development Candidate. On a BAC/ADC Program-by-BAC/ADC Program basis, prior to Nomination of a BAC or ADC in such BAC/ADC Program as a Development Candidate, SUTRO shall have the sole right to prepare, file and maintain all Regulatory Materials necessary for the research, development or manufacture of such BAC or ADC worldwide.

(b) After Nomination as Development Candidate. On a BAC/ADC Program-by-BAC/ADC Program basis, after Nomination of a BAC or ADC in such BAC/ADC Program as a Development Candidate, CELGENE shall have the sole right to prepare, file and maintain all Regulatory Materials necessary for the research, development or manufacture of such BAC or ADC worldwide, including any and all INDs, provided, however, that SUTRO shall have the sole right, and is obligated to, prepare, file and maintain any Drug Master File covering the

SUTRO Expression Technology ("SUTRO Expression DMF"). To the extent permitted by applicable Laws and following Nomination of a Development Candidate for such BAC/ADC Program, SUTRO shall assign and transfer to CELGENE all Regulatory Materials worldwide that relate to such BAC/ADC Program, including such Development Candidate (excluding for clarity any SUTRO Expression DMF).

(c) After IND Clearance.

(i) CELGENE Territory. Following IND Clearance for a Development Candidate anywhere in the CELGENE Territory, CELGENE shall have the sole right to prepare, file and maintain all Regulatory Materials (including pricing and reimbursement approvals) necessary for the development, manufacture or commercialization of such Development Candidate, its corresponding Licensed Products and Diagnostic Products, in the Field in the CELGENE Territory, provided, however, that SUTRO shall have the sole right to prepare, file and maintain any SUTRO Expression DMF. CELGENE shall own all such Regulatory Materials relating to such Development Candidate, Licensed Products and Diagnostic Products in the CELGENE Territory (excluding for clarity any SUTRO Expression DMF).

(ii) SUTRO Territory. Following IND Clearance for a Non-[*] DC in the SUTRO Territory, SUTRO shall have the sole right to prepare, file and maintain all Regulatory Materials (including pricing and reimbursement approvals) in the SUTRO Territory necessary for the development, manufacture or commercialization of such Non-[*] DC, its corresponding Licensed Products and Diagnostic Products, in the Field in the SUTRO Territory. SUTRO shall own all such Regulatory Materials in the SUTRO Territory. To the extent permitted by applicable Laws and following IND Clearance for such Non-[*] DC in the SUTRO Territory, CELGENE shall assign and transfer to SUTRO all Regulatory Materials for the SUTRO Territory that solely relate to such Non-[*] DC and its corresponding Licensed Products and Diagnostic Products.

(d) Access.

(i) Subject to Section 4.1.1(d)(ii), each Party shall have access to, and each Party hereby grants the other Party a right of reference to, all data contained or referenced in such Regulatory Materials, in each case as may be reasonably necessary to enable (A) CELGENE, its Affiliates and Sublicensees to develop, manufacture and commercialize any Development Candidate and its corresponding Licensed Products and Diagnostic Products in and for the Field in and for the CELGENE Territory (provided, however, that with respect to any SUTRO Expression DMF, CELGENE shall only have a right to reference such SUTRO Expression DMF, but no right to access the underlying data) and (B) SUTRO, its Affiliates and licensees to develop, manufacture and commercialize any Non-[*] DC and its corresponding Licensed Products and Diagnostic Products in and for the Field in the SUTRO Territory. Each Party shall provide appropriate notification of such right of the other Party to the Regulatory Authorities.

(ii) If a Party (the "Notifying Party") desires to use the data resulting from any work conducted by the other Party and related Regulatory Materials generated by the other Party to support Regulatory Approval in its Territory, then the Notifying Party shall

notify the other Party in writing. Within forty-five (45) days after its receipt of such notice, the Party that conducted such work shall submit to the Notifying Party a reasonably detailed report setting forth the costs incurred by such other Party in the course of conducting the work that generated such data, which costs shall not include such Party's internal costs to conduct such work. If the Notifying Party desires to use any such data to support Regulatory Approval in its Territory, then the Notifying Party shall notify the other Party in writing which data it wishes to use within ninety (90) days of such report and the other Party shall invoice the Notifying Party for [*] percent ([*]%) of the applicable costs, which invoice the Notifying Party shall pay within thirty (30) days after receipt thereof, provided that CELGENE shall have no obligation to provide such notice nor shall CELGENE be required to pay any such costs with respect to CELGENE's or its Affiliates or Sublicensees' use of, or exercise of its right of reference to, the SUTRO Expression DMF (or any data therein).

4.2. Regulatory Meetings.

4.2.1 CELGENE Territory. On a Non-[*] DC-by-Non-[*] DC basis, after IND Clearance for such Non-[*] DC in the SUTRO Territory, SUTRO may participate in material meetings with Regulatory Authorities pertaining to the development, manufacture and commercialization of such Non-[*] DC and its corresponding Licensed Products and Diagnostic Products, or Regulatory Approvals thereof, in the CELGENE Territory. CELGENE shall provide SUTRO with reasonable advance written notice of all such meetings and other contact and advance copies of all material related documents and other material relevant information relating to such meetings or such other contact. SUTRO and CELGENE shall discuss any material documents or other material correspondence that CELGENE is planning to submit in connection with Regulatory Approvals in the CELGENE Territory sufficiently in advance of submission so that SUTRO may review and comment on such documents and such other correspondence including in each case the proposed labeling for the corresponding Licensed Products and Diagnostic Products. SUTRO shall not have the right to approve the proposed labeling or any other regulatory filings or submissions for the corresponding Licensed Products and Diagnostic Products except with respect to (A) worldwide, for all BACs and ADCs prior to Nomination as a Development Candidate and (B) in the SUTRO Territory, limited to Non-[*] DCs following IND Clearance. CELGENE shall promptly provide to SUTRO copies of any material documents or other material correspondence pertaining to the corresponding Licensed Products and Diagnostic Products in the CELGENE Territory, on a Non-[*] DC-by-Non-[*] DC basis, and shall promptly provide to SUTRO all proposed labeling, in each case received from the Regulatory Authorities in the CELGENE Territory. Notwithstanding the foregoing, SUTRO's rights, and CELGENE's obligations, under this Section 4.2.1 shall terminate upon a Business Combination of SUTRO.

4.2.2 SUTRO Territory. CELGENE may participate in all material meetings and other material contact with Regulatory Authorities pertaining to the development, manufacture and commercialization of a Collaboration BAC, Collaboration ADC or Development Candidate and its corresponding Licensed Products and Diagnostic Products, or Regulatory Approvals thereof, (a) worldwide (prior to Nomination of such Collaboration BAC or Collaboration ADC as a Development Candidate) and (b) in the SUTRO Territory, on a Non-[*] DC-by-Non-[*] DC basis (after IND Clearance for such Development Candidate in the SUTRO Territory). SUTRO shall provide CELGENE with reasonable advance written notice of all such meetings and other contact and advance copies of all material related documents and other material relevant information

relating to such meetings or such other contact. SUTRO and CELGENE shall discuss any material documents or other material correspondence that SUTRO is planning to submit in connection with (i) Regulatory Approvals worldwide (prior to Nomination of such Collaboration BAC or Collaboration ADC as a Development Candidate) and (ii) Regulatory Approvals in the SUTRO Territory, on a Non-[*] DC-by-Non-[*] DC basis (after IND Clearance for such Development Candidate in the SUTRO Territory), including in each case the proposed labeling for the corresponding Licensed Products and Diagnostic Products. SUTRO shall provide CELGENE with drafts of such documents or correspondence sufficiently in advance of submission so that CELGENE may review and comment on such documents and such other correspondence, which comments shall be considered in good faith by SUTRO. CELGENE shall not have the right to approve the proposed labeling or any other regulatory filings or submissions for the corresponding Licensed Products and Diagnostic Products (A) worldwide (prior to Nomination of such BAC or ADC as a Development Candidate) and (B) in the SUTRO Territory, on a Non-[*] DC-by-Non-[*] DC basis (after IND Clearance for such Development Candidate in the SUTRO Territory). SUTRO shall promptly provide to CELGENE copies of any material documents or other material correspondence pertaining to the corresponding Licensed Products and Diagnostic Products (I) worldwide (prior to Nomination of such Collaboration BAC or Collaboration ADC as a Development Candidate) and (II) in the SUTRO Territory, on a Non-[*] DC-by-Non-[*] DC basis (after IND Clearance for such Development Candidate in the SUTRO Territory), and shall promptly provide to CELGENE all proposed labeling, in each case received from the Regulatory Authorities in the SUTRO Territory. Notwithstanding the foregoing, CELGENE's rights, and SUTRO's obligations, under this Section 4.2.2 shall terminate upon a Business Combination of CELGENE.

4.3. Pricing and Reimbursement Approval Proceedings.

4.3.1 CELGENE Territory. CELGENE and its Affiliates shall take the lead in all pricing and reimbursement approval proceedings relating to Licensed Products in the CELGENE Territory. CELGENE shall consult with SUTRO through the JSC with respect to pricing and reimbursement approvals in the CELGENE Territory with respect to Licensed Products comprising or containing Non-[*] DCs.

4.3.2 SUTRO Territory. SUTRO and its Affiliates shall take the lead in all pricing and reimbursement approval proceedings relating to Licensed Products comprising or containing Non-[*] DCs in the SUTRO Territory. SUTRO shall consult with CELGENE through the JSC with respect to pricing and reimbursement approvals in the SUTRO Territory with respect to Licensed Products comprising or containing Non-[*] DCs.

4.4. Adverse Event Reporting; Global Safety Database. CELGENE shall be solely responsible for reporting all adverse drug experiences associated with Licensed Products in the Field in the CELGENE Territory, and for establishing, holding and maintaining the global safety database for Licensed Products in the Field; provided that the Parties' costs and expenses of maintaining the global safety database shall be borne [*] percent ([*]%) by CELGENE and [*] percent ([*]%) by SUTRO. SUTRO shall be solely responsible for reporting all adverse drug experiences associated with Licensed Products comprising or containing Non-[*] DCs in the Field in the SUTRO Territory. Each Party shall provide the other Party with all Licensed Product and Diagnostic Product complaints, adverse event information and safety data from clinical studies, in

its possession and control, necessary or desirable for the other Party to comply with all applicable Laws with respect to Licensed Products and Diagnostic Products. Further, the Parties shall commence good faith discussions with respect to entering into a separate pharmacovigilance agreement, as and when required by the JSC.

4.5. [*] DCs. For the avoidance of doubt, after Nomination of a BAC or ADC as a Development Candidate, as between the Parties, subject to the terms of the Agreement, CELGENE shall have the sole right and responsibility for the preparation, filing and maintenance of all Regulatory Materials necessary for the research, development, manufacture and commercialization of such Development Candidate and its corresponding Licensed Products and Diagnostic Products worldwide, but (a) subject to SUTRO's rights set forth in this Article 4 with respect to (i) BACs and ADCs prior to Nomination of such BAC or ADC as a Development Candidate and (ii) Non-[*] DCs after U.S. IND Clearance; and (b) provided that SUTRO shall have the sole right and responsibility for the preparation, filing and maintenance of any SUTRO Expression DMF.

4.6. SUTRO Opt-Out.

4.6.1 Notice of Opt-Out. On a Non-[*] DC-by-Non-[*] DC basis, SUTRO shall have the right, in its sole discretion, to elect to exercise a "SUTRO Opt-Out", pursuant to which SUTRO opts-out of further participation in:

(a) development and commercialization of the Non-[*] DC (and corresponding Licensed Products and Diagnostic Products) in the SUTRO Territory, such SUTRO Opt-Out to be exercised only during the period prior to the filing of the BLA with the FDA for such Non-[*] (the "Pre-Regulatory Approval Opt-Out Period"); or

(b) commercialization of the Non-[*] DC (and corresponding Licensed Products and Diagnostic Products) at any time after the first Regulatory Approval by the FDA of the Non-[*] DC (or corresponding Licensed Products) (the "Post-Regulatory Approval Opt-Out Period");

in each case by providing written notice to CELGENE of such election. Any such SUTROOpt-Out shall, subject to Section 4.6.3, take effect ninety (90) days after the date of such written notice (the "SUTRO Opt-Out Date"). For purposes of clarity, no rights with respect to the SUTRO Territory shall be transferred by SUTRO to CELGENE until receipt of all applicable consents and approvals under Antitrust Laws, including the termination or expiration of any applicable waiting periods under the HSR Act pursuant to Section 4.6.3.

4.6.2 Effect of Opt-Out. In the event SUTRO exercises the SUTRO Opt-Out with respect to a Non-[*] DC (or corresponding Licensed Product) during the Pre-Regulatory Approval Opt-Out Period or Post-Regulatory Approval Opt-Out Period, the following shall apply:

(a) with respect to any ongoing Clinical Trials with respect to such Non-[*] DC (or corresponding Licensed Product or Diagnostic Product) conducted by or on behalf of SUTRO for the SUTRO Territory, for which CELGENE has not notified SUTRO prior to the SUTRO Opt-Out Date that it wishes to assume responsibility, SUTRO shall continue to conduct at its expense any ongoing Clinical Trials with respect to such Non-[*] DC only with regard to

those patients enrolled at the date of the SUTRO Opt-Out Date and may otherwise cease enrollment and cancel all cancelable expenses relating to such Clinical Trials in accordance with applicable Laws; it being understood and agreed that following a SUTRO Opt-Out, in the event of a data lock in such Clinical Trial, upon CELGENE's request, SUTRO will cooperate with CELGENE as may be reasonably necessary to enable CELGENE to prepare and complete any and all databases, files and reports in the form required for submission to the Regulatory Authorities;

(b) with respect to any ongoing Clinical Trials with respect to such Non-[*] DC (or corresponding Licensed Product or Diagnostic Product) conducted by or on behalf of SUTRO for the SUTRO Territory for which CELGENE has notified SUTRO prior to the SUTRO Opt-Out Date that it wishes to assume responsibility, in each case, (1) each Party shall cooperate with the other Party to facilitate the orderly transfer to CELGENE of the conduct of such Clinical Trials as soon as reasonably practicable after the SUTRO Opt-Out Date, or, in the event CELGENE is not able to obtain all applicable consents and approvals under Antitrust Laws, to wind down such Clinical Trial, and (2) until such time as the conduct of such Clinical Trials has been successfully transferred to CELGENE or completely wound down, SUTRO shall, at its expense, continue to conduct such Clinical Trials or to wind down such Clinical Trial; it being understood and agreed that following an SUTRO Opt-Out, in the event of a data lock in such Clinical Trial, upon CELGENE's request, SUTRO will cooperate with CELGENE as may be reasonably necessary to enable CELGENE to prepare and complete any and all databases, files and reports in the form required for submission to the Regulatory Authorities;

(c) SUTRO shall provide to CELGENE a summary report of the status and results of its (and its Affiliates' and licensees') research, development, manufacturing and commercialization activities in connection with such Non-[*] DC prior to the SUTRO Opt-Out Date within thirty (30) days after the SUTRO Opt-Out Date;

(d) without limiting the generality of the remainder of this Section 4.6.2, SUTRO shall use its Commercially Reasonable Efforts, at no cost to CELGENE, to effect a seamless, timely transition to CELGENE of all research, development, manufacturing and commercialization activities and responsibilities with respect to such Non-[*] DC in accordance with a transition plan to be mutually agreed by the Parties;

(e) SUTRO promptly will transfer to CELGENE all Regulatory Materials (other than the SUTRO Expression DMF) and Regulatory Approvals owned, controlled or possessed by SUTRO or its Affiliates or licensees with respect to such Non-[*] DC, provided that if SUTRO is required to hold any such Regulatory Materials or Regulatory Approvals to complete the Clinical Trial activities contemplated in Sections 4.6.2(a) and (b) above, then SUTRO shall promptly transfer such Regulatory Materials and Regulatory Approvals to CELGENE after completion of such activities;

(f) the royalty provisions of Section 7.5.1(b) shall apply to the sale of a Licensed Product that comprises or contains such Non-[*] DC in the SUTRO Territory, with the royalty rates for such Licensed Product being increased by [*] percent ([*]%) in each tier for all Net Sales of such Licensed Product worldwide and the monetary thresholds specified in each tier being doubled;

(g) within forty-five (45) days after receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the FDA in the United States of a Licensed Product containing or comprising such Non-[*] DC for the first Indication, CELGENE shall pay to SUTRO a milestone payment of (i) [*] U.S. dollars ($[*]) if such Licensed Product is a Collaboration ADC, or (ii) [*] U.S. dollars ($[*]) if such Licensed Product is a Collaboration BAC;

(h) within forty-five (45) days after receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the FDA in the United States of a Licensed Product containing or comprising such Non-[*] DC for a Second Indication, CELGENE shall pay to SUTRO a milestone payment of (i) [*] U.S. dollars ($[*]) if such Licensed Product is a Collaboration ADC, or (ii) [*] U.S. dollars ($[*]) if such Licensed Product is a Collaboration BAC;

(i) the licenses granted by CELGENE to SUTRO under Section 9.1.2(b) with respect to such Non-[*] DC and corresponding Licensed Products and Diagnostic Products shall terminate as of the SUTRO Opt-Out Date;

(j) the CELGENE Territory with respect to such Non-[*] DC and corresponding Licensed Products and Diagnostic Products shall expand to include the SUTRO Territory, and the licenses granted by SUTRO to CELGENE under Section 9.1.2(a) with respect to such Non-[*] DC and corresponding Licensed Products and Diagnostic Products shall be worldwide licenses;

(k) CELGENE shall have sole responsibility and decision-making authority over all research, development, manufacturing and commercialization activities in connection with such Non-[*] DC and corresponding Licensed Products and Diagnostic Products, which shall no longer be within the purview of the JSC (and in the event SUTRO has opted-out of developing all Non-[*], the JSC shall be disbanded); and

(l) notwithstanding anything to the contrary in this Agreement, CELGENE shall not be required to use Commercially Reasonable Efforts with respect to the research, development, manufacturing and commercialization of such Non-[*] DC and corresponding Licensed Products and Diagnostic Products in the SUTRO Territory.

SUTRO shall not have any option or right to buy-back the license and rights granted to CELGENE in this Section 4.6.2, which shall continue for the remainder of the Term.

4.6.3 HSR Approval.

(a) Subject to the terms and conditions of this Agreement, each of the Parties will use its Commercially Reasonable Efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper or advisable under Antitrust Laws to consummate a SUTRO Opt-Out as soon as practicable after any applicable written notice by SUTRO of a SUTRO Opt-Out under Section 4.6, including (i) preparing and filing, in consultation with the other Party and as promptly as practicable and advisable after the date of receipt by CELGENE of such written notice, all documentation to effect all necessary applications, notices, petitions, filings, requests and other documents and to obtain as promptly as practicable all

consents, clearances, waivers, licenses, orders, registrations, approvals, permits, rulings and authorizations necessary to be obtained from any Third Party and/or any applicable governmental authority in order to consummate such SUTRO Opt-Out, and (ii) taking all reasonable steps as may be necessary to obtain all such material consents, clearances, waivers, licenses, orders, registrations, approvals, permits, rulings and authorizations.

(b) In furtherance and not in limitation of the foregoing but subject to this Section 4.6, each Party hereto agrees (i) to make or cause to be made, in consultation and cooperation with the other Party and as promptly as practicable and advisable, but no later than fifteen (15) days, after the date of written notice by SUTRO of an SUTRO Opt-Out under Section 4.6, any necessary filing of a Notification and Report Form pursuant to the HSR Act and all other necessary registrations, declarations, notices and filings relating to such SUTRO Opt-Out with other applicable governmental authorities under Antitrust Laws, (ii) to respond as promptly as practicable to any inquiries received and supply as promptly as practicable any additional information and documentary material that may be requested pursuant to the HSR Act and any other Antitrust Laws, (iii) to take all other actions, if any, reasonably necessary to cause the expiration or termination of the applicable waiting periods under the HSR Act and any other Antitrust Laws as soon as practicable, and (iv) not to enter into any agreement with any applicable governmental authority to extend any waiting period under the HSR Act or any other Antitrust Laws without the prior written consent of CELGENE.

(c) Notwithstanding anything to the contrary in this Agreement, CELGENE shall not be required to sell, divest, hold separate, license or agree to any other structural or conduct remedy with respect to, any operations, divisions, businesses, product lines, customers, assets or relationships of CELGENE or any of its Affiliates. In the event any of the foregoing is required by the applicable governmental authority in order to consummate the SUTRO Opt-Out, CELGENE shall not be required to engage in such conduct, in which case, the CELGENE Territory shall not be expanded to include the SUTRO Territory, and the SUTRO Opt-Out shall be deemed withdrawn and not to have occurred.

4.7. Assistance. At the reasonable request of either Party, the other Party shall provide reasonable assistance in connection with the regulatory matters set forth in this Article 4.

ARTICLE V
GOVERNANCE

5.1. Generally.

5.1.1 Committees.

(a) Pursuant to this Article 5, the Parties will establish a JSC and a Patent Committee within the time frames set forth in Section 5.2.1 and 5.3.1, respectively. The Parties may also determine to establish new committees to oversee particular phases of the Collaboration (each, a "New Committee"), which New Committees will be subject to the oversight of the JSC. Unless otherwise agreed upon by the Parties (including with respect to when such New Committee shall disband), each New Committee shall follow the provisions set forth for the JSC. The JSC and each New Committee shall have decision-making authority with respect to the matters within its purview.

(b) From time to time, the JSC, Patent Committee or a New Committee may establish subcommittees to oversee particular projects or activities, as it deems necessary or advisable (each, a "Subcommittee"). Each Subcommittee shall consist of such number of members as the JSC, Patent Committee or New Committee, as applicable, determines is appropriate from time to time. Such members shall be individuals with expertise and responsibilities in the relevant areas such as antibody design and development, antibody expression, production and manufacture, protein engineering, pre-clinical development, pharmacology, clinical development, patents, process sciences, manufacturing, quality, regulatory affairs, product development or product commercialization, as applicable to the stage of the project or activity.

5.1.2 Certain Decisions.

(a) With respect to all Development Candidates and, if applicable, their corresponding Licensed Products and Diagnostic Products, on a Development Candidate-by-Development Candidate basis, upon Nomination of such Development Candidate, CELGENE and SUTRO shall have certain final decision-making authority with respect to the JSC pursuant to and in accordance with Section 5.2.6.

5.1.3 Alliance Managers. Promptly after the Original Effective Date, each Party shall appoint an individual to act as alliance manager for such Party, which may be one of the representatives of such Party on the JSC (each, an "Alliance Manager"). The Alliance Managers shall be the primary point of contact for the Parties regarding the activities contemplated by this Agreement and shall facilitate all such activities hereunder. The Alliance Managers shall attend all meetings of the JSC and shall be responsible for assisting the JSC in performing its oversight responsibilities. The name and contact information for each Party's Alliance Manager, as well as any replacement(s) chosen by such Party, in its sole discretion, from time to time, shall be promptly provided to the other Party in accordance with Section 14.5.

5.2. Joint Steering Committee.

5.2.1 Establishment. As soon as possible after the Original Effective Date, the Parties shall establish a joint steering committee (the "JSC") as more fully described in this Section 5.2. The JSC shall have review, oversight and decision-making responsibilities for all activities performed under the Research Plan, the Pre-Development Plan and/or as otherwise set forth in Section 5.2.4, as more specifically provided herein. Each Party agrees to keep the JSC informed of its progress and activities under the Collaboration.

5.2.2 Membership. The JSC shall be comprised of three (3) representatives (or such other number of representatives as the Parties may mutually agree) from each of CELGENE and SUTRO. Each Party may replace any or all of its representatives on the JSC at any time upon written notice to the other Party in accordance with Section 14.5. Each Party may, subject to the other Party's prior approval, invite non-member representatives of such Party and any Third Party to attend meetings of the JSC as non-voting participants, provided, that any such representative or Third Party is bound by obligations of confidentiality and non-use consistent with those set forth

in Article 10 prior to attending such meeting; provided, further that such Third Party shall not have any voting or decision-making authority on the JSC. Each representative of a Party shall have sufficient seniority and expertise in biotechnology and pharmaceutical drug discovery and development to participate on the JSC. SUTRO shall have the right to designate the chairperson of the JSC; provided that, effective on and after a Business Combination of SUTRO, CELGENE shall have the right to designate the chairperson of the JSC, subject, for clarity, to Section 5.2.6.

5.2.3 Meetings. The first scheduled meeting of the JSC shall be no later than thirty (30) Business Days after establishment of the JSC unless otherwise agreed by the Parties. The JSC shall disband upon the earlier of the expiration or termination of this Agreement. After the first scheduled meeting of the JSC until the JSC is disbanded, the JSC shall meet at least once each Calendar Quarter in person or telephonically, and more or less frequently as the Parties mutually deem appropriate, on such dates and at such places and times as provided herein or as the Parties shall agree. In addition, the JSC shall meet at a mutually agreeable place and time within ten (10) Business Days following SUTRO's receipt of CELGENE's notice of a Production Issue, or as otherwise appropriate to discuss the matters described in Section 5.2.4(i). Meetings that are held in person shall alternate between the offices of the Parties, or such other location as the Parties may agree. The members of the JSC also may convene or be polled or consulted from time to time by means of telecommunications, video conferences, electronic mail or correspondence, as deemed necessary or appropriate. Each Party will bear all expenses it incurs in regard to participating in all meetings of the JSC, including all travel and living expenses.

5.2.4 Responsibilities. The JSC shall perform the following functions, subject to the final decision-making authority of the Person set forth in Section 5.2.6:

(a) review and monitor progress of the Research Plan and the Pre-Development Plan and serve as a forum for exchange of information and facilitate discussions regarding the conduct of the Research Plan and the Pre-Development Plan, and review and approve amendments to the Research Plan;

(b) review and monitor the Parties' activities pursuant to Section 2.2.1(a);

(c) prioritize and initiate Prioritized BAC/ADC Programs, including approval of Target Combinations for Prioritized BAC/ADC Programs;

(d) oversee the progress of each Prioritized BAC/ADC Program through Nomination of a Collaboration BAC or Collaboration ADC in such BAC/ADC Program as a Development Candidate;

(e) after Nomination of a Development Candidate in which none of the binding domains is Directed to [*], oversee the progress of the development of such Development Candidate and its corresponding Licensed Products comprising or containing such Development Candidate through Regulatory Approval of a Licensed Product, provided, however, that in the event such Development Candidate is subsequently deemed to be a [*] DC (in accordance with the second sentence of Section 1.15) at the time of the First DC IND Clearance Date or Second IND Clearance Date, as applicable, then beginning at such time this Section 5.2.4(e) shall no longer apply to such deemed [*] DC;

(f) after Regulatory Approval of a Licensed Product comprising or containing a Non-[*] DC, oversee the commercialization activities of CELGENE and SUTRO with respect to such Licensed Product, including pre-launch and post-launch activities in the CELGENE Territory and the SUTRO Territory and serve as a forum for coordination of the Parties' global marketing and branding efforts;

(g) determine when the Parties shall commence good faith discussions with respect to a pharmacovigilance agreement;

(h) discuss and attempt to resolve any disputes in the JSC and any Subcommittee;

(i) discuss any Production Issue of which CELGENE notifies SUTRO under Section 6.5, as well as the production method for any particular Development Candidate and corresponding Licensed Product(s) comprising or containing such Development Candidate;

(j) such other responsibilities as may be mutually agreed by the Parties from time to time.

(k) For purposes of clarity, the JSC shall not have any authority beyond the specific matters set forth in this Section 5.2.4, and in particular shall not have any power to amend, modify or waive the terms of this Agreement, or to alter, increase, expand or waive compliance by a Party with, a Party's obligations under this Agreement. In any case where a matter within the JSC's authority arises, the JSC shall convene a meeting and consider such matter as soon as reasonably practicable, but in no event later than thirty (30) days after the matter is first brought to the JSC's attention, or, if earlier, at the next regularly-scheduled JSC meeting.

5.2.5 Minutes. The Party who designates the chairperson of the JSC shall be responsible for preparing and circulating minutes of each meeting of the JSC, setting forth, inter alia, an overview of the discussions at the meeting and a list of any actions, decisions or determinations approved by the JSC. Such minutes shall be effective only after such minutes have been approved by both Parties in writing. Definitive minutes of all JSC meetings shall be finalized no later than ten (10) Business Days after the meeting to which the minutes pertain.

5.2.6 Decisions.

(a) Except as otherwise set forth in this Agreement, all decisions of the JSC shall be made by consensus, with each Party having one (1) vote. If the JSC cannot agree on a matter within the authority of the JSC within ten (10) Business Days after it has met and attempted to reach such decision, then, either Party may, by written notice to the other, have such issue referred to the Executive Officers for resolution. The Parties' respective Executive Officers shall meet within fifteen (15) Business Days after such matter is referred to them, and shall negotiate in good faith to resolve the matter.

(b) If the Executive Officers are unable to resolve the matter within ten (10) Business Days, or such other time frame the Executive Officers may otherwise agree upon, after the matter is referred to them in accordance with this Section 5.2.6(b), then the chairperson of the JSC shall have the final decision-making authority; provided that (i) upon Nomination of any BAC or ADC as a Development Candidate, the Executive Officer of CELGENE shall have the final decision-making authority with respect to the development, manufacture and/or commercialization of such Development Candidate, except that the Executive Officer of SUTRO shall have the final decision-making authority for matters solely related to the development, manufacture and/or commercialization of any Non-[*] DC for the SUTRO Territory after U.S. IND clearance of such Non-[*] DC, and (ii) notwithstanding anything to the contrary, SUTRO shall in all cases have final decision-making authority with respect to matters that relate solely to the SUTRO Expression Technology.

(c) Notwithstanding Section 5.2.6(b), the Person having final decision-making authority shall not have the right to exercise its final decision-making authority to unilaterally: (i) determine that it has fulfilled any obligations under this Agreement or that the other Party has breached any obligation under this Agreement, (ii) determine that a milestone event required for the payment of a milestone payment has or has not occurred, (iii) make a decision that is expressly stated to require the mutual agreement of the Parties, (iv) amend the Research Plan or the Pre-Development Plan to require the other Party to conduct any activities, (v) require or restrict the other Party from conducting development or commercialization activities specifically related only to such Party's Territory, or (vi) otherwise expand its rights or reduce its obligations under this Agreement. Further, in the event the Research Plan is amended to increase the activities to be performed by CELGENE, such amendment shall not be effective unless the Parties mutually agree to such amendment in a written instrument that is executed by both Parties.

5.2.7 Following the Research Term. Following the expiration of the Research Term, the following shall apply:

(a) JSC. Notwithstanding anything to the contrary contained herein, the Parties understand and agree that the JSC shall, following such time as a Collaboration ADC or Collaboration BAC becomes a [*] DC (in accordance with the second sentence of Section 1.15), no longer oversee or review any of the matters under this Agreement, nor have any decision-making authority with respect to such [*] DC. On a Non-[*] DC-by-Non-[*] DC basis, after IND Clearance for such Development Candidate in the SUTRO Territory, the JSC shall continue to perform the functions set forth in this Section 5.2, solely with respect to such Non-[*] DC.

(b) Joint Manufacturing Committee; JRC. The Parties understand and agree that, to the extent that SUTRO continues to Manufacture under this Agreement, the Joint Manufacturing Committee (which was formed as a New Committee pursuant to Section 5.1.1(a)) shall remain in effect. Effective as of the expiration of the Research Term, the JRC (which was formed as a New Committee pursuant to Section 5.1.1(a)) shall disband and no longer oversee or review any of the matters under this Agreement nor have any decision-making authority.

(c) Other Programs. Following such time as a Collaboration ADC or Collaboration BAC becomes a [*] DC (in accordance with the second sentence of Section 1.15), CELGENE shall provide a written progress report at least once per Calendar Year, to SUTRO,

summarizing in reasonably detail (to the extent applicable) the material activities and anticipated plans with respect to the development and commercialization of such [*] DC, including an update of any Clinical Trials (including post-Regulatory Approval) conducted with respect to such [*] DC, a description of INDs and MAAs filed, and Regulatory Approvals obtained with respect to such [*] DC, and other details to be determined by the JSC, taking into account, among other things, SUTRO's reporting requirements under applicable Law. In addition to the annual reports described above, Celgene shall keep SUTRO reasonably informed about the progress of any such [*] DC, including by responding to SUTRO's reasonable requests for updates as soon as reasonably practicable. For clarity, with respect to any [*] DC after IND Clearance for such Development Candidate, such Development Candidate shall never be subject to this Article 5 except as set forth in this Section 5.2.7 and in Section 5.2.4(i).

5.3. Patent Committee.

5.3.1 Establishment. As soon as possible after the Original Effective Date, the Parties shall establish a patent committee (the "Patent Committee") as more fully described in this Section 5.3. The Patent Committee shall determine inventorship of intellectual property and facilitate the discussion and coordination of Patent Prosecution and Maintenance, enforcement and defense matters, in accordance with and subject to the terms of Article 9 and the procedure set forth below.

5.3.2 Membership. The Patent Committee shall be comprised of an equal number of representatives from each of CELGENE and SUTRO. Each Party may replace any or all of its representatives on the Patent Committee at any time upon written notice to the other Party in accordance with Section 14.5. Each representative of a Party shall have sufficient seniority and expertise in Patent Prosecution and Maintenance, enforcement and defense to participate on the Patent Committee. Each Party may, subject to the other Party's prior approval, invite non-member representatives of such Party to attend meetings of the Patent Committee as non-voting participants, subject to the confidentiality obligations of Article 10. CELGENE shall have the right to designate the chairperson of the Patent Committee.

5.3.3 Meetings. The Patent Committee shall convene at such times, places and frequencies as the Patent Committee determines is necessary. Upon expiration or termination of this Agreement in its entirety, the Patent Committee shall disband. Meetings of the Patent Committee that are held in person shall alternate between the offices of the Parties, or such other location as the Parties may agree. The members of the Patent Committee also may convene or be polled or consulted from time to time by means of telecommunications, video conferences, electronic mail or correspondence, as deemed necessary or appropriate. Each Party will bear all expenses it incurs in regard to participating in all meetings of the Patent Committee, including all travel and living expenses.

5.3.4 Responsibilities. The Patent Committee shall perform the following functions, subject to the final decision-making authority of the Person set forth in Section 5.3.6: (a) determine inventorship of Inventions in accordance with U.S. patent laws, it being understood that ownership shall be determined in accordance with, and subject to, the terms of Sections 9.4.1(b), 9.4.2(b) and 9.4.3; and (b) discuss material issues and provide input to each other regarding the Prosecution and Maintenance, enforcement and defense activities described in

Sections 9.4 through 9.6; and (c) such other responsibilities as may be mutually agreed by the Parties from time to time. The Patent Liaisons shall be responsible for coordinating the implementation of each Party's strategies for the protection of the foregoing intellectual property rights related to Development Candidates and Licensed Products. For purposes of clarity, the Patent Committee shall not have any authority beyond the specific matters set forth in this Section 5.3.4, and in particular shall not have any power to amend, modify or waive the terms of this Agreement, or to alter, increase, expand or waive compliance by a Party with, a Party's obligations under this Agreement. In addition, for clarity, the Patent Committee shall not have any authority with respect to matters involving the CELGENE Background IP or SUTRO Expression Technology. In any case where a matter within the Patent Committee's authority arises, the Patent Committee shall convene a meeting and consider such matter as soon as reasonably practicable, but in no event later than thirty (30) days after the matter is first brought to the Patent Committee's attention, or, if earlier, at the next regularly-scheduled Patent Committee meeting.

5.3.5 Minutes. A representative of CELGENE shall be responsible for preparing and circulating minutes of each meeting of the Patent Committee, setting forth, inter alia, an overview of the discussions at the meeting and a list of any actions, decisions or determinations approved by the Patent Committee. Such minutes shall be effective only after such minutes have been approved by both Parties in writing. Definitive minutes of all Patent Committee meetings shall be finalized no later than fifteen (15) Business Days after the meeting to which the minutes pertain.

5.3.6 Decisions. Except as otherwise provided herein, all decisions of the Patent Committee shall be made by consensus, with each Party having one (1) vote. If the Patent Committee cannot agree on a matter within the Patent Committee's authority within five (5) Business Days after it has met and attempted to reach such decision, then, either Party may, by written notice to the other, have such issue referred to the Executive Officers for resolution. The Parties' respective Executive Officers shall meet within ten (10) Business Days after such matter is referred to them, and shall negotiate in good faith to resolve the matter. If the Executive Officers are unable to resolve the matter within ten (10) Business Days, or such other time frame the Executive Officers may otherwise agree upon, after the matter is referred to them in accordance with this Section 5.3.6, then the decision shall be resolved as set forth below:

(a) IP Ownership. The Patent Committee shall determine inventorship of Inventions in accordance with U.S. patent laws, it being understood that ownership shall be determined in accordance with, and subject to, the terms of Sections 9.4.1(b), 9.4.2(b) and 9.4.3; provided that the Patent Committee may allocate ownership of a particular item of intellectual property, even if such allocation is not in accordance with the terms of Section 9.4.1(b), 9.4.2(b) or 9.4.3, so long as the Parties mutually agree to such allocation. In the event the Patent Committee cannot agree on a matter regarding ownership of an item of intellectual property, and the Executive Officers are unable to resolve such matter, then such dispute shall be resolved by a Third Party patent counsel selected by the Patent Committee who (and whose firm) is not, and was not at any time during the five (5) years prior to such dispute, an employee, consultant, legal advisor, officer, director or stockholder of, and does not have any conflict of interest with respect to, either Party. Such patent counsel shall determine inventorship in accordance with U.S. patent laws, it being understood that ownership will be determined as follows: (i) if such intellectual property is SUTRO Core Technology or CELGENE Core Technology, in accordance with Sections 9.4.1 and 9.4.2 and (ii) if such intellectual property is not SUTRO Core Technology or CELGENE Core Technology, in accordance with U.S. patent laws. Expenses of the patent counsel shall be shared equally by the Parties.

(b) Patent Prosecution. The Patent Committee shall discuss material issues and provide input to each other regarding the Prosecution and Maintenance, enforcement and defense of SUTRO Patents and CELGENE Patents. The Patent Liaisons shall be responsible for coordinating the implementation of each Party's strategies for the protection of the foregoing intellectual property rights related to Development Candidates and Licensed Products; provided that such strategy for both Parties shall require the filing and prosecution of divisional Patent applications as set forth in Section 9.5.3(b) (the foregoing referred to herein as the "Patent Strategy"). All final decisions related to the Prosecution and Maintenance, enforcement or defense of any SUTRO Patent or CELGENE Patent shall be made by the Party with the right to control such Prosecution and Maintenance, enforcement or defense, as applicable, as set forth in Article 9.

Notwithstanding the foregoing sentence, such Party shall not have the right to exercise its final decision-making authority to unilaterally: (i) determine that any obligations have been fulfilled under this Agreement or that a Party has breached any obligation under this Agreement, (ii) make a decision that is expressly stated to require the mutual agreement of the Parties, or (iii) otherwise expand a Party's rights or reduce a Party's obligations under this Agreement.

5.3.7 Patent Liaisons. Promptly after the Original Effective Date, each Party shall appoint an individual to act as a patent liaison for such Party, which may be one of the representatives of such Party on the Patent Committee (each, a "Patent Liaison"). The Patent Liaisons shall be the primary point of contact for the Parties regarding the intellectual property-related activities contemplated by this Agreement and shall facilitate all such activities hereunder. The Patent Liaisons shall attend all meetings of the Patent Committee and shall be responsible for assisting the Patent Committee in performing its oversight responsibilities. The name and contact information for each Party's Patent Liaison, as well as any replacement(s) chosen by such Party, in its sole discretion, from time to time, shall be promptly provided to the other Party in accordance with Section 14.5.

ARTICLE VI
MANUFACTURE AND SUPPLY

6.1. Manufacture and Supply of Development Candidate.

6.1.1 Preclinical / Toxicology Material. SUTRO shall manufacture and supply, at SUTRO's sole cost and expense, quantities of BACs, ADCs and Development Candidates (as applicable) in each of the following circumstances: (a) that are expressly specified in the Research Plan and/or the Pre-Development Plan, (b) that the JSC directs to be manufactured and supplied by SUTRO as reasonably required for the Parties to perform the activities pursuant to the Research Plan and/or the Pre-Development Plan if the supply in subclause (a) is not sufficient, and (c) that are necessary for CELGENE to conduct any IND-Enabling Study (including any GLP toxicology study), provided that, (i) with respect to sub-clauses (b) and (c), the supply of quantities of BACs,

ADCs and Development Candidates for IND-Enabling Studies (including GLP toxicology studies) in excess of [*] ([*]) grams per BAC/ADC Program, on a BAC/ADC Program-by-BAC/ADC Program basis, shall be reimbursed by CELGENE at [*] percent ([*]%) of SUTRO's Fully Burdened Manufacturing Costs (as defined in Section 1.43(ii)); and (ii) with respect to any Collaboration BACs and/or Collaboration ADCs Nominated by CELGENE pursuant to 2.2.6(b)(i), (A) SUTRO's obligation to supply quantities of such Development Candidates shall be limited to such quantities that are reasonably necessary for CELGENE to perform all research and exploratory toxicology studies with respect to such Development Candidates during the [*] ([*]) month period after the end of the Research Term, and (B) if CELGENE desires quantities of such Development Candidates for IND-Enabling Studies, SUTRO shall supply such quantities to CELGENE at SUTRO's Fully Burdened Manufacturing Costs. In connection with SUTRO's supply of materials under this Section 6.1.1, SUTRO will supply CELGENE with a full process description of how that material was produced and recovered, and the associated analytical methods. Pursuant to the supply agreement referenced in Section 2.2.6(a), SUTRO will also provide Cell-Free Extract and any other non-commercially available materials that SUTRO has produced and used in the reaction, such that CELGENE is able to successfully reproduce the reaction at an appropriate scale in CELGENE laboratories. In addition, CELGENE may conduct further process optimization and development reactions, for which SUTRO will supply Cell-Free Extract and other non-commercially available materials upon CELGENE's request, in preparation for potentially transferring manufacturing to a CELGENE CMO as contemplated by Section 6.2.

6.1.2 cGMP Material. In the event CELGENE desires SUTRO to manufacture and supply cGMP Development Candidates and their corresponding Licensed Products, for any Development Candidate designated by CELGENE in its sole discretion, in sufficient quantities to permit CELGENE to conduct Clinical Trials and/or commercialize Licensed Products, the Parties shall negotiate in good faith to enter into a separate written agreement regarding such manufacture and supply, including mutually agreed upon quantities, as well as a timeframe for such manufacture and supply consistent with the estimated timeline reasonably proposed by CELGENE, and in accordance with the specifications mutually agreed by the Parties ("Specifications"); provided that SUTRO shall supply such Development Candidate and its corresponding Licensed Products to CELGENE at SUTRO's Fully Burdened Manufacturing Cost.

6.1.3 Modification of BAC. In the event that during the conduct of any studies or trials, including preclinical, GLP toxicology, non-GLP toxicology or other IND-Enabling Studies or any Clinical Trial, CELGENE identifies an issue with any BAC, ADC or Development Candidate, CELGENE shall have the right to request SUTRO to conduct research and development activities to design, identify, generate or develop an alternate BAC, ADC or Development Candidate Directed to the same Target Combination and that meets the performance specifications of such BAC, ADC or Development Candidate; provided that any re-design or re-engineering work of any BAC, ADC or Development Candidate shall be subject to mutual agreement between the Parties. For the avoidance of doubt, any such alternate BAC, ADC or Development Candidate designed, identified, generated or developed by SUTRO under this Section 6.1.3 shall be governed by the terms of this Agreement, including Articles 8, 9 and 10.

6.1.4 Supply of Back-Up Compound. To the extent CELGENE requests SUTRO to supply a back-up compound for IND-Enabling Studies (including GLP toxicology studies) for the [*] Program, SUTRO will supply such back-up compound to CELGENE in quantities designated by CELGENE. The cost of such supply shall be calculated based on SUTRO's Fully Burdened Manufacturing Costs and SUTRO shall be reimbursed by Celgene for the costs that are in excess of $[*] within thirty (30) days of receipt of SUTRO's invoice.

6.2. Third Party Manufacturer. In the event that the Parties mutually agree, or CELGENE desires, as determined in its sole discretion, at any time to have a Third Party manufacture and supply any cGMP Development Candidates and/or their corresponding Licensed Products, CELGENE shall be entitled to enter into a manufacturing and supply agreement with such Third Party on the following terms and conditions: (i) the designation of such Third Party supplier shall be subject to the prior written consent of SUTRO, such consent not to be unreasonably withheld or delayed (such supplier, the "CELGENE CMO"), (ii) SUTRO will license and transfer to such CELGENE CMO the relevant processes, documents, and materials included in any Know-How Controlled by SUTRO as necessary or reasonably useful for such manufacture and supply (including without limitation to permit CELGENE to prepare the CMC (and other relevant) portions of Regulatory Materials to be submitted for Regulatory Approval to the applicable Regulatory Authority), and (iii) SUTRO will supply all necessary quantities of Cell-Free Extract to such Third Party necessary for such manufacture and supply; provided that, in connection with SUTRO's activities described in clauses (ii) and (iii) above, CELGENE promptly shall reimburse SUTRO for [*] percent ([*]%) of the reasonable out-of-pocket costs and expenses incurred by SUTRO in connection with such activities (and SUTRO shall make available to CELGENE reasonable documentary support for such expenses). The transfer by Sutro to the CELGENE CMO of such processes, documents and materials shall be done in collaboration with CELGENE, with representatives of both Parties reviewing all such processes, documents and materials prior to transfer to the CMO, and both Parties shall be involved in such transfer and cooperate in good faith with each other and the CELGENE CMO.

6.3. Responsibilities. SUTRO shall use Commercially Reasonable Efforts to perform its manufacture and supply obligations under this Agreement, and will comply with all applicable Laws and standards governing any manufacture and supply, including cGMP, GCP and GLP.

6.4. Assistance. At the reasonable request of either Party, the other Party shall provide reasonable assistance in connection with the manufacturing and supply matters set forth in this Article 6.

6.5. Transition to Cell-Based Manufacturing. In the event of a Production Issue for a particular BAC/ADC Program, CELGENE will notify SUTRO thereof in writing and upon SUTRO's request the Production Issue will be discussed at the JSC. In any event, after discussion of a Production Issue at the JSC, CELGENE may upon written notice to SUTRO ("CELGENE Manufacturing Notice") elect to have the corresponding Collaboration BACs, and related Development Candidates and Licensed Products, manufactured in a cell-based manufacturing system by a contract manufacturing organization designated by CELGENE ("CELGENE Cell-Based CMO") as necessary to permit CELGENE to conduct activities frompre-clinical research and development through and including Clinical Trials and commercialization of Licensed Products in accordance with the terms of the Agreement. Upon receipt of the CELGENE Manufacturing Notice, SUTRO will transfer to such CELGENE Cell-Based CMO the relevant processes, documents, and materials included in any SUTRO Know-How as necessary or reasonably useful for such manufacture. SUTRO will be relieved of its obligations under this

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Article 6 for the corresponding Collaboration BACs, and corresponding Development Candidates and Licensed Products, of a particular BAC/ADC Program for which CELGENE has provided a CELGENE Manufacturing Notice on such date as determined by the JSC, which date shall in no event be later than the date on which the CELGENE Cell-Based CMO has commenced full scale cGMP manufacturing of such Collaboration BACs, and corresponding Development Candidates and Licensed Products. SUTRO's sole liability and CELGENE's sole remedy with respect to a Production Issue under this Section 6.5, except in the case of SUTRO's material breach of this Agreement (it being understood that a Production Issue shall not be deemed a material breach of this Agreement) or its gross negligence or willful misconduct, shall be the right of CELGENE to off-set the CELGENE Manufacturing Costs as set forth in Section 7.4.5. For purposes of this Agreement:

(a) "Production Issue" shall mean (a) the inability of the SUTRO expression system to achieve [*]; (b) [*] a Collaboration BAC, or corresponding Development Candidate or Licensed Product, through the SUTRO expression system [*]; (c) the FDA or other Regulatory Authority does not permit conduct of Clinical Trials using, or does not grant Regulatory Approval for, a Collaboration BAC, or corresponding Development Candidate or Licensed Product, due to CMC reasons attributable to SUTRO's expression system; and (d) the manufacturing of a Collaboration BAC, or corresponding Development Candidate or Licensed Product, using SUTRO's expression system is subject to material third party intellectual property infringement claims; [*].

(b) "CELGENE Manufacturing Costs" shall mean the amounts paid by CELGENE to the CELGENE Cell-Based CMO to produce Collaboration BACs through the completion of IND-Enabling Studies for the applicable BAC/ADC Program, as evidenced by written records, such amounts not to exceed $[*] per BAC/ADC Program.

6.5.1 Parallel Exploration of Cell-Based Development. CELGENE may upon written notice to SUTRO elect to explore manufacturing of any Collaboration BAC that is included in an Identified BAC/ADC Program designated in such written notice (a "CELGENE Parallel Notice"), in a CHO Manufacturing system by CELGENE and/or a CELGENE Cell-Based CMO designated by CELGENE. Upon receipt of the CELGENE Parallel Notice, and after execution of a confidentiality agreement among CELGENE, SUTRO, and (if applicable) the CELGENE Cell-Based CMO in a form reasonably acceptable to each of them, SUTRO will transfer to CELGENE (with CELGENE having the right to transfer to a CELGENE Cell-Based CMO) the relevant sequences, processes, documents, and materials included in any SUTRO Know-How as necessary or reasonably useful for the manufacture of the applicable Collaboration BAC. SUTRO obligations under this Article 6 shall continue for such Collaboration BAC, and for the sake of clarity, SUTRO shall remain eligible for the one-time MS Milestone 2 described in Section 7.4.1(b).

6.5.2 Decision Points for Parallel Exploration For each CELGENE Parallel Notice, the Parties shall examine the characteristics of each of the molecules and the timely availability of sufficient material from CELGENE's designated CHO Manufacturing system and SUTRO's cell-free expression system to conduct exploratory toxicology studies and determine which system(s) (if any, or both) should move forward.

6.5.3 Continuing Development Milestone Eligibility. In the event that CELGENE or the JSC, as applicable, moves forward with a CHO Manufacturing system for a Collaboration BAC as set forth in Section 6.5.2, SUTRO shall remain eligible for all development milestone payments for such Collaboration BAC, as described in Section 7.4.3.

6.5.4 Agreed Cost Allocation. Each of CELGENE and SUTRO hereby agree to pay for the costs allocated to such Party as set forth on Schedule 6.5.4.

ARTICLE VII
FINANCIAL TERMS

7.1. Initial Upfront Fee. In partial consideration for the licenses granted to CELGENE hereunder, CELGENE shall pay SUTRO a total upfront payment of Eighty One Million and Five Hundred and Sixty Three Thousand Dollars ($81,563,000) within five (5) Business Days after the Original Effective Date as follows:

(a) Celgene Corp. will pay [*] of such amount; and

(b) Celgene Alpine will pay [*] of such amount.

Such payment shall be payable by wire transfer of immediately available funds in accordance with Section 7.6, and shall benon-refundable and non-creditable against any other amount due hereunder.

7.2. Purchase of Shares; Other Payments.

7.2.1 SUTRO Series D-2 Investment. Within five (5) Business Days after the Original Effective Date, SUTRO shall sell to Celgene Corp. and Celgene Corp. shall purchase from SUTRO 18,097,331 shares of Series D-2 Convertible Preferred Stock, par value $0.001 per share, of SUTRO at a purchase price of $ $0.6596 per share, having an aggregate purchase price of Eleven Million and Nine Hundred and Thirty Seven Thousand Dollars ($11,937,000.00) pursuant to the Series D-2 Stock Purchase Agreement.

7.2.2 SUTRO Series E Investment. Within one (1) year of the Amendment Effective Date and upon the closing of SUTRO's private placement of shares of Series E preferred stock of SUTRO which will be convertible to SUTRO's common stock (the "Series E Financing" and such shares, the "Series E Shares"), CELGENE may in its sole discretion purchase an amount of Series E Shares equal to, in CELGENE's sole discretion, either (i) CELGENE's Series E Equity Pro Rata Amount (as defined below) or (ii) [*] ($[*]), at a price per share equal to the price per share at which SUTRO sells Series E Shares in such Series E Financing, all on the same terms and conditions as applicable to the other purchasers of such Series E Shares. "Series E Equity Pro Rata Amount" means a dollar amount equal to (1) the percentage of SUTRO's outstanding capital stock, calculated on an issued and outstanding equity basis, held by CELGENE prior to the closing of the Series E Financing, multiplied by (2) the aggregate amount that SUTRO proposes to raise through the Series E Financing. By way of example, if prior to the Series E Financing CELGENE owns [*] percent ([*]%) of the outstanding SUTRO capital stock (calculated on an issued and outstanding equity basis) and SUTRO proposes to raise an aggregate of [*] Dollars ($[*]), through the Series E Financing, then the Series E Equity Pro Rata Amount would be [*] Dollars ($[*]).

7.2.3 Other Payments. The Parties acknowledge and agree that, prior to the Amendment Effective Date, CELGENE made the payments set forth on Schedule 7.2.3 to SUTRO pursuant to the terms of the Original Agreement.

7.3. CELGENE Worldwide Rights Option.

7.3.1 Second Option Fee. In addition to (and exclusive of) any BAC/ADC Program containing a [*] DC which does not involve any WRDC, SUTRO hereby grants to CELGENE a one-time option to obtain certain rights for one (1) (and only one (1)) Identified BAC/ADC Program ("CELGENE Worldwide Rights Option"), in consideration for the following payments (collectively, "Option Rights Fee"):

(a) Celgene Corp. will pay Twelve Million Five Hundred Thousand Dollars ($12,500,000) within five (5) Business Days after the Amendment Effective Date.

(b) Celgene Corp. will pay Twelve Million Five Hundred Thousand Dollars ($12,500,000) within five (5) Business Days following the First DC IND Clearance Date (the "Second Option Fee").

(c) The payments due under Section 7.3.1(a) and (b) shall be payable by wire transfer of immediately available funds in accordance with Section 7.6, and shall be non-refundable and non-creditable against any other amount due hereunder.

7.3.2 Exercise of Worldwide Rights Option. CELGENE shall exercise the CELGENE Worldwide Rights Option, if at all, by providing written notice thereof to SUTRO at any time during the Option Period, which notice, in order to be effective, shall (1) identify the Identified BAC/ADC Program for which the CELGENE Worldwide Rights Option is being exercised (the "Worldwide Rights BAC/ADC Program") and (2) be accompanied by the following payment ("Option Exercise Fee") within five (5) Business Days of such notice:

(a) [*] Dollars ($[*]), if the CELGENE Worldwide Rights Option is exercised with respect to the [*] Program or the [*] Program; or

(b) [*] Dollars ($[*]), if the CELGENE Worldwide Rights Option is exercised with respect to the [*] Program or the [*] Program.

Notwithstanding the above, CELGENE shall be deemed to have exercised the CELGENE Worldwide Rights Option upon the Second IND Clearance Date, in which case CELGENE shall notify SUTRO promptly after such filing, and shall pay the applicable Option Exercise Fee within five (5) Business Days following filing.

7.3.3 Worldwide Rights Option Termination. The CELGENE Worldwide Rights Option shall automatically terminate on the earliest of: (i) CELGENE's failure to pay the Option Rights Fee in accordance with Section 7.3.1(a) and/or (b) (as applicable), (ii) CELGENE's failure to pay the Option Exercise Fee in accordance with Section 7.3.2(a) or (b) (as applicable), (iii) the end of the Option Period.

7.3.4 Development Candidates. Upon exercise of the Worldwide Rights Option as set forth in this Section 7.3, any Development Candidate from the Worldwide Rights BAC/ADC Program described in Section 7.3.1 (each such Development Candidate following such exercise, a "Worldwide Rights Development Candidate" or "WRDC") shall be deemed a [*] DC for purposes of the Agreement. For clarity, the Parties understand and agree that CELGENE shall be entitled pursuant to this Agreement, on a BAC/ADC Program-by-BAC/ADC Program basis, to Develop and Commercialize the following Development Candidates (and corresponding Licensed Products and Diagnostic Products) included in any applicable BAC/ADC Program on a worldwide basis following IND Clearance: (a) an unlimited number of Development Candidates (and corresponding Licensed Products and Diagnostic Products) in which at least one (1) binding domain is Directed to [*]; (b) the first Development Candidate to have achieved IND Clearance in the U.S. in which none of the binding domains is Directed to [*], and (c) any WRDC.

7.4. Milestones.

7.4.1 Manufacturing and Supply Milestones.

(a) MS Milestone 1. Upon satisfaction of all of the following requirements at any time during the Research Term with respect to SUTRO's San Carlos manufacturing facility:

(i) completion by SUTRO of the facility improvements specified in Exhibit I; and

(ii) passing a GMP audit conducted by or on behalf of CELGENE;

then CELGENE shall make a milestone payment to SUTRO of Ten Million Dollars ($10,000,000) as follows:

(1) Celgene Corp. will pay [*] of such amount; and

(2) Celgene Alpine will pay [*].

(b) MS Milestone 2. Upon successful completion by SUTRO at any time during the Research Term of the first 1,000L GMP production batch of Relevant Antibodies at SUTRO's San Carlos, California manufacturing facility, with CELGENE person-in-plant observation, that meets the performance and quality requirements specified in Schedule 7.4.1(b), CELGENE shall make a milestone payment to SUTRO of Ten Million Dollars ($10,000,000) as follows:

(1) Celgene Corp. will pay [*] of such amount; and

(2) Celgene Alpine will pay [*] of such amount.

For purposes of this Section 7.4.1(b), "Relevant Antibodies" means any of the following: (i) any Collaboration BACs, Collaboration ADCs and/or Development Candidates (whether designed, identified, generated or developed pursuant to this Agreement or the First Collaboration Agreement) and/or (b) any BACs, ADCs, Antibodies and/or antibody drug conjugates designed, identified, generated or developed within the scope of any Internal Program of SUTRO.

(c) MS Milestone 3. Upon successful completion by SUTRO at any time on or prior to [*] of (i) the production of freeze-dried Cell-Free Extract [*], then CELGENE shall make a milestone payment to SUTRO of Ten Million Dollars ($10,000,000), within five (5) Business Days following the achievement of such milestone, as follows:

(1) Celgene Corp. will pay [*] of such amount; and

(2) Celgene Alpine will pay [*] of such amount.

SUTRO hereby agrees to use its Commercially Reasonable Efforts to promptly perform the matters set forth in Exhibit K during the Term of this Agreement, regardless of whether the milestone is achieved pursuant to subsection (i) or (ii) above.

7.4.2 Tranche 2 Milestone.

(a) T2 Milestone. If, during the period that commences on the Original Effective Date and ends at the end of the twenty first (21st) month thereafter ("T2 Period"), SUTRO completes the in-life portion of exploratory toxicology testing set forth on Exhibit G for one (1) BAC (for clarity, such BAC having arisen from this Collaboration and not from any Internal Program of SUTRO, unless included in the Collaboration as a BAC/ADC Program) by or on behalf of SUTRO or its Affiliates ("BAC Tox Testing"), upon expiration of the T2 Period, CELGENE shall make a milestone payment to SUTRO of Twenty-Five Million Dollars ($25,000,000) as follows:

(1) Celgene Corp. will pay [*] of such amount; and

(2) Celgene Alpine will pay [*] of such amount.

(b) Payment Only Once. For purposes of clarity, CELGENE only shall be obligated to make a milestone payment corresponding event set forth in this Section 7.4.2 only once, regardless of the number of times such milestone event occurs.

7.4.3 Development Milestones.

(a) On a Development Candidate-by-Development Candidate basis (other than any WRDC under an Identified BAC/ADC Program, which shall be subject to subsections (b) or (c), as applicable, of this Section 7.4.3), CELGENE shall make the milestone payments set forth below to SUTRO upon the first achievement by or on behalf of CELGENE, its Affiliates or Sublicensees of the milestone events set forth below with respect to such Development Candidate or corresponding Licensed Product.

Milestone Event (For each Development Candidate or corresponding Licensed Product, as applicable, for the First Indication)	Milestone Payments (in $ millions)
(1) FPFV in a Phase 2 Clinical Trial for such Licensed Product for the first Indication by or on behalf of CELGENE, its Affiliates or Sublicensees.	[*]
(2) FPFV in a Phase 3 Clinical Trial for such Licensed Product for the first Indication by or on behalf of CELGENE, its Affiliates or Sublicensees.	[*]
(3) Solely with respect to each [*] DC, receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the FDA in the United States of a Licensed Product comprising or containing such [*] DC for the first Indication.	[*]
(4) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the EMA or the first applicable Regulatory Authority in any Major EU Country of such Licensed Product for the first Indication.	[*]
(5) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the MHLW of such Licensed Product for the first Indication.	[*]

(b) On a WRDC-by-WRDC basis under a [*] Program or [*] Program, CELGENE shall make the milestone payments set forth below to SUTRO upon the first achievement by or on behalf of CELGENE, its Affiliates or Sublicensees of the milestone events set forth below with respect to such WRDC or corresponding Licensed Product.

Milestone Event (For each Development Candidate or corresponding Licensed Product, as applicable, for the First Indication)	Milestone Payments (in $ millions)
(1) FPFV in a Phase 2 Clinical Trial for such Licensed Product for the first Indication by or on behalf of CELGENE, its Affiliates or Sublicensees.	[*]
(2) FPFV in a Phase 3 Clinical Trial for such Licensed Product for the first Indication by or on behalf of CELGENE, its Affiliates or Sublicensees.	[*]
(3) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the FDA in the United States of a Licensed Product comprising or containing such WRDC for the first Indication.	[*]

Milestone Event (For each Development Candidate or corresponding Licensed Product, as applicable, for the First Indication)	Milestone Payments (in $ millions)
(4) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the EMA or the first applicable Regulatory Authority in any Major EU Country of such Licensed Product for the first Indication.	[*]
(5) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the MHLW of such Licensed Product for the first Indication.	[*]

(c) On a WRDC-by-WRDC basis under a [*] Program or [*] Program, CELGENE shall make the milestone payments set forth below to SUTRO upon the first achievement by or on behalf of CELGENE, its Affiliates or Sublicensees of the milestone events set forth below with respect to such WRDC or corresponding Licensed Product.

Milestone Event (For each Development Candidate or corresponding Licensed Product, as applicable, for the First Indication)	Milestone Payments (in $ millions)
(1) FPFV in a Phase 2 Clinical Trial for such Licensed Product for the first Indication by or on behalf of CELGENE, its Affiliates or Sublicensees.	[*]
(2) FPFV in a Phase 3 Clinical Trial for such Licensed Product for the first Indication by or on behalf of CELGENE, its Affiliates or Sublicensees.	[*]
(3) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the FDA in the United States of a Licensed Product comprising or containing such WRDC for the first Indication.	[*]
(4) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the EMA or the first applicable Regulatory Authority in any Major EU Country of such Licensed Product for the first Indication.	[*]
(5) Receipt by or on behalf of CELGENE, its Affiliates or Sublicensees of Regulatory Approval by the MHLW of such Licensed Product for the first Indication.	[*]

(d) Second Indication. With respect to milestone events (2) through (5), inclusive, in each of the above tables in this Section 7.4.3, in addition to the milestone payments specified therein for the first Indication, a corresponding milestone payment will be due in the

event such milestone event is achieved by or on behalf of CELGENE, its Affiliates or Sublicensees with respect to a Second Indication; provided that such milestone payment shall be [*] percent ([*]%) of the milestone payment applicable to the first Indication. "Second Indication" means a second therapeutic Indication having an organ tumor origin different than that of the Indication for which prior Regulatory Approval was obtained in the applicable territory. Further, with respect to milestone events (1) through (2), inclusive, in the above table, the applicable Clinical Trial must be a Clinical Trial designed such that the results thereof meet the requirements to be included, or are included, in an NDA in the United States. In the event a Phase 2 Clinical Trial is deemed a Phase 3 Clinical Trial pursuant to Section 1.71, the milestone payment for milestone event (1), in the above table, shall be paid upon FPFV, and the milestone payment for milestone event (2) shall be paid upon acceptance of filing for Regulatory Approval after the completion of such Clinical Trial for the applicable Licensed Product comprising or containing a Development Candidate.

(e) Catch-up Payments.

(i) First Indication. With respect to the first Indication, if, upon achievement of:

(A) milestone event (2) set forth in the tables in Section 7.4.3(a), (b) or (c), as applicable, the milestone payment with respect to such Development Candidate for milestone event (1) set forth in such applicable table has not been paid for such Development Candidate, then (subject to the last sentence of Section 7.4.3(d)) such milestone payment shall be payable concurrently with the payment for such subsequent achievement with respect to milestone event (2); and

(B) the first to occur of any of milestone events (3), (4) or (5) set forth in the table in Section 7.4.3(a), (b) or (c), as applicable, any of the previous milestone payments with respect to such Development Candidate for milestone events (1) and (2) set forth in such table, has not been paid for such Development Candidate, as applicable, then such milestone payment(s) shall be payable concurrently with the payment for such subsequent achievement with respect to milestone event (3), (4) or (5) set forth in such table, as applicable.

(ii) Second Indication. With respect to the Second Indication, if, upon achievement of the first to occur of any of milestone events (3), (4) or (5) set forth in the table in Section 7.4.3(a), (b) or (c), as applicable, the milestone payment with respect to such Development Candidate for milestone event (2) set forth in such table (and subject to Section 7.4.3(a), (b) or (c), as applicable) has not been paid for such Development Candidate, then such milestone payment shall be payable concurrently with the payment for such subsequent achievement with respect to milestone event (3), (4) or (5) set forth in such table, as applicable;

(f) Payment Only Once. For purposes of clarity, CELGENE only shall be obligated to make a milestone payment corresponding to each of the events set forth in this Section 7.4.3 only once for each Development Candidate with respect to such Development Candidate or the first corresponding Licensed Product, as applicable, only for the first Indication (and, to the extent set forth in Section 7.4.3(a), (b) or (c), as applicable (subject to Section 7.4.3(e)(ii), the Second Indication), in any case regardless of the number of Licensed Products containing the same Development Candidate that achieve such milestone event or the number of times such milestone event occurs for any Licensed Product.

7.4.4 Payment of Milestones. Upon achievement by or on behalf of (a) CELGENE, its Affiliates or Sublicensees of any milestone event set forth in Section 7.4.2 (if achieved by CELGENE, its Affiliates or Sublicensees) or 7.4.3, CELGENE shall promptly (but in no event more than ten (10) Business Days after achievement thereof) notify SUTRO of such achievement, and (b) SUTRO or its Affiliates of any milestone event set forth in Section 7.4.1 or 7.4.2 (if achieved by SUTRO or its Affiliates), SUTRO shall promptly (but in no event more than ten (10) Business Days after achievement thereof) notify CELGENE of such achievement, and in each of (a) and (b), CELGENE shall pay SUTRO the corresponding milestone payment within thirty (30) Business Days after issuance by SUTRO of an invoice for such milestone payment. Each milestone payment shall be payable by wire transfer of immediately available funds in accordance with Section 7.6, and shall be non-refundable and non-creditable (in each case, subject to Section 13.9) against any other amount due hereunder.

7.4.5 Right to Set-off Following Production Issue. Following receipt by SUTRO of the CELGENE Manufacturing Notice in accordance with Section 6.5, CELGENE shall have the right to set off the CELGENE Manufacturing Costs actually incurred by CELGENE for a particular BAC/ADC Program against the amounts due to SUTRO (in accordance with Section 7.4.4) for the corresponding Development Candidate, on a Development Candidate-by-Development Candidate basis, upon achievement of the milestone events set forth in Section 7.4.3(a), (b) or (c), as applicable, in each case up to [*] percent ([*]%) of the applicable milestone payment. Unless a Production Issue has occurred, CELGENE shall not be entitled to set off applicable milestone payments to SUTRO pursuant to this Section 7.4.5 by amounts (if any) attributable to CELGENE Manufacturing Costs for parallel cell-based development pursuant to Section 6.5.1.

7.5. Royalties.

7.5.1 Royalty Rates.

(a) With respect to a Licensed Product that comprises or contains a Development Candidate that is a [*] DC (other than any WRDC under an Identified BAC/ADC Program, which shall be subject to subsections (c) or (d), as applicable, of this Section 7.5.1), CELGENE shall pay SUTRO royalties on Annual Net Sales by CELGENE, its Affiliates and Sublicensees in the CELGENE Territory, on a Licensed Product-by-Licensed Product basis, for the applicable Licensed Product at the royalty rates set forth in the table below:

Annual Net Sales in the CELGENE Territory of the applicable Licensed Product	**Incremental Royalty Rates**
(1) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees up to and including $[*]	[*]%
(2) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*] up to and including $[*]	[*]%
(3) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*]	[*]%

For the avoidance of doubt, with respect to Licensed Products comprising or containing a [*] DC, the CELGENE Territory is the entire world.

(b) With respect to a Licensed Product that comprises or contains a Development Candidate that is a Non-[*] DC, CELGENE shall pay SUTRO royalties on Annual Net Sales by CELGENE, its Affiliates and Sublicensees in the CELGENE Territory, on a Licensed Product-by-Licensed Product basis, for the applicable Licensed Product at the royalty rates set forth in the table below:

Annual Net Sales in the CELGENE Territory of the applicable Licensed Product	Incremental Royalty Rates
(1) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees up to and including $[*]	[*]%
(2) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*] up to and including $[*]	[*]%
(3) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*]	[*]%

For the avoidance of doubt, with respect to Licensed Products comprising or containing a Non-[*] DC, the CELGENE Territory is the entire world except the SUTRO Territory.

(c) With respect to a Licensed Product that comprises or contains a Development Candidate that is a WRDC under a [*] Program or [*] Program, CELGENE shall pay SUTRO royalties on Annual Net Sales by CELGENE, its Affiliates and Sublicensees in the CELGENE Territory, on a Licensed Product-by-Licensed Product basis, for the applicable Licensed Product at the royalty rates set forth in the table below:

Annual Net Sales in the CELGENE Territory of the applicable Licensed Product	Incremental Royalty Rates
(1) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees up to and including $[*]	[*]%
(2) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*] up to and including $[*]	[*]%
(3) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*]	[*]%

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For the avoidance of doubt, with respect to Licensed Products comprising or containing a WRDC, the CELGENE Territory is the entire world.

(d) With respect to a Licensed Product that comprises or contains a Development Candidate that is a WRDC under a [*] Program or [*] Program, CELGENE shall pay SUTRO royalties on Annual Net Sales by CELGENE, its Affiliates and Sublicensees in the CELGENE Territory, on a Licensed Product-by-Licensed Product basis, for the applicable Licensed Product at the royalty rates set forth in the table below:

Annual Net Sales in the CELGENE Territory of the applicable Licensed Product	**Incremental Royalty Rates**
(1) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees up to and including $[*]	[*]%
(2) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*] up to and including $[*]	[*]%
(3) Portion of Annual Net Sales by CELGENE, its Affiliates and Sublicensees greater than $[*]	[*]%

For the avoidance of doubt, with respect to Licensed Products comprising or containing a WRDC, the CELGENE Territory is the entire world.

7.5.2 Diagnostic Products. In the event CELGENE decides to develop one or more Diagnostic Products, the Parties shall discuss in good faith the terms applicable to the assistance, if any, to be provided by SUTRO with respect to such development, and other terms applicable to the development and commercialization of such Diagnostic Products, provided that, in the event CELGENE does commercialize such Diagnostic Products, CELGENE (a) shall pay to SUTRO royalties on annual net sales (to be calculated based on the definitions of "Annual Net Sales" and "Net Sales" of Licensed Products, *mutatis mutandis*) of such Diagnostic Products by CELGENE, its Affiliates and Sublicensees in the CELGENE Territory, on a Diagnostic Product-by-Diagnostic Product basis, at the rate of [*] percent ([*]%), and (b) shall otherwise comply with the applicable provisions of this Agreement, including Sections 7.5.7, 7.6 and 7.7. The royalties payable under this Section 7.5.2 with respect to Diagnostic Products shall be subject to the same reductions applicable to royalties on Net Sales of Licensed Products pursuant to Sections 7.5.3, 7.5.4 and 7.5.5, provided, however, that, notwithstanding anything to the contrary, in no event shall the operation of Sections 7.5.3, 7.5.4 and 7.5.5, individually or in combination, reduce the royalty rate for Diagnostic Products to less than [*] percent ([*]%). Notwithstanding anything to the contrary, (i) no milestone payments shall be due under this Agreement with respect to Diagnostic Products, and (ii) net sales of Diagnostic Products will not count for the purpose of determining the applicable royalty rate under Section 7.5.1.

7.5.3 Royalty Term. CELGENE's royalty obligations to SUTRO under this Section 7.5 shall commence on a country-by-country (in the CELGENE Territory) and Licensed Product-by-Licensed Product basis on the date of First Commercial Sale by CELGENE, its

Affiliates or Sublicensees to a Third Party of the applicable Licensed Product in the relevant country and shall expire on a country-by-country (in the CELGENE Territory) and Licensed Product-by-Licensed Product basis upon expiration of the Royalty Term for such Licensed Product; provided that, subject in all cases to the royalty floor set forth in Section 7.5.6, the royalty amounts payable with respect to Net Sales of Licensed Products shall be reduced, on a country-by-country (in the CELGENE Territory) and Licensed Product-by-Licensed Product basis, [*] percent ([*]%) of the amounts otherwise payable pursuant to Section 7.5.1 during any portion of the Royalty Term in which there is not at least one (1) Valid Claim of any CELGENE Patent which Covers the composition of matter, method of use, or formulation of such Licensed Product in such country. Only one royalty shall be payable by CELGENE for each sale of a Licensed Product.

7.5.4 Royalty Reduction for Comparable Third Party Product Competition. If, on a Licensed Product-by-Licensed Product, country-by-country (in the CELGENE Territory) and Calendar Quarter-by-Calendar Quarter basis,

(a) Comparable Third Party Product(s) has a market share of [*] percent ([*]%) to less than [*] percent ([*]%); or

(b) Comparable Third Party Product(s) has a market share of [*] percent ([*]%) or more;

then, subject in all cases to the royalty floor set forth in Section 7.5.6, the royalties payable with respect to Net Sales of such Licensed Product pursuant to Section 7.5.1 in such country during such Calendar Quarter shall be reduced by (i) [*] percent ([*]%) in the case of subclause (a) above and (ii) [*] percent ([*]%) in the case of subclause (b) above, respectively, of the royalties otherwise payable pursuant to Section 7.5.1. Market share shall be the aggregate market in such country of such Licensed Product and the Comparable Third Party Product(s) (based on sales of units of such Licensed Product and such Comparable Third Party Product(s), as reported by IMS International, or if such data are not available, such other reliable data source as reasonably agreed by the Parties). "Comparable Third Party Product" means, with respect to a Licensed Product in a country in the CELGENE Territory, any pharmaceutical product that (A) contains a highly similar or identical active ingredient(s) as such Licensed Product; (B) is approved for use in such country pursuant to a regulatory approval process governing approval of generic, interchangeable or biosimilar biologics based on the then-current standards for Regulatory Approval in such country, whether or not such Regulatory Approval was based upon clinical data generated by the Parties pursuant to this Agreement or was obtained using an abbreviated, expedited or other process; and (C) is sold in the same country as such Licensed Product by any Third Party that is not a Sublicensee of CELGENE or its Affiliates and did not purchase such product in a chain of distribution that included any of CELGENE or any of its Affiliates or its Sublicensees.

7.5.5 Royalty Reduction for Third Party Payments. The royalties payable under Section 7.5.1 shall be reduced, subject in all cases to the royalty floor set forth in Section 7.5.6, on a Licensed Product-by-Licensed Product, country-by-country (in the CELGENE Territory) and Calendar Quarter-by-Calendar Quarter basis, by an amount equal to [*] percent ([*]%) of any payments made to a Third Party in a Calendar Quarter on sales of such Licensed Product in such Calendar Quarter with respect to license rights to, or judgments owed to Third Parties regarding,

Third Party Patents that CELGENE reasonably determines would Cover, or otherwise be infringed by, the manufacture, use, offer for sale, sale or importation of such Licensed Product in such country. CELGENE may carry over and apply any payments made to a Third Party as described in this Section 7.5.5, which are incurred or accrued in a Calendar Quarter and are not deducted in such Calendar Quarter, to any subsequent Calendar Quarter(s). CELGENE shall not be entitled to reduce royalty payments to SUTRO pursuant to this Section 7.5.5 by amounts (if any) attributable to CELGENE Manufacturing Costs for parallel cell-based development pursuant to Section 6.5.1.

7.5.6 Royalty Floor. During the Royalty Term, notwithstanding anything to the contrary but subject to Section 13.9, in no event shall the operation of Sections 7.5.3, 7.5.4 and 7.5.5, individually or in combination, reduce the royalty rates set forth in the tables in Section 7.5.1 to less than [*] percent ([*]%), [*] percent ([*]%) and [*] percent ([*]%), respectively, for the royalties set out in clauses (1), (2) and (3) of such tables.

7.5.7 Payment of Royalties. CELGENE shall make royalty payments owed to SUTRO hereunder in arrears, within sixty (60) days from the end of each Calendar Quarter in which such payment accrues. Each royalty payment shall be accompanied by a report for each country in the CELGENE Territory in which sales of Licensed Product occurred in the Calendar Quarter covered by such statement, specifying: the gross sales (if available) and Net Sales in each country's currency; the applicable royalty rate under this Agreement; the royalties payable in each country's currency, including an accounting of deductions taken in the calculation of Net Sales in accordance with CELGENE's Accounting Principles; the applicable exchange rate to convert from each country's currency to U.S. Dollars under Section 7.6.1; and the royalties payable in U.S. Dollars.

7.6. Additional Payment Terms.

7.6.1 Accounting. All payments hereunder shall be made in the United States in U.S. Dollars by wire transfer to a bank in the U.S. designated in writing by SUTRO. Conversion of sales recorded in local currencies to Dollars shall be performed in a manner consistent with CELGENE's normal practices used to prepare its audited financial statements for internal and external reporting purposes.

7.6.2 Late Payments. Any payments or portions thereof due hereunder that are not paid on the date such payments are due under this Agreement shall bear interest at a rate equal to the lesser of: (a) [*] percentage points ([*]%) above the prime rate as published by Citibank, N.A., New York, New York, or any successor thereto, at 12:01 a.m. on the first day of each Calendar Quarter in which such payments are overdue or (b) the maximum rate permitted by applicable Law; in each case calculated on the number of days such payment is delinquent, compounded monthly.

7.6.3 Tax Withholding; Restrictions on Payment SUTRO will pay any and all taxes levied on account of all payments it receives under this Agreement. If applicable Laws require that taxes be withheld with respect to any payments by CELGENE to SUTRO under this Agreement, CELGENE will: (a) deduct those taxes from the remittable payment, (b) pay the taxes to the proper taxing authority, and (c) send evidence of the obligation together with proof of tax payment to SUTRO on a timely basis following that tax payment. Each Party agrees to cooperate

with the other Party in claiming refunds or exemptions from such deductions or withholdings under any relevant agreement or treaty which is in effect. The Parties shall discuss applicable mechanisms for minimizing such taxes to the extent possible in compliance with applicable Laws. In addition, the Parties shall cooperate in accordance with applicable Laws to minimize indirect taxes (such as value added tax, sales tax, consumption tax and other similar taxes) in connection with this Agreement.

7.6.4 Tax Matters. Notwithstanding anything to the contrary in the Agreement, including the use of the term "option" (or any derivation thereof), the Parties agree that the CELGENE Worldwide Rights Option is not treated as an option for US federal (or applicable state or local) income tax purposes, and furthermore agree not to take any position inconsistent with the foregoing.

7.7. Records Retention by CELGENE; Review by SUTRO.

7.7.1 Royalty Records. CELGENE agrees to keep, and to require its Affiliates and Sublicensees to keep, for at least three (3) years from the end of the Calendar Year to which they pertain, complete and accurate records of transfer and sales by CELGENE or its Affiliates or Sublicensees, as the case may be, of each Licensed Product, in sufficient detail to allow the accuracy of the payments hereunder to be confirmed.

7.7.2 Review. Subject to the other terms of this Section 7.7.2, at the request of SUTRO, which shall not be made more frequently than once per Calendar Year during the Term, upon at least thirty (30) days' prior written notice from SUTRO, and at the expense of SUTRO, CELGENE shall permit an independent, nationally-recognized certified public accountant selected by SUTRO and reasonably acceptable to CELGENE to inspect (during regular business hours) the relevant records required to be maintained by CELGENE under Section 7.7.1. In every case the accountant must have previously entered into a confidentiality agreement with both Parties substantially similar to the provisions of Article 10 and limiting the disclosure and use of such information by such accountant to authorized representatives of the Parties and the purposes germane to Section 7.7. Results of any such review shall be binding on both Parties absent manifest error. SUTRO shall treat the results of any such accountant's review of CELGENE's records as Confidential Information of CELGENE subject to the terms of Article 10. If any review reveals a deficiency or overpayment in the calculation and/or payment of royalties by CELGENE, then (a) CELGENE or SUTRO shall promptly pay the other Party the amount remaining to be paid, and (b) if such underpayment is by [*] percent ([*]%) or more in any Calendar Year, CELGENE shall, within thirty (30) days of invoice therefor, pay the reasonable out-of-pocket costs and expenses incurred by SUTRO in connection with the review.

7.8. SUTRO IPO.

7.8.1 SUTRO IPO. Within two (2) years of the Amendment Effective Date, if requested by SUTRO in connection with an initial public offering of SUTRO's common stock (an "IPO"), CELGENE may in its sole discretion purchase an amount of SUTRO common stock equal to, in CELGENE's sole discretion, either (i) CELGENE's IPO Equity Pro Rata Amount (as defined below) or (ii) [*] ($[*]), at a price per share equal to the price per share at which SUTRO sells shares of common stock in the IPO, in a private placement to close concurrently with the closing

of the IPO. If CELGENE in its sole discretion elects to purchase such shares, CELGENE agrees to enter into a stock purchase agreement and/or other documentation as reasonably requested by SUTRO or SUTRO's underwriters (and for which SUTRO's other shareholders with holdings in excess of [*]% of SUTRO's common stock agree to be bound) in advance of SUTRO's first public announcement of the IPO, in order to give effect to the foregoing agreement. In such agreement or documentation, Celgene shall agree that its purchase commitment may be reduced by SUTRO or SUTRO's underwriters in their sole discretion during the IPO pricing process. "IPO Equity Pro Rata Amount" means a dollar amount equal to (1) the percentage of SUTRO's outstanding capital stock, calculated on an issued and outstanding equity basis, held by CELGENE prior to the IPO, multiplied by (2) the aggregate amount that SUTRO proposes to raise through sales of its common stock in the IPO and the concurrent private placement to CELGENE. By way of example, if prior to the IPO CELGENE owns [*] percent ([*]%) of the outstanding SUTRO capital stock (calculated on an issued and outstanding equity basis) and SUTRO proposes to raise an aggregate of [*] Million Dollars ($[*]) through a combination of the IPO and a concurrent private placement to CELGENE, then the IPO Equity Pro Rata Amount would be [*] Dollars ($[*]).

7.8.2 SUTRO Planned IPO Agreement. SUTRO further agrees that in connection with a planned IPO, SUTRO will use commercially reasonable efforts to provide CELGENE with advance notice of, and an opportunity to review and comment on, those portions of the registration statement and prospectus for the IPO that describe SUTRO's collaborations with CELGENE, the associated programs and all material SUTRO-CELGENE agreements.

ARTICLE VIII
EXCLUSIVITY

8.1. Exclusivity.

8.1.1 Following the End of the Research Term. Subject to Section 8.1.3, following the expiration or termination of the Research Term and for the remainder of the Term, neither SUTRO nor any of its Affiliates shall:

(a) alone or with or for any Third Party, conduct any activities with respect to the research (including testing, designing, identifying or generating), development, manufacture (for research, development or commercialization), or commercialization of:

(i) any BAC (other than a Collaboration BAC in accordance with the terms of this Agreement), or any Antibody or other construct with bi- or multispecific binding capabilities that is not an antibody drug conjugate, that is Directed to the same Target Combination as any Collaboration BAC or associated Development Candidate or Licensed Products that CELGENE is actively pursuing, and only for so long as CELGENE is actively pursuing such Collaboration BAC or associated Development Candidate or Licensed Products;

(ii) any ADC (other than a Collaboration ADC in accordance with the terms of this Agreement) or any other antibody drug conjugate that is Directed to the same Target Combination as any Collaboration ADC or associated Development Candidate or Licensed Product that CELGENE is actively pursuing, and only for so long as CELGENE is actively pursuing such Collaboration ADC or associated Development Candidate or Licensed Products;

(iii) any Tumor Targeted Multispecific ADC Directed to any individual Target within a Target Combination (comprising solely Tumor Targets) to which any Collaboration ADC or associated Development Candidate or Licensed Product is Directed, if and for so long as CELGENE is actively pursuing such Collaboration ADC or associated Development Candidate or Licensed Products; or

(iv) any ADC (other than a Collaboration ADC in accordance with the terms of this Agreement) or any other antibody drug conjugate that is Directed to the same Target Combination as any Collaboration BAC or associated Development Candidate or Licensed Product that CELGENE is actively pursuing, and only for so long as CELGENE is actively pursuing such Collaboration BAC or associated Development Candidate or Licensed Products, unless such Target Combination is comprised solely of Tumor Targets and the Payload of such ADC or other antibody drug conjugate meets the minimum potency requirements set forth in Schedule 8.1.1(b)(ii)(C);

(b) grant a license or sublicense to any Third Party under any Patents or Know-How owned or controlled by SUTRO and/or its Affiliates during the Term, including the SUTRO IP and SUTRO Expression Technology, to conduct any activities set forth in the preceding sub-section (a); or

(c) transfer, assign, convey or otherwise sell any compound or product owned or controlled by SUTRO or its Affiliates that comprises or contains any such BAC, ADC, Antibody, antibody drug conjugate or construct described in the preceding sub-section (a);

(i) provided that this Section 8.1.1 shall not prevent SUTRO from engaging any Third Party subcontractors in accordance with Section 2.6.

(ii) For purposes of this Section 8.1.1, "actively pursuing" shall mean, with respect to a Collaboration BAC or Collaboration ADC, or associated Development Candidate or Licensed Products, that CELGENE is using Commercially Reasonable Efforts to develop such Collaboration BAC or Collaboration ADC, or associated Development Candidate or Licensed Product, provided that, (A) following initiation of a Phase 1 Clinical Trial for a particular Development Candidate, CELGENE shall be deemed to be "actively pursuing" the applicable Development Candidate, and associated Licensed Products, for the remainder of the Term for purposes of this Section 8.1.1, and (B) as of any time during the Term, the exercise of Commercially Reasonable Efforts by CELGENE (itself or through its Affiliates or Sublicensees) with respect to any Collaboration BAC or Collaboration ADC or associated Development Candidate or Licensed Products included in any BAC/ADC Program shall be deemed to satisfy the requirement to exercise Commercially Reasonable Efforts by CELGENE (itself or through its Affiliates or Sublicensees) with respect to each other Collaboration BAC or Collaboration ADC or associated Development Candidate or Licensed Products included in each such Program.

8.1.2 CELGENE Binder Exclusivity. For each proprietary CELGENE Binder (including any derivatives or modifications thereof) provided to SUTRO pursuant to the Research Plan under this Agreement for it to conduct its activities pursuant to the Research Plan, neither SUTRO nor any of its Affiliates shall (a) alone or with or for any Third Party, conduct any activities with respect to the research (including testing, designing, identifying or generating),

development, manufacture (for research, development or commercialization), or commercialization of any antibody, antibody drug conjugate or any construct with bi- or multispecific binding capabilities containing any such proprietary CELGENE Binder (including any derivatives or modifications thereof), or (b) grant a license or sublicense under the SUTRO IP or the SUTRO Expression Technology to any Third Party to conduct any such activities, or (c) transfer, assign, convey or otherwise sell any compound or product owned or controlled by SUTRO or its Affiliates that comprises or contains any such proprietary CELGENE Binder (including any derivatives or modifications thereof); provided that this Section 8.1.2 shall not prevent SUTRO from engaging any Third Party subcontractors in accordance with Section 2.6. For purposes of this Section 8.1.2, "proprietary" shall mean that CELGENE owns, or has (or has the option to acquire) exclusively licensed-in rights to, the applicable CELGENE Binder in the United States or at least one (1) Major EU Country. Further, this Section 8.1.2 shall apply solely to the extent that such proprietary CELGENE Binder was provided to SUTRO by CELGENE in order to conduct its activities pursuant to the Research Plan.

8.1.3 Business Program. After the expiration of the Research Term, in the event a Third Party acquires SUTRO and, the Third Party (or any of such Third Party's then-existing Affiliates) already has a program that existed prior to or implements a program after the acquisition of SUTRO that would otherwise violate Section 8.1.1 (a "Business Program"), then such Third Party (or such Third Party's Affiliate) or SUTRO, as applicable, shall be permitted to continue or implement such Business Program after such acquisition and such continuation or implementation shall not constitute a violation of Section 8.1.1 (and in no event shall such Business Program be deemed an Internal Program of SUTRO); provided however that (a) none of the SUTRO IP, SUTRO Expression Technology, or Patents or Know-How Controlled by CELGENE and licensed to SUTRO, shall be used in the Business Program, and (b) the research or development activities required under this Agreement shall be conducted separately from any research or development activities directed to such Business Program, including the maintenance of separate lab notebooks and records (password-protected to the extent kept on a computer network) and separate personnel working on each of the activities under this Agreement and the activities covered under such Business Program.

8.2. Government Approvals.

8.2.1 Efforts. Each Party shall coordinate and cooperate with one another and shall use its commercially reasonable efforts to eliminate any concern on the part of any court or governmental authority regarding the legality of this Agreement including promptly taking all steps to secure clearance from all court and governmental authorities under any applicable Antitrust Law, including cooperating in good faith with one another to address any investigation by a court or governmental authority and ensuring the prompt production of requested documents and information. Notwithstanding anything herein to the contrary, neither CELGENE nor any of its Affiliates shall be under any obligation to, nor, without CELGENE'S prior written consent (which consent may be withheld in CELGENE'S sole discretion), shall SUTRO, (a) make proposals, execute, agree or consent to or carry out agreements or submit to any court order or other injunction, ruling or decree of any court or governmental authority (i) providing for the sale or other disposition or holding separate of any assets of CELGENE or any of its Affiliates (including, after the Closing, SUTRO) or any of their Affiliates, or SUTRO or the holding separate of any equity interests of any such Person, or imposing or seeking to impose any limitation on the

ability of CELGENE or any of its Affiliates, to own such assets or to acquire, hold or exercise full rights of ownership of equity interests of SUTRO, or (ii) imposing or seeking to impose (x) any limitation whatsoever on the business activities of CELGENE or any of its Affiliates or (y) any limitation on the business activities of SUTRO, or (b) otherwise take any step to avoid or eliminate any impediment which may be asserted or requested under any applicable Law governing competition, monopolies or restrictive trade practices.

8.2.2 Antitrust Filings. Each Party shall make with any court or governmental authority any filing required, in the reasonable opinion of either Party, of it under any applicable Antitrust Law (an "Antitrust Filing") with respect to the transactions contemplated by this Agreement as promptly as practicable. The Parties shall cooperate with one another to the extent necessary in the preparation of any such Antitrust Filing. CELGENE shall be responsible for the filing fees associated with any Antitrust Filing; provided, however, that penalties that may be incurred as a result of actions or omissions on the part of a Party shall be the sole financial responsibility of such Party.

8.2.3 Information Exchange. CELGENE and SUTRO each shall promptly supply the other with any information which may be required in order to effectuate any filings or application pursuant to Section 8.2.2. Subject to applicable Law relating to the exchange of information and the preservation of any applicable attorney-client privilege, work product doctrine, self-audit privilege, or other similar privilege, each of SUTRO and CELGENE shall use commercially reasonable efforts to collaborate in reviewing and commenting on in advance, and to consult the other on, information relating to SUTRO, CELGENE or any of their subsidiaries, that appears in any filing made with, or written materials submitted to, any Third Party and/or any court or governmental authority in connection with any filing, investigation, or proceeding in connection with this Agreement or the transactions contemplated hereby (including under any Antitrust Law), provided, however, that to the extent any of the documents or information to be supplied are commercially or competitively sensitive a Party may satisfy its obligations by providing such documents or information to the other Party's outside antitrust counsel, with the understanding that such antitrust counsel shall not share such documents and information with its client. In connection with such collaboration, SUTRO and CELGENE each shall act reasonably and as promptly as practicable. Notwithstanding anything to the contrary in this Section 8.2, CELGENE shall have the sole right to determine, control, and direct the Parties' overall strategy with respect to any filings, submissions of information to, proceedings or negotiations with, or any other discussions, meetings, consultations, conversations or interactions with, any court or governmental authority under any applicable Antitrust Law.

8.2.4 Notification. Subject to this Section 8.2, each Party shall cooperate and use respectively all reasonable efforts to make all other registrations, filings and applications, to give all notices and to obtain as soon as practicable all governmental or other consents, transfers, approvals, orders, qualifications, authorizations, permits and waivers, if any, and to do all other things necessary or desirable for the consummation of the transactions as contemplated hereby.

8.2.5 Assistance. Without limiting the generality of the conditions set forth in Section 8.2.3, CELGENE and SUTRO each shall notify the other promptly upon the receipt of: (a) any comments from any officials of any court or governmental authority in connection with any filings made pursuant hereto and (b) any request by any officials of any court or governmental

authority for amendments or supplements to any filings made pursuant to, or information provided to comply in all material respects with, any applicable Law. Whenever any event occurs that is required to be set forth in an amendment or supplement to any filing made pursuant to Section 8.2.2, CELGENE or SUTRO, as the case may be, shall promptly inform the other of such occurrence and, subject to the terms and conditions in Section 8.2.3, cooperate in filing with the applicable court or governmental authority such amendment or supplement.

ARTICLE IX
INTELLECTUAL PROPERTY

9.1. Licenses.

9.1.1 Research Licenses.

(a) License Grants to CELGENE.

(i) Subject to Section 9.1.1(a)(ii), during the Research Term (and/or the Pre-Development Term, as applicable) SUTRO hereby grants to CELGENE an exclusive (even as to SUTRO and its Affiliates, subject to Section 9.1.9), worldwide, royalty-free right and license in the Field, with the right to grant sublicenses (subject to Section 9.1.4(a)), under the SUTRO IP solely to permit CELGENE to conduct its Collaboration activities as contemplated in the Research Plan and by this Agreement (including the activities described in Section 6.5), including with respect to the relevant Collaboration BACs and Collaboration ADCs Directed to Target Combinations in accordance with the terms of this Agreement.

(ii) Commencing solely upon the date of execution of the applicable SUTRO Background IP Transfer Agreement and for the remainder of the Research Term (and/or the Pre-Development Term, as applicable), SUTRO grants upon such date to CELGENE an exclusive (even as to SUTRO and its Affiliates, subject to Section 9.1.9), worldwide, royalty-free right and license in the Field, with the right to grant sublicenses (subject to Section 9.1.4(a)), under the Patents, Know-How, SUTRO Binder, SUTRO Format, SUTRO Linker and SUTRO Payload set forth in such SUTRO Background IP Transfer Agreement, and any and all Patents and Know-How Controlled by SUTRO and/or its Affiliates as of the Original Effective Date or thereafter during the Research Term (and/or the Pre-Development Term, as applicable) that Cover such SUTRO Binder, SUTRO Format, SUTRO Linker or SUTRO Payload, as applicable, solely to permit CELGENE to conduct its activities with respect to the Collaboration as contemplated in the Research Plan and this Agreement, including with respect to Collaboration BAC(s) and Collaboration ADC(s) Directed to Target Combinations in accordance with the terms of this Agreement, provided that such license shall be subject to any express limitations imposed by the applicable SUTRO Background IP Transfer Agreement.

(b) License Grants to SUTRO.

(i) Subject to Section 9.1.1(b)(ii), during the Research Term (and/or the Pre-Development Term, as applicable), CELGENE hereby grants to SUTRO a non-exclusive, worldwide, royalty-free right and license in the Field, with the right to grant sublicenses solely to Third Party subcontractors engaged by SUTRO in accordance with Section 2.6 (subject to Section 9.1.4(b)), under the CELGENE IP solely to permit SUTRO to conduct its Collaboration

activities as contemplated in the Research Plan and by this Agreement (and/or the Pre-Development Plan, as applicable), including with respect to the relevant Collaboration BACs and Collaboration ADCs Directed to Target Combinations in accordance with the terms of this Agreement.

(ii) Commencing solely upon the date of execution of the applicable CELGENE Background IP Transfer Agreement and for the remainder of the Research Term (and/or the Pre-Development Term, as applicable), CELGENE grants upon such date to SUTRO a non-exclusive, worldwide, royalty-free right and license in the Field, with the right to grant sublicenses solely to Third Party subcontractors engaged by SUTRO in accordance with Section 2.6 (subject to Section 9.1.4(b)), under the Patents, Know-How, Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker and CELGENE Payload set forth in such CELGENE Background IP Transfer Agreement, and any and all Patents and Know-How Controlled by CELGENE and/or its Affiliates as of the Original Effective Date or thereafter during the Research Term (and/or the Pre-Development Term, as applicable) that Cover such Antibody, CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload, as applicable, solely to permit SUTRO to conduct its activities with respect to the Collaboration as contemplated in the Research Plan (and/or the Pre-Development Plan, as applicable) and by this Agreement, including with respect to Collaboration BAC(s) and Collaboration ADC(s) Directed to Target Combinations in accordance with the terms of this Agreement, provided that such license shall be subject to any express limitations imposed by the applicable CELGENE Background IP Transfer Agreement.

9.1.2 Development and Commercialization License.

(a) License Grant to CELGENE. Commencing upon each Collaboration BAC or Collaboration ADC (Directed to a Target Combination) becoming a Development Candidate (but subject to the last sentence of this Section 9.1.2(a)), and continuing during the remainder of the Term (and until such later time as provided in Article 13, to the extent applicable), SUTRO hereby grants to CELGENE in the Field worldwide:

(i) an exclusive right and license (even as to SUTRO and its Affiliates, subject to Section 9.1.9), with the right to grant sublicenses (subject to Section 9.1.4(a)), under any Patent in the SUTRO IP that Covers such Development Candidate, to research, develop, manufacture, have manufactured, use, offer for sale, sell, import and otherwise commercialize such Development Candidate (including, in all cases, the corresponding Licensed Products and Diagnostic Products (subject to Section 7.5.2)), and

(ii) a non-exclusive right and license, with the right to grant sublicenses (subject to Section 9.1.4(a)), under any Know-How in the SUTRO IP to research, develop, manufacture, have manufactured, use, offer for sale, sell, import and otherwise commercialize such Development Candidate (including, in all cases, the corresponding Licensed Products and Diagnostic Products (subject to Section 7.5.2));

(iii) provided that, in each case of (i) and (ii):

(iv) (A) Unless and until a SUTRO Opt-Out has occurred pursuant to Section 2.6, CELGENE's right to offer for sale, sell, import and otherwise commercialize Development Candidates (including, in all cases, the corresponding Licensed Products and Diagnostic Products) shall exclude Non-[*] DCs in the SUTRO Territory upon IND Clearance in the SUTRO Territory. Notwithstanding the foregoing and anything to the contrary in this Agreement, a Collaboration BAC or Collaboration ADC may only be clinically developed or commercialized by CELGENE upon Nomination as a Development Candidate in accordance with this Agreement, and CELGENE shall not initiate any IND-Enabling Study or file an IND for any Collaboration BAC or Collaboration ADC until such Collaboration BAC or Collaboration ADC is designated as a Development Candidate in accordance with this Agreement.

(b) License Grant to SUTRO. Subject to Section 4.6, commencing upon each Non-[*] DC achieving IND Clearance in the SUTRO Territory, and continuing during the remainder of the Term (and until such later time as provided in Article 13, to the extent applicable), CELGENE hereby grants to SUTRO in the Field in the SUTRO Territory:

(i) an exclusive right and license (even as to CELGENE and its Affiliates, subject to Section 9.1.9), with the right to grant sublicenses (subject to Section 9.1.4(b)), under any Patent in the CELGENE IP that Covers such Non-[*] DC, to research, develop, use, offer for sale, sell, import and otherwise commercialize such Non-[*] DC (including, in all cases, the corresponding Licensed Products and Diagnostic Products), and

(ii) a non-exclusive right and license, with the right to grant sublicenses (subject to Section 9.1.4(b)), under anyKnow-How in the CELGENE IP to research, develop, manufacture, have manufactured, use, offer for sale, sell, import and otherwise commercialize such Non-[*] DC (including, in all cases, the corresponding Licensed Products and Diagnostic Products);

(iii) provided that, in each case of (i) and (ii), SUTRO's right to offer for sale, sell, import and otherwise commercialize Development Candidates (including, in all cases, the corresponding Licensed Products and Diagnostic Products) shall be limited to Non-[*] DCs in the SUTRO Territory (which, for clarity, is the United States). For clarity, subject to Section 3.1.1, a Non-[*] DC may only be clinically developed or commercialized by SUTRO upon IND Clearance in the SUTRO Territory in accordance with this Agreement, and except as expressly permitted herein, SUTRO shall not initiate any IND-Enabling Study or file an IND for any Development Candidate.

9.1.3 SUTRO Expression Technology Back-Up Licenses. Subject to the terms of the Agreement, SUTRO hereby grants to CELGENE, with the right to grant sublicenses (subject to Section 9.1.4):

(a) an exclusive (even as to SUTRO and its Affiliates, subject to Section 9.1.9), worldwide license, in the Field, under the SUTRO Expression Technology, solely for the purpose of CELGENE (i) having a CMO manufacture (in accordance with Section 13.6.3(e)) any Development Candidates and corresponding Licensed Products Directed to a Target Combination, and (ii) developing, using, offering for sale, selling, importing and otherwise commercializing Development Candidates and corresponding Licensed Products, provided that, for clarity, a

Collaboration BAC or Collaboration ADC may only be clinically developed or commercialized by CELGENE upon designation as a Development Candidate in accordance with this Agreement, and notwithstanding anything herein to the contrary, CELGENE shall not initiate any IND-Enabling Study or file an IND for any Collaboration BAC or Collaboration ADC until such Collaboration BAC or Collaboration ADC is designated as a Development Candidate in accordance with this Agreement; and

(b) a non-exclusive, worldwide license in the Field under the applicable SUTRO Expression Patents solely to the extent necessary (if at all) to permit CELGENE to conduct the activities permitted under Section 9.1.1(a) and otherwise in accordance with this Agreement.

(c) Notwithstanding the above, no SUTRO Expression Know-How shall be transferred under this Agreement until the earliest of (i) subject to the last two sentences of this Section 9.1.3(c), the decision to use a CELGENE CMO pursuant to Section 6.2 (in which case such SUTRO Expression Know-How shall be transferred to the Potential CMO or CELGENE CMO, in accordance with, and subject to the process set forth, in Section 6.2), (ii) termination of the Agreement by CELGENE in accordance with Section 13.2 (in which case such SUTRO Expression Know-How shall be transferred solely to the applicable CELGENE CMO or Potential CMO(s), in accordance with, and subject to the process set forth in, Section 13.6.3(e)), (iii) exercise by CELGENE of the rights set forth in Section 9.3 (in which case such SUTRO Expression Know-How shall be transferred solely to the applicable CELGENE CMO, in accordance with, and subject to the process set forth in, Section 13.6.3(e)), and (iv) CELGENE's written request, solely to permit the applicable regulatory personnel at CELGENE to compile and review the CMC (and other relevant) portions of Regulatory Materials to be submitted for Regulatory Approval to the applicable Regulatory Authority; provided that (a) in the case of this subsection (iv), such transfer shall not include any tangible embodiments of the SUTRO Expression Technology other than information and documentation, and (b) such personnel shall be subject to the obligations of confidentiality and non-use set forth in Article 10. In addition, prior to execution of a manufacturing agreement pursuant to Section 6.2, upon CELGENE's written request, SUTRO shall provide to each Potential CMO, pursuant to a material transfer agreement with commercially reasonable terms, such Know-How as reasonably necessary for each such Potential CMO to evaluate the possible terms of a manufacturing agreement with CELGENE or its Affiliates. Furthermore, upon completion of the evaluation described above, the Potential CMO shall return to SUTRO, or at SUTRO's written request, destroy such Know-How, and provide to SUTRO a written confirmation thereof.

(d) The licenses granted under this Section 9.1.3(a) and (b) shall be subject to, and limited by, the terms of the StanfordIn-License, and CELGENE agrees to comply with all such terms, including those set forth in Schedule 9.1.3(d).

9.1.4 Sublicenses.

(a) By CELGENE. CELGENE shall have the right to grant sublicenses under the rights granted to it under Sections 9.1.1(a), 9.1.2(a) and 9.1.3, without the prior written consent of SUTRO, to any (i) Affiliate of CELGENE, (ii) Third Party subcontractor engaged by CELGENE in accordance with Section 2.6, and (iii) (with respect to the rights granted under

Sections 9.1.2(a) and 9.1.3) any Third Party for the development and commercialization of any Development Candidate and corresponding Licensed Products, provided that in the event CELGENE grants a sublicense under this Section 9.1.4(a)(iii), CELGENE shall provide SUTRO with a fully-executed copy of any agreement (redacted as necessary to protect confidential or commercially sensitive information) reflecting any such sublicense promptly after the execution thereof, provided that, such copy shall provide SUTRO with sufficient information to enable SUTRO to ascertain that any such sublicense is in conformance with this Agreement, including Section 2.6. Each sublicense granted by CELGENE under this Section 9.1.4(a) shall be subject to and subordinate to the terms and conditions of this Agreement. CELGENE shall remain fully responsible to SUTRO for the performance of any and all such terms by its Sublicensees.

(b) By SUTRO. SUTRO shall have the right to grant sublicenses under the rights granted to it (i) under Section 9.1.1(b) without the prior written consent of CELGENE to Third Party subcontractors engaged by SUTRO in accordance with Section 2.6, and (ii) under Section 9.1.2(b) without the prior written consent of CELGENE, to any (A) Affiliate of SUTRO, (B) Third Party subcontractor engaged by SUTRO in accordance with Section 2.6, and (C) any Third Party for the development and commercialization of any Development Candidate and corresponding Licensed Products, provided that in the event SUTRO grants a sublicense under Section 9.1.4(b)(i), Section 9.1.4(b)(ii)(B) or Section 9.1.4(b)(ii)(C), SUTRO shall provide CELGENE with a fully-executed copy of any agreement (redacted as necessary to protect confidential or commercially sensitive information) reflecting any such sublicense promptly after the execution thereof, provided that, such copy shall provide CELGENE with sufficient information to enable CELGENE to ascertain that any such sublicense is in conformance with this Agreement, including Section 2.6. Each sublicense granted by SUTRO under this Section 9.1.4(b) shall be subject to and subordinate to the terms and conditions of this Agreement. SUTRO shall remain fully responsible to CELGENE for the performance of any and all such terms by its sublicensees, each of which shall be a "licensee" of SUTRO for purposes of this Agreement.

9.1.5 Third Party Sourced IP. With respect to any Binder, Format, Linker or Payload contributed by a Party that isin-licensed from a Third Party pursuant to Section 2.2.3, the Parties will discuss the ownership of Inventions conceived or reduced to practice in the course of performing activities pursuant to the Research Plan (and/or Pre-Development Plan, as applicable) with respect to such Binder, Format, Linker or Payload and the scope of any licenses (for clarity, in addition to Sections 9.1.1 and 9.1.2) to be granted by one Party to the other Party with respect to such Inventions. Further, in the event SUTRO wishes to in-license intellectual property from a Third Party for purposes of the Collaboration that does not constitute a Binder, Format, Linker or Payload, the Parties shall first discuss the need and scope of license for such intellectual property. In the event CELGENE does not agree as to the need for such intellectual property, then SUTRO shall be solely responsible for any payments obligations to such Third Party for such license.

9.1.6 Conjugation Chemistry. CELGENE hereby grants to SUTRO a non-exclusive, worldwide, royalty-free, right and license, with the right to grant and authorize sublicenses (subject to Section 9.1.4(b)), to practice and otherwise exploit any Conjugation Chemistry Controlled by CELGENE or its Affiliates for any core business purpose of SUTRO; provided, that in the event SUTRO or any of its sublicensees discover, develop, invent, conceive or reduce to practice any improvements, modifications or derivatives thereof, whether or not patentable ("Conjugation Chemistry Improvements"), SUTRO hereby grants, and shall cause its

sublicensees to grant, to CELGENE a non-exclusive, worldwide, royalty-free, right and license, with the right to grant and authorize sublicenses, to practice and exploit any Conjugation Chemistry Improvements for any core business purpose of CELGENE. For avoidance of doubt, the license granted to SUTRO in this Section 9.1.6 is subject to CELGENE's rights pursuant to Section 9.1 as well as the exclusivity provisions set forth in Section 8.1. SUTRO shall remain fully responsible to CELGENE for the performance of any and all such terms by its sublicensees.

9.1.7 Third Party Technology. The Parties acknowledge and agree that as of the Original Effective Date, SUTRO does not and will not use the Scripps Technology in any manner in the Collaboration, and that no sublicense, whether to Patents or Know-How, are granted to CELGENE pursuant to Section 9.1 (or otherwise pursuant to this Agreement) under the Scripps In-License and the Patents and Know-How in-licensed under the Scripps In-License are not Controlled by SUTRO for purposes of this Agreement. In the event the Parties mutually agree, through the JSC, to use any Patents, Know-How or other technology owned or controlled by a Third Party, that is not licensed to CELGENE as of the Original Effective Date (the "Third Party Technology"), (a) SUTRO will grant CELGENE licenses under such Third Party Technology that are substantially similar to the licenses granted to CELGENE in Sections 9.1.1(a), 9.1.2(a) and 9.1.3, as applicable, and (b) the Parties will agree upon allocation of any costs arising under the Third Party Technology. In addition, SUTRO covenants that (i) it will not perform any activity under the Collaboration related to the incorporation of NNAAs that infringes any claim of any patent or published patent application (other than the Scripps Patents) owned by The Scripps Research Institute and/or its Affiliates (such patents, but not such patent applications, collectively, the "Other Scripps Patents") issued or published, as applicable, as of the Original Effective Date, (ii) it will use Commercially Reasonable Efforts to monitor the issuance of additional Other Scripps Patents subsequent to the Original Effective Date, and (iii) it will not perform any activity under the Collaboration that infringes any claim of any such additional Other Scripps Patents.

9.1.8 Non-Exclusive Licenses to Data and Results. Subject to the terms and conditions of this Agreement, each Party hereby grants to the other Party a non-exclusive, worldwide, royalty-free, fully paid-up, perpetual, irrevocable, non-terminable, non-transferable and non-sublicensable license to use for any and all purposes any and all data and results (including pharmacological, toxicological and clinical test data and results, research data, and reports) included in the Inventions that are Controlled by such Party which relate to the research and development of, during the Research Term (or, limited to data and results generated under the Pre-Development Plan, the Pre-Development Term), Abandoned BACs and Abandoned ADCs.

9.1.9 Rights Retained by the Parties. For purposes of clarity, each Party retains the right under Know-How and Patents Controlled by such Party to the extent necessary to exercise its rights and perform its obligations under this Agreement, and any rights of SUTRO or CELGENE, as the case may be, not expressly granted to the other Party pursuant to this Agreement shall be retained by such Party. Notwithstanding anything contrary in this Agreement, SUTRO shall have (a) the right to license or transfer the SUTRO Expression Technology and any improvements thereof, to any Third Party in SUTRO's discretion for any purpose, provided that there is no conflict with the license(s) granted in Section 9.1 or the exclusivity provisions set forth in Section 8.1, and (b) the right to use and exploit any SUTRO IP, and any SUTRO Binder, SUTRO Format, SUTRO Linker and/or SUTRO Payload in connection with any Internal Program of SUTRO in accordance with this Agreement. For clarity, SUTRO retains the rights to any and all potential uses of the SUTRO Expression Technology except those subject to the license(s) granted in Section 9.1 or the exclusivity provisions set forth in Section 8.1.

9.2. No Implied License. Except for the rights expressly granted under this Agreement, no right, title, or interest of any nature whatsoever is granted whether by implication, estoppel, reliance, or otherwise, by any Party to the other Party. All rights with respect to Know-How, Patent or other intellectual property rights that are not specifically granted herein are reserved to the owner thereof. CELGENE agrees not to use any SUTRO IP or SUTRO Expression Technology (including any tangible embodiments thereof) or any ADCs or BACs, and any variants thereof, and any all derivatives and modifications of any of the foregoing, to research, develop or commercialize any compound or product, other than (a) Collaboration BACs, Collaboration ADCs, and Development Candidates thereof pursuant to the Research Plan and other terms of this Agreement, or (b) development or commercialization of a Development Candidate and its corresponding Licensed Products and Diagnostic Products pursuant to this Agreement and subject to the payment obligations under Article 7.

9.3. Section 365(n) of the Bankruptcy Code. All licenses granted under this Agreement are deemed to be, for purposes of Section 365(n) of the U.S. Bankruptcy Code, licenses of rights to "intellectual property" as defined in Section 101 of such Code. Each Party, as licensee, may fully exercise all of its rights and elections under the U.S. Bankruptcy Code and any foreign equivalent thereto in any country having jurisdiction over a Party or its assets (the "Bankruptcy Code"). The Parties further agree that, if a Party elects to retain its rights as a licensee under any Bankruptcy Code, such Party shall be entitled to complete access to any technology licensed to it hereunder and all embodiments of such technology. Such embodiments of the technology shall be delivered to the licensee Party (in the case of SUTRO Know-How, in accordance with, and subject to the process set forth in, Section 13.6.3(e)) not later than: (a) the commencement of bankruptcy proceedings against the licensor, upon written request, unless the licensor elects to perform its obligations under the Agreement, or (b) if not delivered under Section 9.3 upon the rejection of this Agreement by or on behalf of the licensor, upon written request. Any agreements supplemental hereto will be deemed to be "agreements supplementary to" this Agreement for purposes of Section 365(n) of the Bankruptcy Code.

9.4. Ownership.

9.4.1 CELGENE Ownership.

(a) Retained Rights. As between the Parties, CELGENE retains all right, title and interest in and to the CELGENE IP, including any CELGENE Background IP, and each CELGENE Binder, CELGENE Format, CELGENE Linker and CELGENE Payload, except to the extent that any right is expressly licensed by CELGENE to SUTRO under this Agreement.

(b) CELGENE Core Technology. Subject to Section 9.4.2(a), as between the Parties, CELGENE shall solely own any and all Inventions to the extent related to: (i) each CELGENE Binder, CELGENE Format, CELGENE Linker and CELGENE Payload, and any derivatives and modifications thereof, (ii) the CELGENE Background IP (provided that with respect to any Invention solely related to any CELGENE Binder, CELGENE Format, CELGENE Linker or CELGENE Payload, the foregoing subclause (i) will apply), (iii) the compositions of

matter, methods of use, and formulations of each Nominated Development Candidate and corresponding Licensed Product, including any modification to the amino acid sequence of a Development Candidate to the extent necessary to enable the production of such Development Candidate at scale or as required by a Regulatory Authority, provided that such Development Candidate that includes such modified sequence shall be Directed to the applicable Target Combination (each such modification, a "Permitted Modification"), and (iv) any conjugation chemistry between a NNAA incorporated in an Antibody (but excluding any NNAA structure) and the applicable Linker (such Inventions, "Conjugation Chemistry") (collectively, the "CELGENE Core Technology"). Notwithstanding anything to the contrary in this Agreement, in no event shall the CELGENE Core Technology include any SUTRO Core Technology with respect to the SUTRO Expression Technology.

(c) Assignment by SUTRO. SUTRO hereby: (i) assigns to CELGENE all of its right, title and interest in and to the CELGENE Core Technology, and (ii) agrees to execute and deliver all documents reasonably required to evidence or record such assignment.

9.4.2 SUTRO Ownership.

(a) Retained Rights. As between the Parties, SUTRO retains all right, title and interest in and to the SUTRO IP, including any SUTRO Background IP, and each SUTRO Binder, SUTRO Format, SUTRO Linker and SUTRO Payload, and SUTRO Expression Technology, except to the extent that any right is expressly licensed by SUTRO to CELGENE under this Agreement.

(b) SUTRO Core Technology. Subject to Section 9.4.1(a), as between the Parties, SUTRO shall solely own any and all Inventions to the extent related to: (i) the SUTRO Expression Technology, (ii) each SUTRO Binder, SUTRO Format, SUTRO Linker and SUTRO Payload, and any derivatives and modifications thereof, (iii) each Collaboration BAC and Collaboration ADC, and any derivatives and modifications thereof (other than the composition of matter, methods of use, and formulations of each Development Candidate and Licensed Product, including any Permitted Modifications), (iv) any tRNA charged with NNAAs or relating to the expression of proteins containing NNAAs, and any derivatives and modifications thereof, and (v) any NNAA, and incorporation of NNAAs in proteins in general or in families or classes of proteins (collectively, the "SUTRO Core Technology"). Notwithstanding anything to the contrary in this Agreement, in no event shall the SUTRO Core Technology include any CELGENE Core Technology.

(c) Assignment by CELGENE. CELGENE hereby: (i) assigns to SUTRO all of its right, title and interest in and to the SUTRO Core Technology, and (ii) agrees to execute and deliver all documents reasonably required to evidence or record such assignment. Notwithstanding Section 9.4.1(b), in the event that a Non-[*] DC becomes an Abandoned Non-[*] DC pursuant to Section 2.2.6(b)(iii), CELGENE shall assign to SUTRO, at the time such Non-[*] DC becomes an Abandoned Non-[*] DC, all rights under Section 9.4.1(b)(iii) that were previously assigned by SUTRO to CELGENE pursuant to Section 9.4.1(c) with respect to the Abandoned Non-[*] DC.

9.4.3 All Other Inventions. Ownership of all Inventions that are not CELGENE Core Technology or SUTRO Core Technology shall be determined as follows:

(a) Sole Inventions. Each Party shall own any such Inventions that are discovered, developed, invented, conceived or reduced to practice solely, as between the Parties, by such Party.

(b) Joint Inventions.

(i) The Parties shall jointly own any such Inventions that are discovered, developed, invented, conceived or reduced to practice jointly by the Parties (the "Joint Inventions"), including any Patents that solely Cover the Joint Inventions (the "Joint Patents"). Prosecution and Maintenance, and enforcement, of the Joint Patents shall be managed as mutually agreed by the Parties. Except as expressly provided in this Agreement, it is understood that neither Party shall have any obligation to account to the other for profits, or to obtain any approval of the other Party to license, assign or otherwise exploit any Joint Inventions or Joint Patents, by reason of joint ownership thereof, and each Party hereby waives any right it may have under the laws of any jurisdiction that require any such approval or accounting. For the avoidance of doubt, Joint Patents will be deemed SUTRO Patents or CELGENE Patents solely for the purposes of the licenses granted to CELGENE or SUTRO, respectively, in Section 9.1.

(ii) Notwithstanding Section 9.4.3(a), any Invention that constitutes both CELGENE Core Technology and SUTRO Core Technology shall be jointly owned by the Parties and shall be considered Joint Inventions and subject to the terms of Section 9.4.3(b)(i).

Inventorship of any patentable Inventions shall be determined in accordance with the rules of inventorship under United States patent laws.

9.4.4 Disclosure. During the Term, each Party shall update the other Party through the Patent Committee on a quarterly basis with respect to the making, conception or reduction to practice of any Inventions directly arising out of activities conducted under this Agreement, including any Inventions falling within the scope of SUTRO Core Technology or CELGENE Core Technology.

9.5. Prosecution and Maintenance of Patents. The Parties will perform their respective activities under this Section 9.5 in accordance with the Patent Strategy to the extent reasonably practicable and legally permissible.

9.5.1 SUTRO Patents.

(a) First Right to Prosecute. As between the Parties, SUTRO shall have the first right (but not the obligation) to Prosecute and Maintain the SUTRO Patents at its cost (subject to the second to last sentence of this Section 9.5.1(a)). SUTRO shall keep CELGENE informed as to material developments with respect to the Prosecution and Maintenance of such Patents, including by providing copies of all substantive office actions or any other substantive documents that SUTRO receives from any patent office, including notice of all interferences, reissues, re-examinations, oppositions or requests for patent term extensions. The Prosecution and

Maintenance conducted in accordance with the terms and conditions of this Agreement of any SUTRO Patent Covering a BAC or ADC, Development Candidate or corresponding Licensed Product (each, a "Product-Specific SUTRO Patent") and exclusively licensed to CELGENE under this Agreement shall be at CELGENE's cost. For clarity, no rights are granted under this Section to CELGENE with respect to the SUTRO Expression Patents.

(b) Second Right to Prosecute. If, during the Term, SUTRO in any country in the world decides not to file any Product-Specific SUTRO Patent or intends to allow such Patent to lapse or become abandoned without having first filed a substitute, it shall notify and consult with CELGENE of such decision or intention at least sixty (60) days prior to the date upon which the subject matter of such Patent shall become unpatentable or such Patent shall lapse or become abandoned, and CELGENE shall thereupon have the right (but not the obligation) to assume the Prosecution and Maintenance thereof at CELGENE's expense with counsel of its choice. For clarity, CELGENE shall not have the right pursuant to this Section 9.5.1(b) to assume the Prosecution and Maintenance of any SUTRO Expression Patent, or any SUTRO Patent other than a Product-Specific SUTRO Patent.

9.5.2 CELGENE Patents.

(a) First Right to Prosecute. As between the Parties, CELGENE shall have the first right (but not the obligation) to Prosecute and Maintain the CELGENE Patents at its cost. CELGENE shall keep SUTRO informed as to material developments with respect to the Prosecution and Maintenance of such Patents, including by providing copies of all substantive office actions or any other substantive documents that CELGENE receives from any patent office, including notice of all interferences, reissues, re-examinations, oppositions or requests for patent term extensions.

(b) Second Right to Prosecute. If, during the Term, CELGENE in any country in the world decides not to file any CELGENE Patent or intends to allow such Patent to lapse or become abandoned without having first filed a substitute, it shall notify and consult with SUTRO of such decision or intention at least sixty (60) days prior to the date upon which the subject matter of such Patent shall become unpatentable or such Patent shall lapse or become abandoned, and SUTRO shall thereupon have the right (but not the obligation) to assume the Prosecution and Maintenance thereof at SUTRO's expense with counsel of its choice. For clarity, SUTRO shall not have the right pursuant to this Section 9.5.2(b) to assume the Prosecution and Maintenance of any Patent in the CELGENE IP other than a CELGENE Patent.

9.5.3 Cooperation.

(a) General. Each Party agrees to make its employees, agents and consultants reasonably available to the other Party (or to the other Party's authorized attorneys, agents or representatives), to the extent reasonably necessary to enable the Party responsible for the Prosecution and Maintenance of a Patent in accordance with this Section 9.5.3 to undertake such Prosecution and Maintenance, and shall assist in any license registration processes with applicable governmental authorities that may be available for the protection of a Party's interests in this Agreement. In the event of any termination of a Party's license rights hereunder, the Party with a license registration related to such terminated license rights shall promptly cooperate with any request by the other Party to terminate any such registration relating to the terminated license rights.

(b) Regarding the Filing and Prosecution of Divisional Patent Applications. The Parties shall cooperate with one another, through the Patent Committee and their respective Patent Liaisons, to file and prosecute the SUTRO Patents and CELGENE Patents for which either Party is responsible for Prosecution and Maintenance pursuant to this Section 9.5, including in the furtherance of the Patent Strategy. At either Party's request, the Parties shall cooperate with one another to file and prosecute divisional Patent applications with respect to SUTRO Patents and CELGENE Patents, in each case that are primarily applicable to any Target Combination, ADC or BAC Directed to a Target Combination, Development Candidate, Licensed Product or Diagnostic Product, if practicable and if necessary or desirable to divide subject matter relating to the development, manufacture or commercialization of Licensed Products or Diagnostic Products from other subject matter.

9.6. Defense of Claims Brought by Third Parties. If a Party becomes aware of any claim that the research, development, manufacture or commercialization of any Development Candidate or corresponding Licensed Product, in each case, infringes the intellectual property rights of any Third Party, such Party shall promptly notify the other Party. In any such instance, the Parties shall as soon as practicable thereafter discuss in good faith regarding the best response to such notice, subject to Article 12.

9.7. Enforcement of Patents.

9.7.1 Notice. If any Party learns of an infringement or threatened infringement by a Third Party with respect to any CELGENE Patent or SUTRO Patent (excluding for clarity any SUTRO Expression Patents), including actual or alleged infringement under 35 USC §271(e)(2) that is or would be competitive with a Development Candidate or corresponding Licensed Product with respect to at least one (1) Target of a Target Combination ("Competitive Infringement"), such Party shall promptly notify the other Party and shall provide such other Party with available evidence of such Competitive Infringement.

9.7.2 Enforcement.

(a) SUTRO Patents. SUTRO shall have the primary right, but not the obligation, to institute, prosecute, and control any action or proceeding with respect to any Competitive Infringement of any Product-Specific SUTRO Patent(s) under this Agreement, by counsel of its own choice. The foregoing right of SUTRO shall include the right to perform all actions of a reference product sponsor set forth in the Hatch-Waxman Act or any ex-U.S. equivalent of the Hatch-Waxman Act. CELGENE will have the right, at its own expense and by counsel of its choice, to be represented in any such action or proceeding. At SUTRO's request, CELGENE will join any such action or proceeding as a party and will use Commercially Reasonable Efforts to cause any Third Party as necessary to join such action or proceeding as a party (all at SUTRO's expense) if doing so is necessary for the purposes of establishing standing or is otherwise required by applicable Law to pursue such action or proceeding. SUTRO will have a period of ninety (90) days after its receipt or delivery of notice and evidence pursuant to Section 9.7.1 to elect to so enforce such Product-Specific SUTRO Patent(s) in the applicable jurisdiction

(or to settle or otherwise secure the abatement of such Competitive Infringement), provided however, that such period will be more than ninety (90) days to the extent applicable Law prevents earlier enforcement of such SUTRO Patent(s) (such as the enforcement process set forth in or under the Hatch-Waxman Act or any ex-U.S. equivalent of the Hatch-Waxman Act) and such period will be less than ninety (90) days to the extent that a delay in bringing an action to enforce the applicable Product-Specific SUTRO Patent(s) against such alleged Third Party infringer would limit or compromise the remedies (including monetary and injunctive relief) available against such alleged Third Party infringer. In the event SUTRO does not so elect (or settle or otherwise secure the abatement of such Competitive Infringement) within the aforementioned period of time or twenty (20) days before the time limit, if any, for the filing of an action or proceeding or taking of any other action with respect to such Competitive Infringement, whichever is sooner, it will so notify CELGENE in writing and in the case where CELGENE then desires to commence a suit or take action to enforce the applicable SUTRO Patents with respect to such Competitive Infringement in the applicable jurisdiction, the Parties will confer and upon SUTRO's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed), CELGENE will have the right to commence such a suit or take such action to enforce the applicable SUTRO Patent(s), at CELGENE's expense. Each Party will provide to the Party enforcing any such rights under this Section 9.7.2 reasonable assistance and cooperation in such enforcement, at such enforcing Party's request and expense, including joining such action as a party plaintiff if required by applicable Law to pursue such action. The enforcing Party will keep the other Party regularly informed of the status and progress of such enforcement efforts, and will reasonably consider the other Party's comments on any such efforts. For clarity, CELGENE shall not have any rights pursuant to this Section 9.7.2 to assume the Prosecution and Maintenance of any SUTRO Expression Patent, or any SUTRO Patent other than a Product-Specific SUTRO Patent.

(b) CELGENE Patents. Except as set forth in Section 9.7.2(c), CELGENE shall have the sole right, but not the obligation, to institute, prosecute, and control any action or proceeding with respect to any Competitive Infringement of any CELGENE Patent under this Agreement, by counsel of its own choice.

(c) Non-[*] DCs. Solely with respect to any CELGENE Patent(s) that Covers a Non-[*] DC in the SUTRO Territory, the following shall apply: CELGENE shall have the primary right, but not the obligation, to institute, prosecute, and control any action or proceeding with respect to any Competitive Infringement of such CELGENE Patent(s) in the SUTRO Territory under this Agreement, by counsel of its own choice. The foregoing right of CELGENE shall include the right to perform all actions of a reference product sponsor set forth in the Hatch-Waxman Act. SUTRO will have the right, at its own expense and by counsel of its choice, to be represented in any such action or proceeding. At CELGENE's request, SUTRO will join any such action or proceeding as a party and will use Commercially Reasonable Efforts to cause any Third Party as necessary to join such action or proceeding as a party (all at CELGENE's expense) if doing so is necessary for the purposes of establishing standing or is otherwise required by applicable Law to pursue such action or proceeding. CELGENE will have a period of ninety (90) days after its receipt or delivery of notice and evidence pursuant to Section 9.7.1 to elect to so enforce such CELGENE Patent(s) in the SUTRO Territory (or to settle or otherwise secure the abatement of such Competitive Infringement), provided however, that such period will be more than ninety (90) days to the extent applicable Law prevents earlier enforcement of such CELGENE Patent(s) (such as the enforcement process set forth in or under the Hatch-Waxman Act) and such

period will be less than ninety (90) days to the extent that a delay in bringing an action to enforce the applicable CELGENE Patent(s) against such alleged Third Party infringer would limit or compromise the remedies (including monetary and injunctive relief) available against such alleged Third Party infringer. In the event CELGENE does not so elect (or settle or otherwise secure the abatement of such Competitive Infringement) within the aforementioned period of time or twenty (20) days before the time limit, if any, for the filing of an action or proceeding with respect to such Competitive Infringement, whichever is sooner, it will so notify SUTRO in writing and in the case where SUTRO then desires to commence a suit or take action to enforce the applicable CELGENE Patent(s) with respect to such Competitive Infringement in the applicable jurisdiction, the Parties will confer and upon CELGENE's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed), SUTRO will have the right to commence such a suit or take such action to enforce the applicable CELGENE Patent(s), at SUTRO's expense. Each Party will provide to the Party enforcing any such rights under this Section 9.7.2 reasonable assistance and cooperation in such enforcement, at such enforcing Party's request and expense, including joining such action as a party plaintiff if required by applicable Law to pursue such action. The enforcing Party will keep the other Party regularly informed of the status and progress of such enforcement efforts, and will reasonably consider the other Party's comments on any such efforts. For clarity, SUTRO shall not have any rights pursuant to this Section 9.7.2 to assume the Prosecution and Maintenance of any Patent in the CELGENE IP other than a CELGENE Patent.

9.7.3 Other Actions. For purposes of clarity, (a) SUTRO shall have the sole right, at its own expense, to institute, prosecute, and control any action or proceeding with respect to any infringement of any SUTRO Patent, other than the Product-Specific SUTRO Patents (as set forth in Section 9.7.2), by counsel of its own choice; and (b) CELGENE shall have the sole right, at its own expense, to institute, prosecute, and control any action or proceeding with respect to any infringement of any Patent in the CELGENE IP.

9.7.4 Settlement. A settlement or consent judgment or other voluntary final disposition of a suit under this Section 9.7 may be entered into without the consent of the Party not bringing suit; provided however that any such settlement, consent judgment or other disposition of any action or proceeding by a Party under this Article 9 shall not, without the consent of the Party not bringing suit, (a) impose any liability or obligation on such Party, (b) include the grant of any license, covenant or other rights to any Third Party that would conflict with or reduce the scope of the subject matter included under the exclusive licenses granted to such Party under this Agreement, or (c) conflict with or reduce the scope of the subject matter claimed in any Patent owned by the Party not bringing suit.

9.7.5 Cooperation. If one Party brings any such action or proceeding in accordance with this Section 9.7 or where legally required to initiate or maintain suit or collect damages, the other Party agrees to be joined as a party plaintiff, and to give the first Party reasonable assistance, cooperation and authority to file and prosecute the suit, all at the first Party's cost and expense.

9.7.6 Costs and Recoveries. The costs and expenses of the Party bringing suit under this Section 9.7 shall be borne by such Party, and any damages or other monetary awards recovered shall be shared as follows:

(a) the amount of such recovery actually received by the Party controlling such action shall first be applied to theout-of-pocket costs incurred by each Party in connection with such action; and

(b) any remaining proceeds shall, in the case of suits with respect to Competitive Infringement relating to any Development Candidate or corresponding Licensed Product or Diagnostic Product, be allocated between the Parties such that the Party bringing suit under this Section 9.7 retains [*] and the other Party retains [*] of such amount.

9.8. Patent Marking. CELGENE shall mark (or cause to be marked) all Licensed Products marketed and sold hereunder with the appropriate numbers or indicia of the applicable SUTRO Patent or (if applicable) SUTRO Expression Patent, to the extent permitted by law, in those countries in the CELGENE Territory in which such notices impact recoveries of damages or remedies available with respect to infringements of Patents. SUTRO shall mark (or cause to be marked) all Licensed Products marketed and sold hereunder with the appropriate numbers or indicia of the applicable CELGENE Patent, to the extent permitted by law, in those countries in the SUTRO Territory in which such notices impact recoveries of damages or remedies available with respect to infringement of Patents.

9.9. Common Interest Disclosures. With regard to any information or opinions disclosed pursuant to Article 9 by one Party to the other Party regarding Prosecution and Maintenance of SUTRO IP or CELGENE IP, or enforcement of intellectual property and/or technology by or against Third Parties, SUTRO and CELGENE agree that they have a common legal interest in determining the ownership, scope, validity and/or enforcement of such SUTRO IP and CELGENE IP, and whether, and to what extent, Third Party intellectual property rights may affect the conduct of the research, development, manufacture and commercialization of any BAC or ADC Directed to any Target Combination and have a further common legal interest in defending against any actual or prospective Third Party claims based on allegations of misuse or infringement of intellectual property rights relating to the research, development, manufacturing, or commercialization of any BAC or ADC Directed to any Target Combination. Accordingly, the Parties agree that all such information and materials obtained by the Parties from each other in connection with the matters described above, including certain legally privileged documents, information, factual materials, mental impressions, memoranda, and client communications, whether oral or written ("Defense Materials"), will be used solely for purposes of the Parties' common legal interests with respect to the conduct of the Agreement or as otherwise permitted under this Agreement. All Defense Materials will be treated as protected by the attorney-client privilege, the work product privilege, and any other privilege or immunity that may otherwise be applicable. By sharing any Defense Materials, neither Party intends to waive or limit any privilege or immunity that may apply to the Defense Materials. Neither Party shall have the authority to waive any privilege or immunity on behalf of the other Party without such other Party's prior written consent, nor shall the waiver of privilege or immunity resulting from the conduct of one Party be deemed to apply against the other Party. The Parties mutually agree as follows:

(a) Neither Party nor its agents will disclose Defense Materials (or the contents thereof) originating from the other Party (Received Materials") to anyone except directors, officers, employees and agents (including counsel) of the receiving Party who would be included within the scope of the applicable legal privilege for the receiving Party's comparable

material ("Qualified Recipient"), unless the receiving Party first obtains the consent in writing of the Party that is the source of the Received Materials, except to the extent that such Received Materials: (i) are now or hereafter become, through no breach of this Agreement by the receiving party, generally known or available; (ii) are known by the receiving party at the time of receiving such materials, as evidenced by its pre-existing written records; (iii) are hereafter furnished to the receiving party by a Third Party, as a matter of right and without restriction on disclosure; and/or (iv) are hereafter independently developed by the receiving party without reference to or reliance upon the Received Materials and without any breach of this Agreement (with each of (i), (ii), (iii), and/or (iv) being an "Exception"). It is further agreed that all persons permitted access to Defense Materials shall be advised that the Defense Materials are privileged and subject to the terms of this Section 9.9. Defense Materials (including all copies thereof and the relevant portions of any notes or other documents reflecting oral Defense Materials or the contents of Defense Materials) shall be returned upon request at any time to the Party (or their designee) that furnished or permitted access to them. Defense Materials also shall be returned promptly to the Party (or their designee) who furnished or permitted access to them in the event either Party concludes that the Parties no longer have a common interest in the matter or if for any reason this Agreement is terminated. In the event that the Defense Materials have been incorporated into notes, memoranda or other work-product, the Party may in lieu of returning the documents destroy those portions that reflect Defense Materials and confirm in writing that such destruction has occurred. The obligation the Parties and their agents not to disclose Defense Materials, except in accordance with this Section 9.9, shall not be affected by the return or destruction of such materials or the termination of this Agreement. Should either Party testify in any proceeding, counsel for the other Party will not be disqualified from cross-examining the testifying Party for any reason arising out of the existence of this Section 9.9, including the ground that such counsel has been privy to attorney-client communications pursuant to this Section 9.9. Defense Materials or their contents will not, however, be used in any way in or in connection with any such cross-examination, unless an Exception exists. Notwithstanding the foregoing, nothing contained in this Section 9.9 shall be deemed to create an attorney-client relationship between CELGENE's counsel and SUTRO and its Affiliates on the one hand, nor between SUTRO's counsel and CELGENE and its Affiliates, on the other hand.

(b) The Parties and their agents may use Defense Materials only for the purposes set forth above. Defense Materials will not be used for any other purpose. In particular, the Parties understand and agree that Received Materials and the contents of such Received Materials, will not be used at any time against the Party who provided or granted access to the Received Materials, even if such Party develops adverse interests in litigation or otherwise, unless an Exception exists.

(c) If another Person requests or demands, by subpoena or otherwise, any Received Materials, the receiving Party (or its agents) receiving the request or demand will immediately notify the supplying Party. The Person seeking the Received Materials will be informed that such Received Materials are privileged and may not be disclosed without the consent of the supplying Party furnishing or granting access to them unless ordered by a court or other legally authorized entity. Before any disclosure is made by a receiving Party, that Party will take all steps necessary and appropriate to facilitate the assertion of all applicable rights and privileges with respect to such Received Materials, including permitting the supplying Party a reasonable opportunity to intervene and be heard, and otherwise cooperating with the supplying Party to enable that Party to take any other appropriate steps to protect its rights under this Section 9.9.

(d) This Section 9.9 is binding on each Party's agents, including counsel, and employees. The Defense Materials received from one Party will not be disseminated to any agent that is a qualified recipient (including counsel) representing the receiving Party without informing such agent that the Defense Materials are subject to attorney-client privilege, work product and other privileges, and providing such agent a copy of the relevant portions of this Agreement. Furthermore, any disclosure in accordance with this subclause (d) will not diminish in any way the confidentiality of the Defense Materials disclosed and will not constitute a waiver of any applicable privilege.

(e) Specific performance and/or injunctive relief is an appropriate remedy to complete compliance with the provisions of this Section 9.9.

ARTICLE X
CONFIDENTIALITY

10.1. Confidentiality. Except to the extent expressly authorized by this Agreement, the Parties agree that the receiving Party (the "Receiving Party") shall keep confidential and shall not publish or otherwise disclose or use for any purpose other than as provided for in this Agreement any Know-How, Materials or other confidential and proprietary information and materials (whether patentable or not and in any form (written, oral, photographic, electronic, magnetic, or otherwise)) of the other Party (the "Disclosing Party") which is disclosed to it by the Disclosing Party, including trade secrets, Know-How, inventions or discoveries, sequences, formulae, processes, techniques and information relating to a Party's past, present and future marketing, financial and research or development activities of any product or potential product or useful technology of the Disclosing Party and the pricing thereof, whether disclosed before, on or after the Original Effective Date with respect to the subject matter of this Agreement (collectively, "Confidential Information"). Notwithstanding anything to the contrary, any SUTRO IP, SUTRO Core Technology and SUTRO Expression Technology shall be deemed SUTRO's Confidential Information, and any CELGENE IP, CELGENE Core Technology and CELGENE Background IP shall be deemed CELGENE's Confidential Information. Each Party recognizes that the other Party's Confidential Information constitutes highly valuable and proprietary confidential information. Each Party agrees that during the Term and for [*] ([*]) years thereafter, it will keep confidential, and will cause its officers, employees, consultants (including any subcontractors or CMO), agents, Affiliates, Sublicensees (in the case of CELGENE) and licensees (in the case of SUTRO), to keep confidential, all Confidential Information of the other Party. Neither Party nor any of its respective officers, employees, consultants, agents, Affiliates, Sublicensees (in the case of CELGENE) or licensees (in the case of SUTRO) shall use any Confidential Information of the other Party for any purpose whatsoever other than exercising any rights granted to it or reserved by it hereunder or as expressly permitted in this Article 10. Each Party may disclose the other Party's Confidential Information to the extent such disclosure is reasonably necessary to file and prosecute patent applications and/or maintain patents which are filed or prosecuted in accordance with the provisions of this Agreement or to obtain any authorization to conduct Clinical Trials or any Regulatory Approval for Licensed Products. Each Party may disclose the other Party's Confidential Information as reasonably necessary to file, conduct or defend litigation in

accordance with the provisions of this Agreement or comply with applicable Laws or court orders; provided, however, that if a Party is required to make any such disclosure of the other Party's Confidential Information in connection with any of the foregoing, it will give reasonable advance notice to the other Party of such disclosure requirement and will use reasonable efforts to assist such other Party in efforts to secure confidential treatment of such information required to be disclosed. Notwithstanding anything to the contrary in this Agreement, SUTRO will keep confidential any SUTRO IP consisting of trade secrets in accordance with its ordinary business practices, and will cause its employees, consultants (including any subcontractors or CMO), licensees, sublicensees, professional advisors and Affiliates to keep confidential, such SUTRO IP, on confidentiality terms at least as protective as the confidentiality provisions of this Agreement.

10.2. Exceptions. The obligations of non-use and non-disclosure set forth in Section 10.1 shall not apply to the extent that it can be established by the Receiving Party that such Confidential Information:

(a) was in the lawful knowledge and possession of the Receiving Party prior to the time it was disclosed to the Receiving Party, or was otherwise developed independently by or for the Receiving Party, as evidenced by written records kept in the ordinary course of business, or other documentary proof of actual use by the Receiving Party;

(b) was generally available to the public or otherwise part of the public domain at the time of its disclosure to the Receiving Party;

(c) became generally available to the public or otherwise part of the public domain after its disclosure and other than through any act or omission of the Receiving Party in breach of this Agreement; or

(d) was disclosed to the Receiving Party, other than under an obligation of confidentiality, by a Third Party who, to the knowledge of the Receiving Party, had no obligation to the Disclosing Party not to disclose such information to others.

Notwithstanding anything to the contrary in this Agreement, a Receiving Party may use any learning, skills, ideas, concepts, techniques,know-how and information, including general chemistry methodologies and general SAR (structure-activity relationship) concepts, retained in intangible form in the unaided memory of the Receiving Party's directors, employees, contractors, advisors, agents and other personnel of the Receiving Party who had access to the Disclosing Party's Confidential Information (collectively, "Residual Information") for any purpose, provided that (i) the Receiving Party may not disclose to Third Parties such Confidential Information except as set forth in Section 10.3, and (ii) this right to use Residual Information does not represent a license to any Patents Controlled by the Disclosing Party. For purposes of clarity, nothing contained in the preceding sentence gives the Receiving Party the right to publish or otherwise disclose or use the tangible source of any Residual Information for any purpose other than as provided for in this Agreement. A personnel's memory will be considered unaided only if such personnel has not intentionally memorized the information for the purpose of retaining and/or subsequently recording, publishing, disclosing or using it.

10.3. Limited Disclosure and Use. Each Party may disclose the other Party's Confidential Information to any of its officers, directors, employees, consultants, agents or Affiliates, Sublicensees (in the case of CELGENE) or licensees (in the case of SUTRO), if and only to the extent necessary to carry out its rights and responsibilities under this Agreement; provided that each such disclosee is bound by written confidentiality obligations to maintain the confidentiality thereof and not to use such Confidential Information except as expressly permitted by this Agreement. Each Party shall not disclose nor transfer the other Party's Confidential Information to any Third Parties under any circumstances without the prior written approval from the other Party (such approval not to be unreasonably withheld, conditioned or delayed), except as otherwise required by Law or as otherwise expressly permitted under this Agreement or to exercise the rights granted to it hereunder. Each Party shall take such action, to preserve the confidentiality of the other Party's Confidential Information, as it would customarily take to preserve the confidentiality of its own Confidential Information, using, in all such circumstances, not less than reasonable care. Each Party, upon the request of the other Party, will return all copies of or destroy (and certify such destruction in writing) the Confidential Information disclosed or transferred to it by the other Party pursuant to this Agreement, within fifteen (15) days of such request or, if earlier, the termination or expiration of this Agreement; provided however that a Party may retain (a) Confidential Information of the other Party relating to any license that is still in force hereunder or which expressly survives such termination, and (b) one (1) copy of all other Confidential Information in archives solely for the purpose of establishing the contents thereof.

10.4. Terms of Agreement. Subject to Sections 10.1, 10.2, 10.3, 10.5 and 10.7, neither Party may disclose the existence or terms or any other matter of fact regarding the performance of this Agreement without the prior written consent of the other Party; provided however that either Party may make such a disclosure (a) to the extent required by Law or by the requirements of any nationally recognized securities exchange, quotation system or over-the-counter market on which such Party has its securities listed or traded, or (b) to any investors, prospective investors, lenders and their respective legal and financial advisors who are obligated to keep such information confidential (provided that such disclosure is solely in the form of a redacted version of this Agreement, such redacted version to be reasonably and mutually agreed upon by the Parties), or (c) solely upon expiration of the Research Term, to any acquirers or potential acquirers who are obligated to keep such information confidential (provided that such disclosure is solely in the form of a redacted version of this Agreement, such redacted version to be reasonably and mutually agreed upon by the Parties). If such disclosure is required as aforesaid, the disclosing Party shall make reasonable efforts to provide the other Party with notice beforehand and to coordinate with the other Party with respect to the wording and timing of any such disclosure.

10.5. Press Release. SUTRO shall issue a press release in the form attached hereto asExhibit H, to announce the execution of this Agreement, the timing of which issuance shall be decided by CELGENE, and provided that CELGENE shall provide reasonable advance notice thereof (but in no event less than 24 hours) to SUTRO. Thereafter, except as otherwise set forth in Section 10.4, neither Party shall issue any subsequent press release or other public disclosure regarding this Agreement or the subject matter hereof, including the Parties' activities hereunder, or any results or data arising hereunder, without the prior consent of the other Party, provided, however, that in the event of achievement of any of the development milestones (1) through (5) set forth in Section 7.4.3(a), (b) or (c), as applicable, CELGENE may not unreasonably withhold or delay its consent to the issuance by SUTRO of a press release with respect to the achievement

of such milestone. Once any press release or any other written statement subject to this Article 10 is approved for disclosure by both Parties, either Party may make subsequent public disclosure of the contents of such statement without the further approval of the other Party. Further, neither Party shall employ or use the name of the other Party in any promotional materials or advertising without the prior express written permission of the other Party. Notwithstanding anything to the contrary in this Agreement, communications required by applicable Law will not require advance approval, but will be provided to the other Party as soon as practicable after release or communication thereof; provided that any such disclosure is limited to that information which is legally required to be disclosed.

10.6. Permitted Publications. CELGENE, its Affiliates and Sublicensees may publish or present any information with respect to any Collaboration BAC, Collaboration ADC, Development Candidate or Licensed Product without prior consent of SUTRO; provided that prior consent of SUTRO is required if such publication or presentation contains any Confidential Information of SUTRO. With respect to any (a) Collaboration BAC or Collaboration ADC that is not a Development Candidate or (b) Non-[*] DC, in each case CELGENE shall provide to SUTRO for review written copies of any such publication or presentation at least thirty (30) days prior to submission for publication or presentation, and SUTRO shall provide its comments, if any, within thirty (30) days from CELGENE's submission. Upon SUTRO's request, CELGENE shall delete from such publication or presentation any Confidential Information of SUTRO identified by SUTRO. In addition, CELGENE shall delay the submission for publication or presentation for a period of up to sixty (60) days in the event SUTRO can demonstrate reasonable need for such delay for the purpose of preparing and filing patent applications on such Confidential Information in accordance with this Agreement. SUTRO and its Affiliates may not publish or present any information with respect to any Collaboration BAC, Collaboration ADC, Development Candidate or Licensed Product without prior consent of CELGENE.

10.7. Third Party Sourced IP. Notwithstanding anything to the contrary in this Agreement, any Confidential Information related to any Third Party Binder, Format, Linker, Payload and/or any other Third Party Know-How contributed pursuant to a CELGENE Background IP Transfer Agreement or otherwise generated by the Parties during the Term with specific respect to any such Third Party Binder, Format, Linker, Payload and/or any other Third Party Know-How contributed pursuant to a CELGENE Background IP Transfer Agreement shall constitute the Confidential Information of CELGENE, and may not be used by SUTRO, its Affiliates, licensees and any of its or their respective officers, employees, consultants or agents for any purpose other than to perform activities contemplated by this Agreement. The obligations of non-use and non-disclosure set forth in this Article 10 shall survive any expiration or termination of this Agreement indefinitely with respect to such Confidential Information.

***Confidential Treatment Requested.**

ARTICLE XI
REPRESENTATIONS AND WARRANTIES

11.1. Representations and Warranties of Both Parties. Each Party hereby represents and warrants to the other Party, as of the Effective Date, that:

(a) such Party is duly organized, validly existing and in good standing under the Laws of the jurisdiction of its formation and has full corporate power and authority to enter into this Agreement and to carry out the provisions hereof;

(b) such Party has taken all necessary action on its part to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

(c) this Agreement has been duly executed and delivered on behalf of such Party, and constitutes a legal, valid, binding obligation, enforceable against it in accordance with the terms hereof;

(d) the execution, delivery and performance of this Agreement by such Party does not conflict with any agreement or any provision thereof, or any instrument or understanding, oral or written, to which it is a party or by which it is bound, nor violate any applicable Law of any court, governmental body or administrative or other agency having jurisdiction over such Party; and

(e) no government authorization, consent, approval, license, exemption of or filing or registration with any court or governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, under any applicable Laws currently in effect, is or will be necessary for, or in connection with, the transaction contemplated by this Agreement or any other agreement or instrument executed in connection herewith, or for the performance by it of its obligations under this Agreement and such other agreements except as may be required to conduct Clinical Trials or to seek or obtain Regulatory Approvals.

11.2. Representations and Warranties of SUTRO. SUTRO hereby represents and warrants to CELGENE, as of the Original Effective Date, that:

(a) Schedule 11.2(a) sets forth a complete and accurate list of all SUTRO Patents and SUTRO Expression Patents Controlled by SUTRO and/or its Affiliates as of the Original Effective Date, indicating the owner, licensor and/or co-owner(s), if applicable. Except as set forth on Schedule 11.2(a), SUTRO and its Affiliates do not own, or have a license to, or possess as beneficiary a covenant not to sue regarding any Patent that Covers any Antibody Directed to any Target or BAC or ADC Directed to any Target Combination, or that otherwise are necessary or useful to research, develop, manufacture or commercialize any Antibody Directed to any Target or BAC or ADC Directed to any Target Combination;

(b) Schedule 11.2(b) sets forth a complete and accurate list of all agreements pursuant to which SUTRO and/or its Affiliates receive a license or sublicense of any SUTRO IP or SUTRO Expression Technology, and SUTRO has provided complete and accurate copies of all such agreements to CELGENE (the "SUTRO In-Licenses"). Except under the SUTRO In-Licenses, SUTRO and its Affiliates are not subject to any contractual payment obligations to Third Parties as a result of the execution or performance of this Agreement. SUTRO and its Affiliates are not in material breach (and as a result of the delivery and execution of this Agreement will not be in material breach) of any SUTRO In-Licenses. As between the Parties, SUTRO shall be solely responsible for any payment obligations to the applicable Third Parties pursuant to any SUTRO In-Licenses;

(c) SUTRO has all rights, authorizations and consents necessary to grant all rights and licenses it purports to grant to CELGENE with respect to the SUTRO IP or (if applicable) SUTRO Expression Technology under this Agreement, and other than (i) that certain license agreement between SUTRO and Pfizer effective as of December 31, 2010, and (ii) evaluation and/or agreements entered in the ordinary course of business that do not grant to the applicable licensee any development or commercialization rights with respect to the SUTRO IP or SUTRO Expression Technology, SUTRO and/or its Affiliates has not granted any license or rights under any SUTRO IP or SUTRO Expression Technology, or to any BAC or ADC, to any Third Party;

(d) neither SUTRO nor any of its Affiliates has granted any right or license to any Third Party relating to any of the SUTRO IP or (if applicable) SUTRO Expression Technology that would conflict with or limit the scope of any of the rights or licenses granted to CELGENE hereunder;

(e) neither SUTRO nor any of its Affiliates has granted or is otherwise subject to any liens or security interests of any kind on the SUTRO IP or (if applicable) SUTRO Expression Technology;

(f) neither SUTRO nor its Affiliates has received any written notice of any claim that any Patent or trade secret right owned or controlled by a Third Party would be infringed or misappropriated by the use of the SUTRO Know-How or the SUTRO Expression Technology as contemplated by this Agreement;

(g) there are no claims, judgments, settlements, litigations, suits, actions, disputes, arbitration, judicial or legal, administrative or other proceedings or governmental investigations pending or, to SUTRO's knowledge, threatened against SUTRO which would be reasonably expected to materially affect or restrict the ability of SUTRO to consummate the transactions contemplated under this Agreement and to perform its material obligations under this Agreement, or which would affect in a material manner the SUTRO IP or SUTRO Expression Technology;

(h) to its knowledge, the SUTRO IP and SUTRO Expression Technology are not being infringed or misappropriated by any Third Party;

(i) to its knowledge, the use of the SUTRO Know-How and SUTRO Expression Know-How as contemplated by this Agreement does not infringe on any Third Party Patents or misappropriate any Third Party Know-How; and

(j) the Pre-Existing Licenses are non-exclusive.

11.3. Representations and Warranties of CELGENE. Celgene Corp. on behalf of itself and Celgene Alpine, and Celgene Alpine, on behalf of itself, hereby represents and warrants to SUTRO, as of the Original Effective Date, that:

(a) CELGENE has all rights, authorizations and consents necessary to grant all rights and licenses it purports to grant to SUTRO with respect to the CELGENE Background IP under this Agreement;

(b) neither CELGENE nor any of its Affiliates has granted any right or license to any Third Party relating to any of the CELGENE Background IP that would conflict with or limit the scope of any of the rights or licenses granted to SUTRO hereunder;

(c) neither CELGENE nor any of its Affiliates has granted any liens or security interests on the CELGENE Background IP and the CELGENE Background IP is free and clear of any mortgage, pledge, claim, security interest, covenant, easement, encumbrance, lien or charge of any kind;

(d) neither CELGENE nor its Affiliates has received any written notice of any claim that any Patent or trade secret right owned or controlled by a Third Party would be infringed or misappropriated by the research, development, manufacture, or commercialization of any BAC or ADC Directed to any Target Combination by CELGENE, its Affiliates or Sublicensees as contemplated by this Agreement;

(e) there are no claims, judgments, settlements, litigations, suits, actions, disputes, arbitration, judicial or legal, administrative or other proceedings or governmental investigations pending or, to CELGENE's knowledge, threatened against CELGENE which would be reasonably expected to materially affect or restrict the ability of CELGENE to consummate the transactions contemplated under this Agreement and to perform its material obligations under this Agreement, or which would affect in a material manner the CELGENE Background IP;

(f) to its knowledge, the CELGENE Background IP is not being infringed or misappropriated by any Third Party; and

(g) to its knowledge, except for the matter disclosed by CELGENE to SUTRO by email dated August 14, 2014, the CELGENE Background Know-How and CELGENE Binders do not infringe on any valid Third Party Patents or misappropriate any Third Party trade secrets.

11.4. Covenants.

11.4.1 Mutual Covenants. Each Party hereby covenants to the other Party that:

(a) all employees of such Party or its Affiliates or Third Party subcontractors or Sublicensees (in the case of CELGENE) or licensees (in the case of SUTRO) working under this Agreement will be under appropriate confidentiality provisions at least as protective as those contained in this Agreement and the obligation to assign all right, title and interest in and to their inventions and discoveries, whether or not patentable to such Party as the sole owner thereof;

(b) to its knowledge, such Party will not (i) employ or use, nor hire or use any contractor or consultant that employs or uses, any individual or entity, including a clinical investigator, institution or institutional review board, debarred or disqualified by the FDA (or subject to a similar sanction by any Regulatory Authority outside the United States) or (ii) employ any individual who or entity that is the subject of an FDA debarment investigation or proceeding (or similar proceeding by any Regulatory Authority outside the United States), in each of subclauses (i) and (ii) in the conduct of its activities under this Agreement; and

(c) neither Party nor any of its Affiliates shall, during the Term, grant any right or license to any Third Party relating to any of the intellectual property rights it owns or Controls which would conflict with any of the rights or licenses granted to the other Party hereunder.

11.4.2 SUTRO Covenants. SUTRO hereby covenants to CELGENE that:

(a) SUTRO shall maintain the SUTRO In-Licenses, and shall not amend or terminate such agreements, and will not breach such agreements, if such modification, termination or breach would materially adversely affect CELGENE's rights under this Agreement;

(b) if SUTRO or any of its Affiliates licenses or acquires any Patents or Know-How related to any BAC/ADC Program, SUTRO or its Affiliate shall use Commercially Reasonable Efforts to ensure that such license or acquisition permits SUTRO to grant to CELGENE a license or sublicense consistent with the terms of this Agreement, subject to payment by CELGENE of any applicable Additional Payments (subject to Section 9.1.7);

(c) any Collaboration BAC, Collaboration ADC or Development Candidate supplied by SUTRO to CELGENE pursuant to Article 6 shall have been produced in accordance with this Agreement;

(d) SUTRO shall manufacture, store, ship and transport (whether on its own or through a Third Party) any Collaboration BAC, Collaboration ADC or Development Candidate supplied by SUTRO to CELGENE pursuant to Article 6, in compliance with all applicable Laws; and

(e) SUTRO shall use Commercially Reasonable Efforts to ensure that any manufacturing agreement entered into with any Third Party to manufacture cGMP Development Candidates and corresponding Licensed Products under this Agreement contain a provision providing CELGENE and its Affiliates with industry-standard indemnification, including against Product Liability claims.

11.5. Disclaimer. Except as otherwise expressly set forth in this Agreement, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY THAT ANY PATENTS ARE VALID OR ENFORCEABLE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. Without limiting the generality of the foregoing, each Party disclaims any warranties with regards to: (a) the success of any study or test commenced under this Agreement; (b) the safety or usefulness for any purpose of the technology or materials (and any derivatives or modifications thereof), including any BAC or ADC, it provides or discovers under this Agreement; or (c) the validity, enforceability, or non-infringement of any intellectual property rights or technology it provides or licenses to the other Party under this Agreement.

ARTICLE XII
INDEMNIFICATION; INSURANCE

12.1. Indemnification by CELGENE. Celgene Corp. on behalf of itself and Celgene Alpine, shall indemnify, defend (subject to Section 12.3) and hold harmless SUTRO and its Affiliates, and its and their respective directors, officers, employees and agents (collectively, the "SUTRO Indemnitees"), from and against any and all liabilities, damages, losses, costs and expenses, including the reasonable fees of attorneys and other professional Third Party advisors and experts (collectively, "Losses"), arising out of or resulting from any and all suits, claims, actions, proceedings or demands brought by a Third Party ("Claims") based upon:

(a) the willful misconduct of CELGENE or its Affiliates and its or their respective directors, officers, employees and agents, in connection with CELGENE's performance of its obligations or exercise of its rights under this Agreement;

(b) any breach of any representation or warranty or express covenant made by CELGENE under Article 11 or any other provision under this Agreement;

(c) the research that is conducted by or on behalf of CELGENE or its Affiliates (excluding any research carried out by or on behalf of SUTRO or its Affiliates hereunder in accordance with the Research Plan and/or Pre-Development Plan, as applicable), the handling and storage by or on behalf of CELGENE of any chemical agents or other compounds for the purpose of conducting research by or on behalf of CELGENE, and the development and commercialization by CELGENE, its Affiliate or Sublicensee of any Collaboration BAC or Collaboration ADC, including any Product Liability claims in the CELGENE Territory, or personal injury, property damage or other damage resulting from any of the foregoing activities described in this Section 12.1(c); and

(d) an allegation that the contribution by CELGENE to the Collaboration of any Third Party Binder, Format, Linker, Payload and/or any other Third Party Know-How, whether or not listed on the CELGENE Background IP Transfer Agreement, constitutes a breach by CELGENE of any agreement with such Third Party.

in each case, provided however that, such indemnity shall not apply to the extent SUTRO has an indemnification obligation pursuant to Section 12.2 for such Loss or any matters for which royalties have been reduced pursuant to Section 7.5 or milestones have been reduced pursuant to Section 6.5.

12.2. Indemnification by SUTRO. SUTRO shall indemnify, defend (subject to Section 12.3) and hold harmless CELGENE and its Affiliates, and its and their respective directors, officers, employees and agents (collectively, the "CELGENE Indemnitees"), from and against any and all Losses, arising out of or resulting from any and all Claims based upon:

(a) the willful misconduct of SUTRO or its Affiliates or its or their respective directors, officers, employees and agents, in connection with SUTRO's performance of its obligations or exercise of its rights under this Agreement;

(b) any breach of any representation or warranty or express covenant made by SUTRO under Article 10 or any other provision under this Agreement;

(c) the research that is conducted by or on behalf of SUTRO (excluding any research carried out by or on behalf of CELGENE or its Affiliates or Sublicensees hereunder in accordance with the Research Plan, the handling and storage by or on behalf of SUTRO of any chemical agents or other compounds for the purpose of conducting research by or on behalf of SUTRO, and the development and commercialization by SUTRO, its Affiliate or licensee of any Collaboration BAC, Collaboration ADC, and any Non-[*] DCs, Licensed Products comprising or containing any Non-[*] DCs, including any Product Liability claims in the SUTRO Territory, and any personal injury or property damage directly caused by the personnel of SUTRO, its Affiliates and/or subcontractors while performing activities under this Agreement on SUTRO's or its Affiliates' or subcontractors' premises; or

(d) any use by or on behalf of SUTRO of the Scripps Technology to conduct any of its activities under this Agreement, unless the Parties have mutually agreed to use such Scripps Technology in accordance with Section 9.1.7 and CELGENE has been granted a license to such Scripps Technology; and

(e) an allegation that the contribution by SUTRO to the Collaboration of any Third Party Binder, Format, Linker, Payload and/or any other Third Party Know-How, whether or not listed on the SUTRO Background IP Transfer Agreement, constitutes a breach by SUTRO of any agreement with such Third Party;

in each case, provided however that, such indemnity shall not apply to the extent CELGENE has an indemnification obligation pursuant to Section 12.1 for such Loss; and provided further that any manufacturing agreement entered into between the Parties to manufacture cGMP Development Candidates and corresponding Licensed Products under this Agreement shall contain a provision providing CELGENE and its Affiliates with industry-standard indemnification, including for Product Liability claims.

12.3. Indemnification Procedures. Subject to the immediately succeeding sentence, each Party's agreement to indemnify and hold the other harmless is conditioned upon the indemnified Party (a) providing written notice to the indemnifying Party of any Claim arising out of the indemnified activities within thirty (30) days after the indemnified Party has actual knowledge of such Claim, (b) permitting the indemnifying Party to assume full responsibility to investigate, prepare for and defend against any such Claim, (c) reasonably assisting the indemnifying Party, at the indemnifying Party's expense, in the investigation, preparation and defense of any such Claim, and (d) not compromising or settling such claim, demand or action without the indemnifying Party's prior written consent; provided however that, if the Party entitled to indemnification fails to promptly notify the indemnifying Party pursuant to the foregoing clause (a), the indemnifying Party will only be relieved of its indemnification obligation to the extent materially prejudiced by such failure. The indemnifying Party may, at its option, assume the defense of any Claim arising out of the indemnified activities by giving written notice to the indemnified Party within thirty (30) days of receipt of notice from the indemnified party under subsection (a) above; provided that, (i) such Claim solely seeks monetary damages and (ii) the indemnifying Party expressly agrees in writing that as between the indemnifying Party and the indemnified Party, the

indemnifying Party shall be solely obligated to satisfy and discharge such Claim in full and is able to reasonably demonstrate that it has sufficient financial resources (the matters described in (i) and (ii), the "Litigation Conditions"); provided further that the indemnified Party may, at any time, assume the defense of a Claim if at any time the Litigation Conditions are not satisfied with respect to such Claim.

12.4. Insurance. Each Party shall maintain, at its cost, a program of insurance and/or self insurance against liability and other risks associated with its activities and obligations under this Agreement, including as applicable its Clinical Trials, the commercialization of any Licensed Products, and its indemnification obligations hereunder, in such amounts, subject to such deductibles and on such terms as are customary for such Party for the activities to be conducted by it under this Agreement.

12.5. LIMITATION OF LIABILITY. EXCEPT (A) FOR A BREACH OF ARTICLE 8 OR ARTICLE 10 OR (B) FOR CLAIMS OF A THIRD PARTY THAT ARE SUBJECT TO INDEMNIFICATION UNDER THIS ARTICLE 12 OR (C) FOR DAMAGES DUE TO THE WILLFUL MISCONDUCT OF THE LIABLE PARTY, NEITHER SUTRO NOR CELGENE, NOR ANY OF THEIR RESPECTIVE AFFILIATES OR SUBLICENSEES (IN THE CASE OF CELGENE) OR LICENSEES (IN THE CASE OF SUTRO), WILL BE LIABLE TO THE OTHER PARTY TO THIS AGREEMENT, ITS AFFILIATES OR CELGENE'S SUBLICENSEES (IN THE CASE OF SUTRO) OR SUTRO'S LICENSEES (IN THE CASE OF CELGENE) FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OR LOST PROFITS OR ROYALTIES, LOST DATA OR COST OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, WHETHER LIABILITY IS ASSERTED IN CONTRACT, TORT (INCLUDING NEGLIGENCE AND STRICT PRODUCT LIABILITY), INDEMNITY OR CONTRIBUTION, AND IRRESPECTIVE OF WHETHER THAT PARTY OR ANY REPRESENTATIVE OF THAT PARTY HAS BEEN ADVISED OF, OR OTHERWISE MIGHT HAVE ANTICIPATED THE POSSIBILITY OF, ANY SUCH LOSS OR DAMAGE.

ARTICLE XIII
TERM AND TERMINATION

13.1. Term; Expiration. Unless earlier terminated in accordance with this Article 13, the term of this Agreement (the "Term") shall commence as of the Original Effective Date and remain in force until it expires as follows: (a) on a Licensed Product-by-Licensed Product and country-by-country (in the CELGENE Territory) basis, this Agreement shall expire on the date of expiration of all applicable Royalty Terms with respect to such Licensed Product in such country; and (b) this Agreement shall expire in its entirety upon the expiration of all applicable Royalty Terms under this Agreement with respect to all Licensed Products in all countries in the CELGENE Territory. Upon expiration of the Term with respect to any Licensed Product in a country in the CELGENE Territory pursuant to this Section 13.1, CELGENE shall have a fully paid-up, royalty-free, perpetual, non-terminable and irrevocable right and license, with the right to grant sublicenses, under (i) the SUTRO IP, on an exclusive basis and (ii) the SUTRO Expression Technology, on a non-exclusive basis, in each case, to research, develop, manufacture, commercialize, make, have made, use, sell, offer to sell and import such Licensed Product in such country (and in the case of SUTRO Expression Technology, on the terms set forth in Section 9.1.3, except, for clarity, that such licenses shall be non-exclusive) in the CELGENE Territory; provided, for the avoidance of doubt, that CELGENE shall make any payment obligations that accrued as of the expiration of the Term.

13.2. Termination for Breach. Subject to the other terms of this Agreement, this Agreement and the rights granted herein may be terminated by either Party for the material breach by the other Party of this Agreement, provided that the breaching Party has not cured such breach within ninety (90) days (or thirty (30) days, in case of CELGENE's payment obligations under the Agreement) after the date of written notice to the breaching Party of such breach, which notice shall describe such breach in reasonable detail and shall state the non-breaching Party's intention to terminate this Agreement pursuant to this Section 13.2; provided further that, after a Development Candidate has been Nominated, (a) a material breach shall be deemed to have occurred only in the event a Party materially breaches or defaults in the performance of its obligations hereunder with respect to a Licensed Product in a manner that fundamentally frustrates the transactions contemplated by this Agreement with respect to such Licensed Product, (b) such Party has failed to cure such breach within the sixty (60)-day period specified in this Section 13.2, and (c) the other Party's termination right shall be limited to a termination of this Agreement with respect to the applicable Licensed Product and, with respect to termination by SUTRO, only in the country(ies) materially and adversely impacted by such material breach.

13.3. Termination for IP Challenge. If either Party or any Affiliate directly or indirectly, makes, files or maintains any claim, demand, lawsuit or cause of action to challenge the validity or enforceability of any SUTRO IP, SUTRO Expression Technology or CELGENE IP licensed to it hereunder, the other Party may terminate this Agreement immediately upon written notice to the challenging Party with respect to such SUTRO IP, SUTRO Expression Technology or CELGENE IP, as applicable; it being understood and agreed that such other Party's right to terminate this Agreement under this Section 13.3 shall not apply to any Affiliate of such Party that first becomes an Affiliate of such Party as a result of or after the date of a Business Combination involving such Party, where such new Affiliate was undertaking any of the activities described in the first sentence of this Section 13.3 prior to such Business Combination.

13.4. Voluntary Termination. CELGENE may terminate this Agreement in its entirety or with respect to one or more BAC/ADC Program(s), Development Candidates or Licensed Products upon one hundred twenty (120) days' prior written notice to SUTRO hereunder.

13.5. Termination for Bankruptcy. If either Party makes a general assignment for the benefit of creditors, appoints or suffers appointment of a receiver or trustee over all or substantially all of its property, files a petition under any bankruptcy or insolvency act or has any such petition filed against it which is not dismissed, discharged, bonded or stayed within ninety (90) days after the filing thereof, the other Party may terminate this Agreement in its entirety effective immediately upon written notice to such Party.

13.6. Effects of Expiration or Termination.

13.6.1 License Upon Expiration. Upon expiration, but not earlier termination, of this Agreement, the licenses granted to CELGENE in Sections 9.1.2 and 9.1.3 shall automatically convert to the license set forth in Section 13.1, and the licenses granted under Sections 9.1.5, 9.1.6 and 9.1.8 shall survive in perpetuity.

13.6.2 Termination (Other Than By CELGENE Pursuant to Section 13.2 or 13.5). Upon any termination of this Agreement for any reason other than by CELGENE pursuant to Section 13.2 or 13.5, (a) as of the effective date of such termination, all licenses granted by a Party to the other Party under this Agreement shall terminate automatically (except for the licenses granted under Sections 9.1.5, 9.1.6 and 9.1.8, which shall survive in perpetuity), (b) the conduct of the activities of the Parties under the then-current Research Plan (and/or Pre-Development Plan, as applicable) shall terminate, and (c) each Party shall return or destroy (i) all Confidential Information of the other Party as required by Article 10 and (ii) all materials received from the other Party as required by Sections 2.7.2 and 2.7.3, as applicable; provided that if such termination is limited to a particular Licensed Product, country, BAC/ADC Program, SUTRO IP or SUTRO Expression Technology or CELGENE IP, then (A) the termination of the licenses set forth in the foregoing subclause (a) shall be limited to such particular Licensed Product, country, BAC/ADC Program, SUTRO IP, SUTRO Expression Technology or CELGENE IP, as applicable, and (B) the obligation to return or destroy Confidential Information or materials of the other Party set forth in the foregoing subclause (c) shall be limited to that Confidential Information or materials that are solely related to such particular Licensed Product, country, BAC/ADC Program, SUTRO IP, SUTRO Expression Technology or CELGENE IP, as applicable.

13.6.3 Termination by CELGENE Pursuant to Section 13.2 or 13.5. In the event CELGENE terminates this Agreement pursuant to Section 13.2 or 13.5, then:

(a) All rights and obligations of the Parties under this Agreement shall terminate, except that the licenses granted under Sections 9.1.2 and 9.1.3 shall survive (provided that the licenses set forth in Section 9.1.3 shall survive on a non-exclusive basis), and 9.1.5, 9.1.6, 9.1.8, 9.5, 9.6, and 9.7 shall survive, CELGENE's payment obligations (subject to this Section 13.6.3) and the audit rights set forth in Article 7 shall survive, and Section 13.8 shall survive.

(b) The conduct of the activities of the Parties under the then-current Research Plan (and/or Pre-Development Plan, as applicable) shall terminate.

(c) Each Party shall return or destroy (i) all Confidential Information of the other Party as required by Article 10 and (ii) all materials received from the other Party as required by Sections 2.7.2 and 2.7.3, as applicable, provided, however, that CELGENE shall not have any obligation to return or destroy Development Candidates Nominated by CELGENE prior to delivery of notice of termination pursuant to Section 13.2 or 13.5.

(d) CELGENE shall be entitled, in its sole discretion, to seek and recover all Losses available to CELGENE under this Agreement and applicable Laws (at law or in equity) as a result of the breaches giving rise to the termination by CELGENE pursuant to Section 13.2; it being understood and agreed that, if CELGENE elects to avail itself of the remedy described in the immediately succeeding sentence and for so long as such remedy remains in effect (the "Liquidated Damages Alternative"), then such Liquidated Damages Alternative shall be CELGENE's sole recourse for the identified breaches giving rise to the termination by CELGENE pursuant to Section 13.2. In the event termination of this Agreement pursuant to Section 13.2 by

CELGENE is pursuant to a breach of: (a) Section 6.1, 6.2, 8.1 or 8.2, (b) Section 14.3, or (c) Article 10 (provided that, solely in the case of any such breach of Article 10, if (but only if) such breach of Article 10 (i) materially adversely affects the actual and anticipated commercial prospects of CELGENE's interests under this Agreement, (ii) such breach of Article 10 resulted from the willful misconduct of employees, consultants or agents of SUTRO, and (iii) SUTRO failed to adopt reasonable precautions that could have reasonably avoided such breach), then, in each case of clauses (i), (ii) and (iii) of this sentence, each of the payment obligations set forth in Article 7 shall be reduced by [*] percent ([*]%). The Parties understand and agree that the Liquidated Damages Alternative shall not be a penalty but shall constitute liquidated damages (in addition to any other remedies available at law or in equity). The Parties understand and agree that the Liquidated Damages Alternative is so fixed and agreed upon because of the impracticability and difficulty in fixing and ascertaining the actual Losses that CELGENE would sustain in the event of termination by CELGENE pursuant to Section 13.2 for the identified breaches.

(e) Upon CELGENE's written request, SUTRO shall transfer the relevant processes, documents, and materials included in any Know-How Controlled by SUTRO as of the effective date of termination (including Cell-Free Extract), as necessary to manufacture the Development Candidate(s) and Licensed Products (and derivatives or modifications thereof) designated by CELGENE prior to such date solely to a CELGENE CMO, for the sole purpose of having such CELGENE CMO manufacture the applicable Development Candidate(s) and Licensed Products for CELGENE subject to the terms of this Agreement, including the payment obligations under Article 7 and the confidentiality obligations set forth in Article 10. In addition, prior to the selection of the CELGENE CMO, upon CELGENE's written request, SUTRO shall provide to each Potential CMO, pursuant to a material transfer agreement with commercially reasonable terms, such Know-How as reasonably necessary for each such Potential CMO to evaluate the possible terms of a manufacturing agreement with CELGENE or its Affiliates. Furthermore, (i) the CELGENE CMO or Potential CMO, as applicable, shall not, and shall be contractually required not to, share with, or disclose to, CELGENE, its Affiliates or subcontractors any such Know-How transferred by SUTRO to such CELGENE CMO or Potential CMO, (ii) CELGENE, its Affiliates and subcontractors shall not solicit any such sharing or disclosure, and (iii) upon termination of the manufacturing agreement between the CELGENE CMO, or, in the case of a Potential CMO, completion of the evaluation described above, the CELGENE CMO and/or Potential CMO, as applicable, shall return to SUTRO or, at SUTRO's written request, destroy such Know-How, and provide to SUTRO a written confirmation thereof. Notwithstanding the foregoing, upon CELGENE's written request, SUTRO or the CELGENE CMO, at SUTRO's election, will disclose to CELGENE such Know-How solely to permit the applicable regulatory personnel at CELGENE to compile and review the CMC (and other relevant) portions of Regulatory Materials to be submitted for Regulatory Approval to the applicable Regulatory Authority; provided that such personnel shall be subject to the obligations of confidentiality and non-use set forth in Article 10.

(f) Notwithstanding the above, SUTRO will, (i) upon CELGENE's written request and pursuant to the applicable supply agreement, continue to supply CELGENE with mutually agreed upon quantities of such Development Candidate(s) and Licensed Products in the dosage strength, formulation and presentation under development or being commercialized by CELGENE, in either case, as of the effective date of termination, until the earlier of: (x) eighteen (18) calendar months after the effective date of termination or (y) establishment by

CELGENE of an alternative supply for such Development Candidate(s) and Licensed Products (and SUTRO shall assist, including by conducting a technology transfer, in the transition of supply to such alternative supplier); and (ii) at CELGENE's election, SUTRO will transfer to CELGENE SUTRO's existing inventory of Development Candidates and Licensed Products, as applicable, subject to payment of the amounts, if any, payable under Article 6.

13.6.4 Survival of Sublicensees. Notwithstanding the foregoing, no termination of this Agreement shall be construed as a termination of any sublicense of any Sublicensee hereunder and, except in the case of termination of this Agreement by CELGENE pursuant to Section 13.2 or 13.5, thereafter each such Sublicensee shall be considered a direct licensee of SUTRO, provided that (a) CELGENE has first represented and warranted to SUTRO that, to CELGENE's actual knowledge, as of the effective date of such termination, such Sublicensee is then in full compliance with all terms and conditions of its sublicense, and (b) such Sublicensee agrees in writing to assume all applicable obligations of CELGENE under this Agreement.

13.7. Remedies. Except as otherwise expressly set forth in this Agreement, the termination provisions of this Article 13 are in addition to any other relief and remedies available to either Party under this Agreement and at Law.

13.8. Surviving Provisions. Notwithstanding any provision herein to the contrary, the rights and obligations of the Parties set forth in Sections 1, 2.7.4, 2.8, 4.1.1(d), 6.2, 6.5, 9.3, 9.4, 10, 12, 13 and 14, as well as any rights or obligations otherwise accrued hereunder (including any accrued payment obligations), shall survive the expiration or termination of this Agreement. For the avoidance of doubt, in the event notice of termination of this Agreement is given by CELGENE pursuant to Section 13.5 prior to the occurrence of any milestone events set forth in Article 7, CELGENE shall not be obligated to make any payment to SUTRO for such or subsequent milestone events. Termination shall not relieve any Party from any liability which has accrued prior to such termination.

13.9. Right to Set-off. Notwithstanding anything to the contrary in this Agreement, each Party has the right at all times to retain and set off against all amounts due and owing to the other Party under this Agreement any amounts payable to the first Party by such other Party as determined in a final judgment.

ARTICLE XIV
MISCELLANEOUS

14.1. Governing Law; Dispute Resolution for Assignment.

14.1.1 Governing Law; Jurisdiction; Venue. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to the conflicts of law principles that would provide for application of the law of a jurisdiction other than the State of New York and excluding the United Nations Convention on Contracts for the International Sales of Goods; provided however that with respect to matters involving the enforcement of intellectual property rights, the Laws of the applicable country shall apply. Subject to Sections 14.1.2 and 14.2, each Party hereby irrevocably and unconditionally (a) consents to submit to the exclusive jurisdiction of the state and federal courts located in New York, New York, for any actions, suits

or proceedings arising out of or relating to this Agreement and the transactions contemplated hereby and (b) waives any objection to the laying of venue of any action, suit or proceeding arising out of this Agreement or the transactions contemplated hereby in the state and federal courts of New York, New York, and agrees not to plead or claim in any such court that any such action, suit or proceeding brought in any such court has been brought in an inconvenient forum.

14.1.2 Dispute Resolution for Assignment. Notwithstanding the above, any dispute with respect to the breach or alleged breach by SUTRO of the restrictions on assignment set forth in Section 14.3, shall be resolved by arbitration pursuant to the Commercial Arbitration Rules (Expedited Rules) of the American Arbitration Association ("AAA Expedited Rules"). Arbitration will be conducted in New York City, New York by one (1) arbitrator who shall be reasonably acceptable to the Parties and who shall be appointed in accordance with the AAA Expedited Rules. If the Parties are unable to select an arbitrator within ten (10) days of the notice that initiated the arbitration, then the arbitrator shall be appointed in accordance with the AAA Expedited Rules. Any arbitrator chosen hereunder shall have educational training and industry experience sufficient to demonstrate a reasonable level of scientific, financial, medical and industry knowledge relevant to the particular dispute.

14.2. Injunctive Relief. Nothing in this Agreement will preclude either Party from seeking equitable relief or interim or provisional relief from any court of competent jurisdiction, including a temporary restraining order, preliminary injunction or other interim equitable relief, concerning a dispute if necessary to protect the interests of such Party or to preserve the status quo. Any such remedies will be in addition to all other remedies available by Law or at equity to such Party.

14.3. Assignment. Neither Party may assign (which for purposes hereof includes any transfer as part of a merger or consolidation) this Agreement without the consent of the other Party, except that the consent of the other Party shall not be required for an assignment of this Agreement in whole (but not in part) that (1) is made in connection with or occurs (or is deemed by operation of law to occur) as a result of a merger or consolidation in which the assigning Party is a constituent party and not the surviving entity of such merger or consolidation, or (2) is made to any Affiliate of a Party for so long as it remains an Affiliate of such Party, provided, that in the case of an assignment described in either subclause (1) or (2) that the following conditions have been met, as applicable:

(a) such assigning Party provides the other Party to this Agreement with at least thirty (30) Business Days (or in the case of an assignment resulting from a merger or consolidation transaction described in clause "(1)" above, three (3) Business Days) advance written notice of such assignment and the assigning Party agrees in a written agreement delivered prior to such assignment to the non-assigning Party (and upon which such non-assigning Party may rely) to remain fully liable for the performance of its obligations under this Agreement by its assignees,

(b) the assignee agrees in a written agreement delivered prior to such assignment to thenon-assigning Party (and upon which such non-assigning Party may rely) to assume performance of all such assigned obligations,

(c) in the case of any assignment by SUTRO, all SUTRO IP licensed to CELGENE under this Agreement shall be transferred to such assignee effective as of such assignment,

(d) all of the matters referred to in clauses (a), (b) and (c), as applicable, shall be set forth in documentation reasonably acceptable to the non-assigning Party prior to any such assignment (and with such reasonable acceptance not to be unreasonably withheld, conditioned or delayed) and in all cases shall provide the non-assigning Party with the full benefits of its rights under this Agreement (after taking into account all risks involving applicable counter-party performance and bankruptcy and insolvency risks, including those involving contractual rejection under 11 USC §365) as if no such assignment had occurred; provided, however, that in the case of an assignment resulting from a merger or consolidation transaction described in clause "(1)" above, the Parties agree that the requirements of clauses (a), (b) and (d) of this Section 14.3 shall be satisfied by delivery of an executed notice and assumption agreement in the form attached hereto as Schedule 14.3, and

(e) in the case of any assignment, the assigning Party shall reimburse the non-assigning Party for all of the legal fees and expenses reasonably incurred by such non-assigning Party in connection with the matters set forth in clause (iv) of this sentence in an aggregate amount not to exceed [*] ($[*]).

Notwithstanding anything to the contrary in this Agreement, including the foregoing, CELGENE may assign this Agreement, or any rights or obligations hereunder, in whole or in part, to (A) an Affiliate (and an Affiliate of CELGENE may assign this Agreement to another Affiliate of CELGENE or to CELGENE) or (B) its successor in connection with the merger, consolidation, or sale of all or substantially all of its assets or that portion of its business pertaining to the subject matter of this Agreement, in all cases, without the prior consent of SUTRO. The terms of this Agreement shall be binding upon and shall inure to the benefit of the successors, heirs, administrators and permitted assigns of the Parties. Any purported assignment in violation of this Section 14.3 shall be null and void *ab initio*. SUTRO hereby agrees that it will not transfer ownership of the SUTRO IP licensed to CELGENE under this Agreement unless the conditions set forth in subclauses (i) through (v), inclusive, have been met.

14.4. Performance by Affiliates. The Parties recognize that each may perform some or all of its obligations under this Agreement through Affiliates or may exercise some or all of its rights under this Agreement through Affiliates, provided, however, that each Party shall remain responsible and be guarantor of the performance by its Affiliates and shall cause its Affiliates to comply with the provisions of this Agreement in connection with such performance. In particular and without limitation, all Affiliates of a Party that receive Confidential Information of the other Party pursuant to this Agreement shall be governed and bound by all obligations set forth in Article 10. Each Party will prohibit all of its Affiliates from taking any action that such Party is prohibited from taking under this Agreement as if such Affiliates were parties to this Agreement.

14.5. Notices. Any notice or request required or permitted to be given under or in connection with this Agreement shall be deemed to have been sufficiently given if in writing and personally delivered or sent by certified mail (return receipt requested), facsimile transmission (receipt verified), or overnight express courier service (signature required), prepaid, to the Party for which such notice is intended, at the address set forth for such Party below:

If to SUTRO,

addressed to: SUTRO Biopharma, Inc.
310 Utah Avenue
South San Francisco, CA 94080
Attention: William Newell
Telephone: [*]
Facsimile: [*]

with a copy to: Fenwick and West, LLP
1191 Second Avenue
10th Floor
Seattle, WA 98101
Attention: [*]
Facsimile: [*]

If to CELGENE,

addressed to: Celgene Corporation
86 Morris Avenue
Summit, NJ 07901
Attention: President, Global Research and Early Development
Telephone: [*]
Facsimile: [*]

with a copy to: Celgene Legal
86 Morris Avenue
Summit, NJ 07901
Attention: General Counsel
Telephone: [*]
Facsimile: [*]

with a copy to: Dechert LLP
1900 K Street, N.W.
Washington, DC 20006
Attention: [*]
Telephone: [*]
Facsimile: [*]

or to such other address for such Party as it shall have specified by like notice to the other Party; provided however that notices of a change of address shall be effective only upon receipt thereof. If delivered personally or by facsimile transmission, the date of delivery shall be deemed to be the date on which such notice or request was given. If sent by overnight express courier service, the

date of delivery shall be deemed to be the next Business Day after such notice or request was deposited with such service. If sent by certified mail, the date of delivery shall be deemed to be the third (3rd) Business Day after such notice or request was deposited with the U.S. Postal Service.

14.6. Entire Agreement. This Agreement, together with the Exhibits and Schedules hereto, the Research Plan, thePre-Development Plan, and the agreements referenced or contemplated herein, contain the entire agreement by the Parties with respect to the subject matter hereof and supersedes any prior express or implied agreements, understandings and representations, either oral or written, which may have related to the subject matter hereof in any way, including any and all term sheets relating to the transactions contemplated by this Agreement and exchanged between the Parties prior to the Amendment Effective Date.

14.7. Severability. If any provision hereof should be held invalid, illegal or unenforceable in any jurisdiction, the Parties shall negotiate in good faith a valid, legal and enforceable substitute provision that most nearly reflects the original intent of the Parties and all other provisions hereof shall remain in full force and effect in such jurisdiction and shall be liberally construed in order to carry out the intentions of the Parties hereto as nearly as may be possible. Such invalidity, illegality or unenforceability shall not affect the validity, legality or enforceability of such provision in any other jurisdiction.

14.8. Waiver; Amendment. A term of this Agreement may be waived only by a written instrument executed by a duly authorized representative of the Party waiving compliance. The delay or failure of any Party at any time to require performance of any provision of this Agreement shall in no manner affect such Party's rights at a later time to enforce the same. This Agreement may be amended, and any term of this Agreement may be modified, only by a written instrument executed by a duly authorized representative of each Party.

14.9. Headings; Construction; Interpretation. Headings used herein are for convenience only and shall not in any way affect the construction of or be taken into consideration in interpreting this Agreement. Each Party hereby waives the application in connection with the interpretation and construction of this Agreement of any rule of Law to the effect that ambiguous or conflicting terms or provisions contained in this Agreement shall be interpreted or construed against the Party whose attorney prepared the executed draft or any earlier draft of this Agreement. Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, subclause, Schedule or Exhibit shall be deemed to be a reference to any Article, Section, subsection, paragraph, clause, subclause, Schedule or Exhibit, of or to, as the case may be, this Agreement. Except where the context otherwise requires, (a) any definition of or reference to any agreement, instrument or other document refers to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein or therein), (b) any reference to any Law refers to such Law as from time to time enacted, repealed or amended, (c) the words "herein," "hereof" and "hereunder," and words of similar import, refer to this Agreement in its entirety and not to any particular provision hereof, (d) the words "include," "includes," and "including," shall be deemed to be followed by the phrase "but not limited to," "without limitation" or words of similar import, (e) the word "or" is used in the inclusive sense (and/or), (f) the singular shall include the plural and *vice versa*; and (g) masculine, feminine and neuter pronouns and expressions shall be interchangeable.

14.10. Force Majeure. No Party shall be held liable or responsible to the other Party nor be deemed to be in default under, or in breach of any provision of, this Agreement for failure or delay in fulfilling or performing any obligation of this Agreement when such failure or delay is due to force majeure, and without the fault or negligence of the Party so failing or delaying. For purposes of this Agreement, force majeure is defined as causes beyond the control of the Party, including acts of God; material changes in Law; war; civil commotion; destruction of production facilities or materials by fire, flood, earthquake, explosion or storm; labor disturbances; epidemic; and failure of public utilities or common carriers. In such event SUTRO or CELGENE, as the case may be, shall immediately notify the other Party of such inability and of the period for which such inability is expected to continue. The Party giving such notice shall thereupon be excused from such of its obligations under this Agreement as it is thereby disabled from performing for so long as it is so disabled for up to a maximum of ninety (90) days, after which time SUTRO and CELGENE shall promptly meet to discuss in good faith how to best proceed in a manner that maintains and abides by the Agreement. To the extent possible, each Party shall use reasonable efforts to minimize the duration of any force majeure.

14.11. Independent Contractors. Nothing herein shall be construed to create any relationship of employer and employee, agent and principal, partnership or joint venture between the Parties. Each Party is an independent contractor. Neither Party shall assume, either directly or indirectly, any liability of or for the other Party. Neither Party shall have the authority to bind or obligate the other Party and neither Party shall represent that it has such authority.

14.12. Further Assurances. Each Party shall execute, acknowledge and deliver such further instruments, and do all such other acts, as may be necessary or appropriate in order to carry out the expressly stated purposes and the clear intent of this Agreement.

14.13. Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Facsimile and other electronically scanned signatures shall have the same effect as their originals.

14.14. Celgene Parties. The Parties hereby acknowledge and agree that (a) Celgene Corp. is the party to this Agreement with respect to all rights and obligations under this Agreement in the United States; (b) Celgene Alpine is the party to this Agreement with respect to all rights and obligations under this Agreement outside of the United States; and (c) as between SUTRO, on the one hand, and Celgene Corp. and Celgene Alpine, on the other, Celgene Corp. shall undertake all actions permitted or required to be taken by Celgene Corp. and/or Celgene Alpine.

[*Signature page follows*]

IN WITNESS WHEREOF, and intending to be legally bound hereby, the Parties have caused this AMENDED AND RESTATED COLLABORATION AND LICENSE AGREEMENT to be executed by their duly authorized representatives as of the Amendment Effective Date.

SUTRO BIOPHARMA, INC.

By: /s/ William J. Newell
Name: William J. Newell
Title: CEO

CELGENE CORPORATION

App'd Legal Dept.

By: /s/ [illegible]
Name:
Title:

Solely with respect to the rights and obligations under this Amended and Restated Collaboration and License Agreement outside of the United States (subject to Section 14.14):

CELGENE ALPINE INVESTMENT COMPANY II, LLC

App'd Legal Dept.

By: Celgene International Sàrl, sole member

By: /s/ Kevin Mello
Name: Kevin Mello
Title: Manager

[*Signature Page to Amended and Restated Collaboration and License Agreement*]

Exhibit A

A-1 Research Plan

[*]

***Confidential Treatment Requested.**

A-2 Pre-Development Plan

[To be agreed by the JSC and attached after execution]

Exhibit B

Target Combinations

BCMA ADC Program: BCMA (single Target)
[*]

***Confidential Treatment Requested.**

Exhibit C

Development Candidates

(Indicate applicable Target Combination and whether a [*] DC or a Non-[*] DC)

As of the Amendment Effective Date:

BCMA ADC Program Development Candidates List.

1) [*] (mAb [*] conjugated to [*])*

2) [*] (mAb [*] conjugated to [*])*

* None of the binding domains is Directed to [*] (may subsequently deemed to be a [*] DC in accordance with the second sentence of Section 1.15 of the Agreement)

***Confidential Treatment Requested.**

Exhibit D

Form of SUTRO Background IP Transfer Agreement

This SUTRO Background IP Transfer Agreement No. _____ (the "IP Transfer Agreement") is made as of _____ (the "IP Transfer Agreement Effective Date"), by and between Celgene Corporation and Sutro Biopharma, Inc., pursuant and subject to that certain Collaboration and License Agreement, entered into among Celgene Corporation, Celgene Alpine Investment Company II, LLC and Sutro Biopharma, Inc. with an effective date of [_____] (the "Agreement"), for the transfer pursuant to Section 2.2.3(a) thereof, of:

A. Program(s) – Indicate if use of the transferred IP is to restricted to any specific BAC/ADC Program(s):

Internal Program Designation: _____
Restriction: _____

B. Transfer – Indicate what is being transferred (check all that apply):

☐ Patents

☐ Know-How

☐ Antibody

☐ Binder *Indicate Target(s):* _____

Source: ☐SUTRO ☐ Third Party:_____ ☐ Public Domain

☐ Format

Source: ☐SUTRO ☐ Third Party:_____ ☐ Public Domain

☐ Linker *Indicate Antibody Base(s):* _____

Source: ☐SUTRO ☐ Third Party:_____ ☐ Public Domain

☐ Payload *Indicate Antibody Base(s):*_____

Source: ☐SUTRO ☐ Third Party:_____ ☐ Public Domain

C. Description of Patents and Know-How:

If Patents or Know-How are being transferred, please list below, otherwise state "None":

[None]

D. Description of Antibody, Binder, Format, Linker or Payload being transferred

- [Add description, if any]
-

E. Patents and Know-How– Any Patents or Know-How Controlled by CELGENE and/or its Affiliates that Cover the transferred IP shall be listed or described below (if not previously listed):

Patents: [____]

Know-How: [____]

F. Additional Terms – The following terms shall apply regarding the transferred IP:

If any additional terms, please describe below, otherwise state "None":

[None]

The Parties acknowledge and agree that the Patents, Antibodies, Binders, Formats, Linkers and/or Payloads set forth in this IP Transfer Agreement are Confidential Information of SUTRO and that the transfer thereof pursuant to this IP Transfer Agreement will be pursuant to and in accordance with the terms and conditions of the Agreement. Any capitalized terms used in this IP Transfer Agreement that are not defined herein have the meanings ascribed to them in the Agreement.

[*Signature Page Follows*]

IN WITNESS WHEREOF, this IP Transfer Agreement is entered into as of the IP Transfer Agreement Effective Date, and it is accepted and agreed to by the Parties' authorized representatives.

For CELGENE CORPORATION:	**For SUTRO BIOPHARMA, INC.**
By: _____	By: _____
Name: _____	Name: _____
Title: Alliance Manager	Title: _____

Exhibit E

Form of Initial CELGENE Background IP Transfer Agreement

This Initial CELGENE Background IP Transfer Agreement (the "IP Transfer Agreement") is made as of _____ (the "IP Transfer Agreement Effective Date"), by and between Celgene Corporation and Sutro Biopharma, Inc., pursuant and subject to that certain Collaboration and License Agreement, entered into among Celgene Corporation, Celgene Alpine Investment Company II, LLC and Sutro Biopharma, Inc. with an effective date of September _____, 2014 (the "Agreement"), for the transfer pursuant to Section 2.2.3(b) thereof, of:

A. Program(s) – Indicate if use of the transferred IP is restricted to any specific BAC/ADC Program(s):

Internal Program Designation: _____
Restriction: _____

B. Transfer – Indicate what is being transferred (check all that apply):

☐ Patents

☐ Know-How

☐ Antibody

☐ Binder *Indicate Target(s):* _____

Source: ☐ CELGENE ☐ Third Party: _____ ☐ Public Domain

☐ Format

Source: ☐ CELGENE ☐ Third Party: ☐ Public Domain

☐ Linker *Indicate Antibody Base(s):* _____

Source: ☐ CELGENE ☐ Third Party: _____ ☐ Public Domain

☐ Payload *Indicate Antibody Base(s):* _____

Source: ☐ CELGENE ☐ Third Party: _____ ☐ Public Domain

C. Description of Patents and Know-How:

If Patents or Know-How are being transferred, please list below, otherwise state "None":

[None]

D. Description of Antibody, Binder, Format, Linker or Payload being transferred:

- [Add description, if any]
-

E. Patents and Know-How– Any Patents or Know-How Controlled by CELGENE and/or its Affiliates that Cover the transferred IP shall be listed or described below (if not previously listed):

Patents: [___]

Know-How: [___]

F. Additional Terms

- Access. Subject to Section G. of this IP Transfer Agreement, SUTRO hereby covenants and agrees that, during the Research Term, it will grant CELGENE access to SUTRO IP and SUTRO Expression Technology with respect to any Patents, Know-How, Antibodies, Binders, Formats, Linkers and Payloads transferred by CELGENE under this IP Transfer Agreement and each future CELGENE Background IP Transfer Agreement, for the purpose of developing and commercializing Collaboration BACs and Collaboration ADCs, and corresponding Development Candidates and Licensed Products and Diagnostic Products in accordance with the Agreement, as more specifically described in Schedule A hereto. Promptly after execution of this IP Transfer Agreement and each future CELGENE Background IP Transfer Agreement, the Parties shall update the Research Plan to reflect such access and the performance by SUTRO of the activities described in Schedule A hereto.
-

If any additional terms, please describe below, otherwise state "None":

[Address, if relevant, ownership of portion, fragment, variant, modification or derivative of Antibody contributed under this IP Transfer Agreement]

[None]

G. Acknowledgement:

The Parties acknowledge and agree that the Patents, Know-How, Antibodies, Binders, Formats, Linkers and/or Payloads set forth in this IP Transfer Agreement are Confidential Information of CELGENE and that the transfer of such Patents, Know-How, Antibodies, Binders, Formats, Linkers and/or Payloads pursuant to this IP Transfer Agreement will be pursuant to and in accordance with the terms and conditions of the Agreement. The Parties further acknowledge and agree that nothing in this IP Transfer Agreement shall be construed to expand the rights granted to CELGENE with respect to SUTRO IP and/or SUTRO Expression Technology under Article 9 of the Agreement. Any capitalized terms used in this IP Transfer Agreement that are not defined herein have the meanings ascribed to them in the Agreement.

[*Signature Page Follows*]

IN WITNESS WHEREOF, this IP Transfer Agreement is entered into as of the IP Transfer Agreement Effective Date, and it is accepted and agreed to by the Parties' authorized representatives.

For CELGENE CORPORATION:	**For SUTRO BIOPHARMA, INC.**
By: _____	By: _____
Name: _____	Name: _____
Title: Alliance Manager	Title: _____

***Confidential Treatment Requested.**

Exhibit F

Form of Subsequent CELGENE Background IP Transfer Agreement

This Subsequent CELGENE Subsequent Background IP Transfer Agreement No. _____ (the "IP Transfer Agreement") is made as of _____ (the "IP Transfer Agreement Effective Date"), by and between Celgene Corporation and Sutro Biopharma, Inc., pursuant and subject to that certain Collaboration and License Agreement, entered into among Celgene Corporation, Celgene Alpine Investment Company II, LLC and Sutro Biopharma, Inc. with an effective date of September _____, 2014 (the "Agreement"), for the transfer pursuant to Section 2.2.3(b) thereof, of:

A. Program(s) – Indicate if use of the transferred IP is restricted to any specific BAC/ADC Program(s):

Internal Program Designation: _____
Restriction: _____

B. Transfer – Indicate what is being transferred (check all that apply):

☐ Patents

☐ Know-How

☐ Antibody

☐ Binder *Indicate Target(s):* _____

Source: ☐ CELGENE ☐ Third Party: ☐ Public Domain

☐ Format

Source: ☐ CELGENE ☐ Third Party: ☐ Public Domain

☐ Linker *Indicate Antibody Base(s):* _____

Source: ☐ CELGENE ☐ Third Party: _____ ☐ Public Domain

☐ Payload *Indicate Antibody Base(s):* _____

Source: ☐ CELGENE ☐ Third Party: _____ ☐ Public Domain

C. ***Description of Patents and Know-How:***

If Patents or Know-How are being transferred, please list below, otherwise state "None":

[None]

D. ***Description of Antibody, Binder, Format, Linker or Payload being transferred:***

- [Add description, if any]
-

E. ***Patents and Know-How– Any Patents or Know-How Controlled by CELGENE and/or its Affiliates that Cover the transferred IP shall be listed or described below (if not previously listed):***

Patents: [___]

Know-How: [___]

F. ***Additional Terms – The following terms shall apply regarding the transferred IP:***

If any additional terms, please describe below, otherwise state "None":

[Address, if relevant, ownership of portion, fragment, variant, modification or derivative of Antibody contributed under this IP Transfer Agreement]

[None]

The Parties acknowledge and agree that the Patents, Know-How, Antibodies, Binders, Formats, Linkers and/or Payloads set forth in this IP Transfer Agreement are Confidential Information of CELGENE and that the transfer of such Patents, Know-How, Antibodies, Binders, Formats, Linkers and/or Payloads pursuant to this IP Transfer Agreement will be pursuant to and in accordance with the terms and conditions of the Agreement. Any capitalized terms used in this IP Transfer Agreement that are not defined herein have the meanings ascribed to them in the Agreement.

[*Signature Page Follows*]

IN WITNESS WHEREOF, this IP Transfer Agreement is entered into as of the IP Transfer Agreement Effective Date, and it is accepted and agreed to by the Parties' authorized representatives.

For CELGENE CORPORATION:	**For SUTRO BIOPHARMA, INC.**
By: _____	By: _____
Name: _____	Name: _____
Title: Alliance Manager	Title: _____

Exhibit G

In-Life Portion of Exploratory Toxicology Testing

[*]

***Confidential Treatment Requested.**

Exhibit H

Press Release

[*to be attached*]

EXHIBIT I

San Carlos Facility Improvements

1. Complete detailed engineering drawings for San Carlos site upgrade and get San Carlos city approval and permit
2. Complete construction at San Carlos site based on approved drawings
3. Receive license to utilize San Carlos facility after inspection
4. Install the following equipment at San Carlos facility:
    a. [*]
    b. [*]
    c. [*]
    d. [*]
    e. [*]
5. Receive Quality validation on process equipment at San Carlos facility

***Confidential Treatment Requested.**

EXHIBIT J

Identified BAC/ADC Programs

Exhibit-A1

BCMA ADC Program Development Candidates List:

1) [*] (mAb [*] conjugated to [*])

2) [*] (mAb [*] conjugated to [*])

Exhibit-A2

[*] Program Molecule List

[*]

Exhibit-A3

[*] Program Molecule List

[*]

Exhibit-A4

[*] Program Molecule List

[*]

***Confidential Treatment Requested.**

EXHIBIT K

JMC Memo

[*]

***Confidential Treatment Requested.**

Schedule 1.98(b)

SUTRO Patents

[*]

***Confidential Treatment Requested.**

Schedule 6.5.4

Agreed Cost Allocation

Notwithstanding anything to the contrary in this Agreement, the Parties acknowledge and agree that CELGENE will pay [*] percent ([*]%) of the costs for the [*] Program, as set forth in the budget attached to this Schedule 6.5.4 ("[*] Budget"), provided that: (a) in the event [*] achieves the milestone set forth in [*], unless otherwise set forth in the [*] Budget, [*] percent ([*]%) of such costs will be deducted from the milestone payable to SUTRO under Section 7.4.3(c)(2), and (b) any change to the [*] Program that would result in an increase greater than [*] percent ([*]%) of the [*] Budget shall require the Parties' mutual agreement. For clarity, in the event such milestone is not achieved, SUTRO shall not be required to reimburse CELGENE for any costs.

[*] Budget:

Activity	Lead Party/Individual	Cost (000's)
Generate PK study Material (3 constructs)	Celgene ([*] group)	$[*]
PK Study- 5 animals per group for 3 compounds	Celgene ([*] group)	$[*]
ET Material manufactured at CMO	Celgene ([*])	$[*]
ET Study on 1 Construct	Celgene ([*] group)	$[*]
Process Development to support manufacturing of IND enabling material and the manufacturing of Tox material	Celgene ([*])	$[*]
Process Development to support Phase 1 manufacturing and manufacturing of Phase 1 material*	Celgene ([*])	$[*]
Total		$[*]

* Celgene to bear [*]% of these costs to the extent that these costs are incurred for the development of a molecule for which Celgene has world-wide commercial rights for such molecules, these costs are not subject to offset against Phase III milestone. For molecules where Sutro retains U.S. commercial rights, Celgene and Sutro shall [*] bear [*] of these costs; Sutro's portion shall be offset against [*].

Schedule 7.2.3

Other Payments

(a) [*], in consideration for CELGENE's exercise of the NNAA Option (as defined in the Original Agreement).

(b) [*] in consideration for that certain option set forth in that certain Option Support Agreement, dated as of the Original Effective Date, by and between Celgene Corp. and SUTRO ("Option Agreement"). Notwithstanding the foregoing payment, the Parties acknowledge and agree that the Option Agreement is hereby terminated in its entirety as of the Amendment Effective Date.

(c) Eighty One Million and Five Hundred and Sixty Three Thousand Dollars ($81,563,000) within five (5) Business Days after the Original Effective Date, pursuant to Section 7.1.

(d) CELGENE purchased from SUTRO 18,097,331 shares of Series D-2 Convertible Preferred Stock, par value $0.001 per share, of SUTRO at a purchase price of $ $0.6596 per share, having an aggregate purchase price of Eleven Million and Nine Hundred and Thirty Seven Thousand Dollars ($11,937,000.00), pursuant to the Series D-2 Stock Purchase Agreement and Section 7.2.

(e) The following one-time payments have been paid by CELGENE to SUTRO:

(i) Ten Million Dollars ($10,000,000) pursuant to Section 7.4.1(a) for achievement of MS Milestone 1.

(ii) Twenty-Five Million Dollars ($25,000,000) pursuant to Section 7.4.2 for achievement of the Tranche 2 Milestone.

(iii) Fifteen Million Dollars ($15,000,000) in connection with the execution of that certain initial IP transfer agreement referenced in Section 2.2.3 (c)(i)(2).

 ***Confidential Treatment Requested.**

Schedule 7.4.1(b)

MS Milestone 2 Performance and Quality Requirements

[*]

***Confidential Treatment Requested.**

Schedule 8.1.1(b)(ii)(C)

Minimum Potency Requirement

[*]

***Confidential Treatment Requested.**

Schedule 9.1.3(d)

Stanford In-License Sublicensing Requirements

CELGENE hereby agrees to be bound by the terms and conditions of the StanfordIn-License, including the terms set forth below, to the same extent SUTRO (formerly known as Fundamental Applied Biology, Inc., or "FAB") is bound thereunder, as if references to FAB or SUTRO were references to CELGENE.

Sec. 1. The following provisions of the Stanford In-License (Articles 9 and 10) are hereby included in the Agreement, and Stanford is hereby named as a third party beneficiary of such provisions:

9 WARRANTIES AND NEGATION OF WARRANTIES

9.1. Warranties. Stanford warrants and represents that (a) it has the right and authority to enter into this Agreement and to grant licenses of the scope granted in this Agreement and (b) Stanford has not previously granted any rights in the Licensed Patents other than the rights and licenses granted in the Pre-Existing Licenses and will not grant any further rights in the Licensed Patents that are inconsistent with the rights and licenses granted to SUTRO herein. For purposes of clarity, SUTRO acknowledges that it has been made aware by Stanford of the scope of the field of use of the Pre-Existing Licenses.

9.2. Negation of Warranties. Except as expressly set forth in this Agreement, Stanford makes no representations and extends no warranties of any kind, either express or implied. Among other things, Stanford disclaims any express or implied warranty:

(A) of merchantability, of fitness for a particular purpose,

(B) of non-infringement or

(C) arising out of any course of dealing.

9.2. No Representation of Licensed Patent. SUTRO also acknowledges that Stanford does not represent or warrant:

(A) the validity or scope of any Licensed Patent, or

(B) that the exploitation of Licensed Patent or Technology will be successful.

10 INDEMNITY

10.1. Indemnification. SUTRO will indemnify, hold harmless, and defend all Stanford Indemnitees against any and all third party claims for death, illness, personal injury, property damage, and improper business practices arising out of the manufacture, use, sale, or other disposition of the Licensed Patents or Licensed Products by SUTRO or any sublicensee, unless resulting from a claimed breach by Stanford of its warranties or the gross negligence or willful misconduct of any Stanford Indemnitee; provided that:

(A) SUTRO receives prompt notice of any such claim,

(B) SUTRO shall not be obligated to indemnify any Stanford Indemnitee in connection with any settlement for any claim unless SUTRO consents in writing to such settlement (which consent shall not be unreasonably withheld), and

(C) SUTRO shall have the first right to defend any such claim and, if SUTRO elects to exercise such first right, the exclusive right to control the defense thereof.

Notwithstanding the foregoing, SUTRO shall have no obligations for any third party claim or demand that may be the subject of this Section 10.1 if the Stanford Indemnitee seeking indemnification makes any admission regarding such claim without the prior written consent of SUTRO, which consent shall not be unreasonably withheld.

10.2. No Indirect Liability. Neither party shall be liable for any special, consequential, lost profit, expectation, punitive or other indirect damages in connection with any claim arising out of or related to this Agreement, whether grounded in tort (including negligence), strict liability. contract, or otherwise arising out of or in connection with solely this Agreement under any theory of liability; provided, however, that the foregoing shall not apply to any right of action for infringement, contributory infringement or inducement of infringement Stanford may have under any applicable law. Except as provided in Section 9.1, Stanford shall not have any responsibilities or liabilities whatsoever with respect to Licensed Products.

10.3. Workers' Compensation. SUTRO will comply with all statutory workers' compensation and employers' liability requirements for activities performed under this Agreement.

10.4. Insurance. During the term of this Agreement, SUTRO will maintain Comprehensive General Liability Insurance, including Product Liability Insurance, with a reputable and financially secure insurance carrier to cover the activities of SUTRO and its sublicensees. Upon introduction of Licensed Product into humans, such insurance will provide minimum limits of liability of $[*] and will include all Stanford Indemnitees as additional insureds. Such insurance shall be written to cover claims incurred, discovered, manifested, or made during or after the expiration of this Agreement and must be placed with carriers with ratings of at least A- as rated by A.M. Best. Within 15 days of the introduction of Licensed Product into humans. SUTRO will furnish a Certificate of Insurance evidencing primary coverage and additional insured requirements. SUTRO will provide to Stanford 30 days prior written notice of cancellation or material change to this insurance coverage. SUTRO will advise Stanford in writing that it maintains excess liability coverage (following form) over primary insurance for at least the minimum limits set forth above. All insurance of SUTRO will be primary coverage; insurance of Stanford and Stanford Hospitals and Clinics will be excess and noncontributory. Notwithstanding the foregoing, if SUTRO proposes alternative coverage under this Section 10.4, Stanford shall not unreasonably withhold its consent to such alternative coverage in lieu of the coverage detailed in this Section 10.4, so long as the proposed coverage is reasonable and customary for the industry and reasonably protects Stanford's interests."

***Confidential Treatment Requested.**

Sec. 2. If the Stanford In-License is terminated, the applicable obligations with respect to the subject matter covered by the StanfordIn-License will be transferred to Stanford or its designee, and CELGENE will assume such obligations, and (to the extent it exercises any rights to such subject matter) CELGENE will make any payment thereby due under the Stanford In-License by SUTRO directly to Stanford or its designee. For purposes of clarity, it is agreed that in the event the Stanford In-License is terminated, Stanford shall have audit rights vis-à-vis CELGENE and its Affiliates substantially similar to those set forth in Section 8.5 of the Stanford In-License.

Sec. 3. Stanford is hereby named as a third party beneficiary of Section 12.3 of the Agreement (Termination for IP Challenge).

Sec. 4. Any sublicense granted by CELGENE under the Licensed Patents (as defined in the StanfordIn-License) will not include the right to further sublicense.

Schedule 11.2(a)

PATENTS AND PATENT APPLICATIONS LICENSED FROM STANFORD

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	TITLE
STAN-117	US	ISSUED	09/270,814		6,168,931	Enhanced In Vitro Synthesis of Biological Macromolecules Using a Novel ATP Regeneration System
STAN-117CA	CA	ISSUED	2365668		2,365,668	In Vitro Macromolecule Biosynthesis Methods Using Exogenous Amino Acids and a Novel ATP Regeneration System
STAN-117CON	US	ISSUED	09/948,815	US-2002-0081660-A1	6,994,986	In Vitro Synthesis of Polypeptides by Optimizing Amino Acid Metabolism
STAN-117EP	EP	PUBLISHED	923078			In Vitro Macromolecule Biosynthesis Methods Using Exogenous Amino Acids and a Novel ATP Regeneration System
STAN-117JP	JP	ISSUED	2000-605770	2002-538832	4707237	In Vitro Macromolecule Biosynthesis Methods Using Exogenous Amino Acids and a Novel ATP Regeneration System
STAN-117JPDIV	JP	PUBLISHED	2010-259783	2011-079845		In Vitro Macromolecule Biosynthesis Methods Using Exogenous Amino Acids and a Novel ATP Regeneration System
STAN-117WO	WO	NAT PHASE	US00/07095	WO00/5353		In Vitro Macromolecule Biosynthesis Methods Using Exogenous Amino Acids and a Novel ATP Regeneration System

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	TITLE
STAN-152	US	ISSUED	09/621,339		6,337,191	In Vitro Protein Synthesis Using Glycolytic Intermediates as an Energy Source
STAN-152CA	CA	ABANDONED	2428693			In Vitro Protein Synthesis Using Glycolytic Intermediates as an Energy Source
STAN-152EP	EP	ABANDONED	980413.9			In Vitro Synthesis Using Glycolytic Intermediates as an Energy Source
STAN-152JP	JP	ABANDONED	2002-543505			In Vitro Synthesis Using Glycolytic Intermediates as an Energy Source
STAN-152PRV	US	EXPIRED	60/145,438			In Vitro Synthesis Using Glucose Or Glycolytic Intermediates as an Energy Source
STAN-152WO	WO	NAT PHASE	US00/31449			In Vitro Synthesis Using Glycolytic Intermediates as an Energy Source

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	TITLE
STAN-205	US	ISSUED	09/948,052	US-2002-0058303-A1	6,548,276	Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-205AU	AU	ISSUED	2001288931		2001288931	Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-205CA	CA	ISSUED	2419996		2419996	Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-205CIP	US	ISSUED	10/404,599	US-2004-0038332-A1	7,041,479	Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-205EP	EP	ISSUED	1968701.1	1315826	1315826	Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-205JP	JP	ISSUED	2002-525824	2004-508050	4889185	Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-205PRV	US	EXPIRED	60/230,381			Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-205WO	WO	NAT PHASE	US01/28159	WO 02/20818		Enhanced In Vitro Synthesis of Active Proteins Containing Disulfide Bonds

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	TITLE
STAN-273	US	ISSUED	10/643,683	US 2004-0209321 A1	7,338,789	Methods of In Vitro Protein Synthesis
STAN-273AU	AU	ISSUED	2003259912		2003259912	Improved Methods of In Vitro Protein Synthesis
STAN-273CA	CA	ISSUED	2496437		2496437	Improved Methods of In Vitro Protein Synthesis
STAN-273DIV	US	ISSUED	11/971,130	US 2008-0138857 A1	8,357,529	Methods of In Vitro Protein Synthesis
STAN-273EP	EP	ISSUED	3788625.6	1539948	1539948	Improved Methods of In Vitro Protein Synthesis
STAN-273EPDIV	EP	ABANDONED	9009204	2108697		Improved Methods of In Vitro Protein Synthesis
STAN-273JP	JP	ISSUED	2004-529558	2005-536206	5259046	Improved Methods of In Vitro Protein Synthesis
STAN-273JPDIV	JP	ABANDONED	2010-153515	2010-279368		Improved Methods of In Vitro Protein Synthesis
STAN-273PRV	US	EXPIRED	60/404,591			Methods of In Vitro Protein Synthesis
STAN-273WO	WO	NAT PHASE	US03/25888	WO 2004/016778		Improved Methods of In Vitro Protein Synthesis

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	TITLE
STAN-309	US	ISSUED	10/888,145	US-2005-0054032-A1	7,341,852	Methods of Decoupling Reaction Scale and Protein Synthesis Yield in Batch Mode
STAN-309AU	AU	ISSUED	2004259433		2004259433	Methods of Decoupling Reaction Scale and Protein Synthesis Yield in Batch Mode
STAN-309EP	EP	ISSUED	4778237	1649025	1649025	Methods of Decoupling Reaction Scale and Protein Synthesis Yield in Batch Mode
STAN-309JP	JP	ISSUED	2006-521119	2006-527997	4751829	Methods of Decoupling Reaction Scale and Protein Synthesis Yield in Batch Mode
STAN-309PRV	US	EXPIRED	60/488,282			Methods of Decoupling Reaction Scale and Protein Synthesis Yield in Batch Mode
STAN-309WO	WO	NAT PHASE	US2004/022632	WO 2004/022632		Methods of Decoupling Reaction Scale and Protein Synthesis Yield in Batch Mode

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	TITLE
STAN-337	US	PUBLISHED	10/579,711	US 2007-0154983 A1		Improved Methods of In Vitro Protein Synthesis
STAN-337AU	AU	ISSUED	2004293798		2004293798	Improved Methods of In Vitro Protein Synthesis
STAN-337CN	CN	PUBLISHED	2.0048E+11	101014716		Improved Methods of In Vitro Protein Synthesis
STAN-337EP	EP	PUBLISHED	4811533.1	1685240		Improved Methods of In Vitro Protein Synthesis
STAN-337IN	IN	ISSUED	1741/CHENP/ 2006		239129	A Method for Synthesis of Polynucleotides and/or Polypeptides
STAN-337JP	JP	ISSUED	2006-541404	2007-521023	5074768	Improved Methods of In Vitro Protein Synthesis
STAN-337KR	KR	ISSUED	2006-7010314		10-1232656	Improved Methods of In Vitro Protein Synthesis
STAN-337NZ	NZ	ISSUED	546961	Journal No. 1559	546961	Improved Methods of In Vitro Protein Synthesis
STAN-337PRV	US	EXPIRED	60/524,374			Improved Methods of In Vitro Protein Synthesis
STAN-337WO	WO	NAT PHASE	US2004/038830	WO 2005/052117		Improved Methods of In Vitro Protein Synthesis

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	COUNTRY
STAN-353	US	ISSUED	10/599,310	US 2009-0042244 A1	8,298,759	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353AU	AU	ISSUED	2005230916		2005230916	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353CA	CA	PENDING	2560504			Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353CN	CN	ABANDONED	2.0058E+11			Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353EA	EA	ISSUED	200601748		10837	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353EP	EP	ISSUED	5733219.9	1730313	1730313	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353ID	ID	ISSUED	W00 2006 02538	047.0258A	P0029416	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353JP	JP	ISSUED	2007-505063	2007-530042	4829215	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353KR	KR	ISSUED	10-2006-7019493		10-1229849	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353MX	MX	ISSUED	PA/a/2006/010918		280082	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353NO	NO	ISSUED	20064735		331586	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353NZ	NZ	ISSUED	549523	1564	549523	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents

STAN-353PRV	US	EXPIRED	60/556,736			Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353SG	SG	ISSUED	200606158-4		125458	Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents
STAN-353WO	WO	NAT PHASE	US2005/009342	WO 2005/098048		Protein Expression Yield Enhancement in Cell-Free Protein Synthesis Systems by Addition of Antifoam Agents

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	COUNTRY
STAN-405	US	ISSUED	11/447,367	US 2007-0004001 A1	7,312,049	Total Amino Acid Stabilization During Cell-Free Protein Synthesis
STAN-405AU	AU	ISSUED	2006259543		2006259543	Total Amino Acid Stabilization During Cell-Free Protein Synthesis
STAN-405CA	CA	PENDING	2611908			Total Amino Acid Stabilization During Cell-Free Protein Synthesis
STAN-405EP	EP	PUBLISHED	6784839	1893768		Total Amino Acid Stabilization During Cell-Free Protein Synthesis
STAN-405PRV	US	EXPIRED	60/690,571			Total Amino Acid Stabilization During Cell-Free Protein Synthesis
STAN-405WO	WO	NAT PHASE	US2006/023032	WO 2006/138322		Total Amino Acid Stabilization During Cell-Free Protein Synthesis

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	COUNTRY
STAN-459	US	ISSUED	12/089,596	US 2009-0029414 A1	8,183,010	Cell-Free Synthesis of Membrane Bound Polypeptides
STAN-459AU	AU	ISSUED	2006308854		2006308854	Cell-Free Synthesis of Membrane Bound Polypeptides
STAN-459CA	CA	PENDING	2626061			Cell-Free Synthesis of Membrane Bound Polypeptides
STAN-459DIV	US	ISSUED	13/468,907		8,492,115	Cell-Free Synthesis of Membrane Bound Polypeptides
STAN-459EP	EP	PUBLISHED	6844245.8	1943338		Cell-Free Synthesis of Membrane Bound Polypeptides
STAN-459IN	IN	PENDING	3144/DELNP/ 2008			Cell-Free Synthesis of Membrane Bound Polypeptides

STAN-459JP	JP	ISSUED	2008-538111	2009-513146	5383197	Cell-Free Synthesis of Membrane Bound Polypeptides
STAN-459PRV	US	EXPIRED	60/732,437			Cell-Free Synthesis of Membrane Bound Polypeptides
STAN-459WO	WO	NAT PHASE	US2006/042583	WO 2007/053655		Cell-Free Synthesis of Membrane Bound Polypeptides

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	COUNTRY
STAN-507	US	ISSUED	12/305,617	US 2010-0093024 A1	8,715,958	Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507AU	AU	ISSUED	2007325952		2007325952	Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507CA	CA	PENDING	2657811			Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507CN	CN	ISSUED	2.0078E+11		ZL200780024345.9	Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507EP	EP	ISSUED	7870711.4	2035554	2035554	Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507IN	IN	ISSUED	2784/MUMNP/2008		258411	Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507JP	JP	PUBLISHED	2009-518303	2009-542214		Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507PRV	US	EXPIRED	60/817,915			Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids
STAN-507WO	WO	NAT PHASE	US2007/015170	WO 2008/066583		Cell-Free Synthesis of Proteins Containing Unnatural Amino Acids

MATTER NO	COUNTRY	STATUS	SERIAL NO	PUBL NO	PATENT NO	COUNTRY
STAN-534	US	ISSUED	12/016,763	US 2008-0248521 A1	7,871,794	Enhanced Cell-Free Synthesis of Active Proteins Containing Disulfide Bonds
STAN534AU	AU	ABANDONED	2008205479			Enhanced Cell-Free Synthesis of Active Proteins Containing Disulfide Bonds
STAN-534CA	CA	ABANDONED	2673765			Enhanced Cell-Free Synthesis of Active Proteins Containing Disulfide Bonds
STAN-534EP	EP	ABANDONED	8724626	2109682		Enhanced Cell-Free Synthesis of Active Proteins Containing Disulfide Bonds

STAN-534JP	JP	ABANDONED	2009-546434	2010-516251	Enhanced Cell-Free Synthesis of Active Proteins Containing Disulfide Bonds
STAN-534PRV	US	EXPIRED	60/881,251		Enhanced in Vitro Synthesis of Active Proteins Containing Disulfide Bonds
STAN-534WO	WO	NAT PHASE	US2008/000699	WO 2008/088884	Enhanced Cell-Free Synthesis of Active Proteins Containing Disulfide Bonds

PATENTS AND PATENT APPLICATIONS OWNED BY SUTRO

[*]

***Confidential Treatment Requested.**

Schedule 11.2(b)

SUTRO In–Licenses

- License Agreement by and between SUTRO and The Board of Trustees of the Leland Stanford Junior University, dated Oct. 3, 2007
- License Agreement by and between SUTRO and Enwave Corporation, dated May 23, 2014

SUTRO will be solely responsible for all payment obligations under the agreements listed above.

Schedule 14.3

Assignee Assumption Form

[Assigning Party Letterhead]

[Notice Address of Non-Assigning Party]

[Date]

Re: Notice and Agreement of Assignment and Assumption

To Whom It May Concern:

Pursuant to Section 14.3 of that certain Amended and Restated Collaboration and License Agreement, entered into by and between Celgene Corporation ("Celgene") and Sutro Biopharma, Inc. ("Sutro"), dated August 2, 2017 (as amended and restated, the "Collaboration Agreement"), [ASSIGNING PARTY] (the "Assigning Party") hereby gives notice to [NON-ASSIGNING PARTY] (the "Non-Assigning Party") of the assignment to, and the assumption by, [ASSIGNEE] ("Assignee") of the Collaboration Agreement (the "Assignment and Assumption"), effective as of [INSERT DATE] (the "Assignment Date"). In the event the Assignment and Assumption does not occur on the Assignment Date specified above, the Assigning Party shall provide written notice and certification of the date of consummation of the Assignment and Assumption (the "Actual Assignment Date") to the Non-Assigning Party within three (3) Business Days (as defined in the Collaboration Agreement) after such consummation, and for purposes of this Notice and Agreement of Assignment and Assumption, such Actual Assignment Date shall be deemed the Assignment Date.

The Assigning Party and Assignee hereby acknowledge and agree that on and after the Assignment Date: (a) the Assigning Party remains fully liable for the performance of its obligations under the Collaboration Agreement by Assignee, (b) Assignee assumes performance of all such obligations under the Collaboration Agreement, and (c) the Non-Assigning Party may rely upon this Notice and Agreement of Assignment and Assumption, including with respect to any obligations owed to the Non-Assigning Party under the Collaboration Agreement.

[IF HOLDER OF SUTRO IP IS THE ASSIGNING PARTY, INCLUDE THIS PROVISION: In addition, the Assigning Party hereby represents and warrants, as of the Assignment Date, that all SUTRO IP (as defined in the Collaboration Agreement) licensed to Celgene under the Collaboration Agreement is transferred to Assignee.]

In the event it is determined not to proceed with the Assignment and Assumption, the Assigning Party shall provide written notice and certification thereof to the Non-Assigning Party within three (3) Business Days after such determination. Upon receipt of such notice and certification by theNon-Assigning Party, this Notice and Agreement of Assignment and Assumption shall be deemed null and void *ab initio*; provided that the Assignment and Assumption referenced herein is not consummated.

Respectfully,

[ASSIGNING PARTY]

_____

Name: _____
Title: _____
Date: _____

ACKNOWLEDGED AND AGREED BY ASSIGNEE:

_____

Name: _____
Title: _____
Date: _____

EXHIBIT 10.13

[*] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

AMENDED AND RESTATED EXCLUSIVE AGREEMENT

This Agreement between THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY ("Stanford"), an institution of higher education having powers under the laws of the State of California, and Fundamental Applied Biology, Inc. ("FAB"), a corporation having a principal place of business at 1455 Adams Drive, Bldg. 15, Suite 1015, Menlo Park, CA 94025, is effective on the 3 day of October, 2007 ("Effective Date").

1 BACKGROUND

1.1 Stanford has an assignment of certain inventions invented in the laboratory of Dr. James Swartz, entitled as follows:

- "Mimicking the cellular environment with in vitro synthesis" described in Stanford Docket S02-181,
- "Cell-free synthesis of active mammalian proteins containing multiple disulfide bonds" described in S00-156,
- "Enhanced In Vitro Synthesis", described in S99-130,
- "Efficient Scale-up of Protein Synthesis using Unrestricted Drops", described in S03-168,
- "In vitro Protein Synthesis using ATP Regeneration System", described in S98-199,
- "An Economical Cell-free Protein Synthesis Method Using Nucleoside Monophosphates and Glucose", described in S03-316,
- "Antifoams for Enhanced and Efficient Scale-Up of Protein Synthesis in Cell-Free Expression Systems", described in S04-041,
- "High-yield Expression of Membrane Proteins Using Cell-free Protein Synthesis", described in S05-339,
- "Total Amino Acid Stabilization during Cell Free Protein Synthesis", described in S05-044,

- "An Improved Method for the Use of Glucose in Cell-free Synthesis of Proteins Containing Disulfide Bonds", described in S06-146,
- Cell-free Synthesis of Unnatural Amino Acid Incorporated Virus-like Particles for Site-specific Post-translational Modification, described in S06-257, and
- "High-yield Expression of Complex Proteins Containing Unnatural Amino Acids Using Cell-free Protein Synthesis", described in S06-254,

The inventions were made in the course of research supported by the NIH. Stanford wants to have the inventions perfected and marketed as soon as possible so that resulting products may be available for public use and benefit.

1.2 The Parties entered into a license agreement dated July 1, 2004 (the "Original License Agreement") pursuant to which Stanford granted FAB a license to certain inventions described in Stanford Dockets S02-181, S00-156, S99-130, S03-168 and S98-199, all as further set forth in the Original License Agreement.

1.3 The Parties entered into an Option agreement dated July 2005 (the "Option Agreement") pursuant to which Stanford granted an option to FAB to obtain an exclusive license to certain inventions described in Stanford dockets S03-316, S04-041, S05-044 and S03-208 (S03-208 having since been abandoned).

1.4 Stanford dockets S99-130, S98-199, and S00-156 are non exclusively licensed to Roche. FAB acknowledges that it has been made aware by Stanford of the scope of the field of use of the Roche License. Additionally, Stanford dockets S03-316, and S05-044 are non exclusively licensed to Genencor, and Stanford dockets S98-199, S99-130, and S00-156 are non exclusively licensed to Invitrogen. FAB acknowledges that it has been made aware by Stanford of the scope of the field of use of these licenses.

1.5 The Parties now desire to amend certain terms of the Original License Agreement, to include certain additional inventions described in Stanford Dockets S03-316, S04-041, S05-339, S05-044, S06-146, S06-257 and S06-254 within the licenses granted therein, and to restate the Original License Agreement as amended in its entirety in this amended and restated license agreement ("Agreement").

2 DEFINITIONS

2.1 "Control" means with respect to a given Licensed Product, the possession by FAB (whether by ownership or license) of the right to grant a license to make, use, sell, offer for sale and import such Licensed Product without giving rise to a violation of the terms of any agreement or other arrangement between FAB and any third party.

2.2 "Change of Control" means the occurrence of any of the following: (a) any consolidation or merger of FAB with or into any third party, or any other corporate reorganization involving a third party, in which those persons or entities that are stockholders of FAB immediately prior to such consolidation, merger or reorganization own less than fifty percent (50%) of the surviving entity's voting power immediately after such consolidation, merger or

reorganization; (b) a change in the legal or beneficial ownership of fifty percent (50%) or more of the voting securities of FAB (whether in a single transaction or series of related transactions) where, immediately after giving effect to such change, the legal or beneficial owners of more than fifty percent (50%) of the voting securities of FAB are third parties that are not an affiliate of License; or (c) the sale or other disposition for value of all or substantially all of FAB's assets in one or a series of related transactions to a third party that is not an affiliate of FAB.

2.3 "Exclusive" means that, (i) except for those licenses granted under the Pre-Existing Licenses, Stanford has not previously granted any rights or licenses to any third party under the Licensed Patents in the Licensed Field of Use, and (ii) subject to Section 3.4 and Article 5, Stanford will not grant further licenses under the Licensed Patents in the Exclusive Licensed Field of Use in the Licensed Territory.

2.4 "Exclusive Licensed Field of Use" means all fields of use other than the "Non-Exclusive Licensed Field of Use"

2.5 "FAB Licensed Product" means a Licensed Product which is Controlled by FAB and is being actively developed by FAB for its own account (or in the case of a Licensed Product which FAB has sublicensed to a sublicensee, was being actively developed by FAB for its own account prior to being sublicensed). Notwithstanding the foregoing, it is understood and agreed that should this Agreement be assigned to a sublicensee pursuant to a Change of Control, any non-FAB Licensed Products that are being developed by such sublicensee pursuant to such sublicense prior to such Change of Control shall continue to be considered non-FAB Licensed Products for purposes of this Agreement.

2.6 "Licensed Field of Use'' means the Exclusive Licensed Field of Use and the Non-Exclusive Licensed Field of Use, collectively.

2.7 "Licensed Patent" means (i) the patents and patent applications listed in Appendix D, (ii) any foreign patent application corresponding thereto, (iii) any divisional, continuation, CIP or reexamination application of any of the preceding, and (iv) each patent that issues or reissues from any of these patent applications. Any claim of an unexpired Licensed Patent is presumed to be valid unless it has been held to be invalid by a final judgment of a court of competent jurisdiction from which no appeal can be or is taken. Notwithstanding the foregoing, if a claim of a pending patent application within the Licensed Patent has not issued as a claim of an issued patent within the Licensed Patent within eight (8) years after the filing date from which such claim takes priority, such pending claim shall cease to be a valid claim for purposes of this Agreement until such time as the claim actually issues. As used herein, "CIPs" means those claims in any continuation-in-part of the patent applications in (i) or (ii) above that are entitled to the priority date of the parent application, and filed within two years of the Effective Date, share the same inventor or same set of inventors as the parent application, and are not encumbered by prior obligations to third parties.

2.8 "Licensed Product" means a product or part of a product in the Licensed Field of Use, the making, using, importing or selling of which, absent this license, infringes, induces infringement, or contributes to infringement of a valid claim of a Licensed Patent.

2.9 "Licensed Service" means commercial services provided on a fee-for-service basis under a contract with a third party, where such services are based on the use of an invention claimed in a Licensed Patent for its intended commercial purpose. Notwithstanding the foregoing, it is understood that Licensed Service shall not include any service involving or performed in connection with the research or development of a Licensed Product by or for FAB or any sublicensee.

2.10 "Licensed Territory'' means worldwide.

2.11 "Net Sales" means all gross revenue received by FAB from sales of Licensed Product, as well as all gross revenue received by sublicensees on sales of FAB Licensed Product. Net Sales excludes the following items (but only as they pertain to the making, using, importing or selling of Licensed Products, are included in gross revenue, and are separately accounted for):

(A) import, export, excise and sales taxes, and custom duties;

(B) costs of insurance, packing, and transportation from the place of manufacture to the customer's premises or point of installation;

(C) costs of installation at the place of use;

(D) refunds, credit for returns, allowances, or trades; and

(E) customary rebates, cash and trade discounts, actually taken.

2.12 "Net Service Revenue" means revenue received by FAB as consideration for FAB's providing a third party with Licensed Services. For purposes of clarity, it is understood that Net Service Revenue shall not include funding received for the research and/or development of Licensed Products themselves.

2.13 "Net Sublicensing Fees" means upfront and milestone payments received by FAB from a sublicensee in consideration of the grant of a sublicense under the Licensed Patents. For purposes of clarity, it is understood that Net Sublicensing Fees shall not include amounts received as (i) loans; (ii) equity investments in FAB (including conditional equity, such as warrants, convertible debt and the like); (iii) reimbursements of patent prosecution costs and patent maintenance expenses, (iv) reimbursements for research and development work to be performed by FAB (including fully burdened FTE costs), and (v) advances on earned royalties payable under Section 7.5, payments for the supply of products or materials, and any taxes withheld at the source (unless and until FAB recoups such taxes).

2.14 "Non-Exclusive Licensed Field of Use" means the sale of research tools for use as research reagents.

2.15 "Pre-Existing Licenses" mean, collectively, (i) that certain license agreement between Roche Diagnostics GmbH and Stanford with an effective date of March 20, 2001 ("Roche License"), (ii) that certain nonexclusive patent and technology license agreement between Genencor International, Inc., and Stanford with an effective date of October 11, 2004, and (iii) that certain nonexclusive agreement between Invitrogen Corporation and Stanford with an effective date of November 3 2004.

2.16 "Stanford Indemnitees" means Stanford and Stanford Hospitals and Clinics, and their respective trustees, officers, employees, students, and agents.

3 GRANT

3.1 **Grant.** Subject to the terms and conditions of this Agreement, Stanford grants FAB a license under the Licensed Patents in the Licensed Field of Use to make, have made, use, import, offer to sell and sell Licensed Product, to practice any method, process, or procedure within the Licensed Patents, and to otherwise exploit the Licensed Patents in the Licensed Territory.

3.2 **Exclusivity.** The license granted under Section 3.1 is Exclusive, including the right to sublicense under Article 4, in the Exclusive Licensed Field of Use beginning on the Effective Date and ending on the expiration of the last to expire Licensed Patent ("Exclusive Term").

3.3 **Nonexclusivity.** The license granted under Section 3.1 shall be non-exclusive in the Non-Exclusive Licensed field of Use until the last Licensed Patent expires.

3.4 **Retained Rights.** Stanford retains the right, on behalf of itself and all other non-profit academic research institutions, to practice the Licensed Patent for any non-profit purpose, including sponsored research and collaborations. FAB agrees that, notwithstanding any other provision of this Agreement, it has no right to enforce the Licensed Patent against any such institution. Stanford and any such other institution have the right to publish any information included in a Licensed Patent.

3.5 **Specific Exclusion.** Stanford does not:

(A) grant to FAB any other licenses, implied or otherwise, to any patents or other rights of Stanford other than those rights granted under Licensed Patent, regardless of whether the patents or other rights are dominant or subordinate to any Licensed Patent, or are required to exploit any Licensed Patent;

(B) commit to FAB to bring suit against third parties for infringement, except as described in Article 14; and

(C) agree to furnish to FAB any technology or technological information or to provide FAB with any assistance.

4 SUBLICENSING

4.1 **Permitted Sublicensing.**

(A) Subject to the requirements of Section 4.3 below, FAB shall be free to grant and authorize sublicenses in the Exclusive Licensed Field of Use during the Exclusive Term.

(B) Subject to the requirements of Section 4.3 below, FAB may grant and authorize sublicense(s) within the Non-Exclusive Licensed Field of Use, but only for Licensed Products discovered, developed or Controlled, in whole or in part, by FAB, or in combination with a license or sublicense of other patents or technology controlled by FAB.

4.2 **Required Sublicensing.**

(A) If at any time after the [*] of the Effective Date, Stanford receives from a third party with adequate resources, a bona fide proposal to develop a Licensed Product for a non-pharmaceutical use within the Exclusive Licensed Field of Use which FAB is currently not addressing, Stanford will notify FAB. Prior to notifying FAB of such proposal, Stanford will require that such third party provide Stanford with a written plan for the development of such product, such plan to be in sufficient detail to enable Stanford to assess the third party's capability to develop such product.

(B) If FAB (itself or through an affiliate or sub licensee) has not been developing, producing, using, or selling a Licensed Product that is substantially similar to, or intended for a similar purpose or application as, the proposed product referred to in subsection (A) above, and the development or sublicensing of such a Licensed Product is not reasonably within FAB's business plans, then FAB shall elect one of the following three options and shall notify Stanford in writing within thirty (30) days of Stanford's written notice to FAB whether it will:

(1) undertake reasonable efforts to develop, produce, sell, use, or sublicense a Licensed Product that is substantially similar to or intended for a similar purpose or application as the product in such proposal;

(2) allow Stanford the right to grant a license to such third party under the Licensed Patents to make, use, sell, offer for sale and import such product; or

(3) enter into negotiations directly with such third party to sublicense such third party under one or more of the Licensed Patents.

The provisions of Section 4.2 shall not preclude FAB and Stanford from discussing whether the development of such a Licensed Product is in the parties overall best interests, and if FAB and Stanford agree it is not, then the decision not to proceed will be communicated to such third party.

4.3 **Sublicense Requirements.** Any sublicense granted by FAB under this Agreement:

(A) is subject to the terms and conditions of this Agreement, except that the financial terms may differ;

(B) FAB's sublicensees shall have the right to grant further sublicenses under the Licensed Patents, provided that all sublicenses granted by FAB will reflect that any sublicense(s) granted by such sublicensee will not include the right to further sublicense.

(C) will expressly include the provisions of Articles 9 and 10 for the benefit of Stanford, and shall expressly include provisions under which FAB has rights similar to Stanford's rights in Section 8.4 and 8.5 (which FAB will exercise for Stanford at Stanford's request and expense, provided that if the audit reveals an underreporting of earned royalties due Stanford of [*]% or more for the period being audited, FAB or the sublicensee shall bear such audit costs); and

(D) will require the transfer of all applicable obligations with respect to the sublicense, including the payment of royalties specified in the sublicense (up to the earned royalty rates set forth in Article 7), to Stanford or its designee, if this Agreement is terminated. For purposes of clarity, it is agreed that in the event this Agreement is terminated, Stanford shall have audit rights substantially similar to those set forth in Section 8.5 with respect to any surviving sublicenses.

(E) will extend to Stanford the benefit of any provisions included in such sublicense that are analogous to the provisions contained in Section 7.6 of this Agreement.

4.4 **Copy of Sublicenses.** FAB will submit to Stanford a redacted copy of each sublicense granted pursuant to this Article 4, which copy shall provide Stanford with sufficient information to enable Stanford to ascertain that any such sublicense is in conformance with this Agreement and shall include but not be limited to the following information relating to this Agreement: royalty reporting, warranty and indemnification obligations. Such redacted sublicense shall be considered FAB's confidential information under Section 19.5.

4.5 **Sharing of Sublicensing Income**. FAB will pay to Stanford:

(A) [*] of all Net Sublicensing Fees received in [*] and [*];

(B) [*] of all Net Sublicensing Fees received in [*] and [*];

(C) [*] of all Net Sublicensing fees received in [*] or thereafter.

4.6 **Royalty-Free Sublicenses**. As long as FAB agrees to be responsible for paying all royalties due Stanford on a sublicensee's sale of Licensed Product, FAB may grant that sublicensee a fully paid-up and royalty-free:

(A) sublicense or

(B) cross-license.

5 GOVERNMENT RIGHTS

This Agreement is subject to Title 35 Sections 200-204 of the United States Code. Among other things, these provisions provide the United States Government with nonexclusive rights in the Licensed Patent. To the extent required under Title 35 Section 204 of the United States Code, FAB will impose the obligation that Licensed Product sold or produced in the United States be "manufactured substantially in the United States" unless a waiver is obtained from the United States Government. FAB will ensure all obligations of these provisions are met.

6 DILIGENCE

6.1 **Milestones**.

(A) Because the invention is not yet commercially viable as of the Effective Date, FAB will use commercially reasonable efforts to develop, manufacture, and sell Licensed Product and will develop markets for Licensed Product.

(B) In addition to its general diligence obligation under Section 6.1(A) above, FAB will use commercially reasonable efforts to meet the milestones shown in Appendix A, and will notify Stanford in writing as each milestone is met.

(C) If FAB fails to fulfill its diligence obligations under Sections (A) or (B) above, Stanford may, upon written notice, terminate this agreement pursuant to Section 15.2.

6.2 **Progress Report**.

(A) By March 1 of each year until FAB markets a Licensed Product, FAB will submit a written annual report to Stanford covering the preceding calendar year. The report will include information sufficient to enable Stanford to satisfy reporting requirements of the U.S. Government and for Stanford to ascertain progress by FAB toward meeting this Agreement's diligence requirements. Each report will describe, where relevant: FAB's progress toward commercialization of Licensed Product, including a summary of work completed, key scientific discoveries, summary of work-in-progress, current schedule of anticipated events or milestones, market plans for introduction of Licensed Product, and significant corporate transactions involving Licensed Product.

(B) All reports provided to Stanford under this Section 6.2 shall be deemed FAB's Confidential Information and shall be protected as such pursuant to Section 19.5.

6.3 **Clinical Trial Notice**. FAB will notify Stanford prior to commencing any clinical trials at Stanford.

7 ROYALTIES

7.1 **Issue Royalty**.

(A) FAB will pay to Stanford a nonrefundable license issue royalty of [*] upon signing this Agreement, [*] of which shall be creditable against past patent costs due Stanford under Section 7.1B below.

(B) FAB will pay an additional issue fee to Stanford of $184,473.83 as reimbursement for all previously unreimbursedout-of-pocket costs incurred by Stanford in filing, prosecuting and maintaining the Licensed Patents before the Effective Date.

(C) The parties acknowledge that a license maintenance fee of [*] was due on September 1, 2007 under the Original License Agreement

for the 12 month period commencing September 1, 2007 and ending August 31, 2008. As satisfaction in full of its payment obligations under the Original License Agreement with respect to the above referenced license maintenance fee, FAB will pay to Stanford an additional issue fee of [*] which represents the *pro rata* portion of the above referenced license maintenance fee due for the months of September and October 2007.

7.2 **Equity Interest**. As further consideration for the licenses granted hereunder, FAB will, subject to Stanford's execution and delivery to FAB of FAB's standard stock purchase agreement, grant to Stanford [*] shares of common stock in FAB. When issued, these shares, together with the [*] shares previously issued to Stanford will represent [*] of the capital stock of FAB. The shares shall be issued directly as follows:

- [*]% issued to The Board of Trustees of the Leland Stanford Junior University
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]

7.3 **License Maintenance Fee**. FAB will pay Stanford a yearly license maintenance fee in the following manner:

$[*] on the 1st anniversary of the Effective Date;

$[*] on the 2nd anniversary of the Effective Date;

$[*] on the 3rd anniversary of the Effective Date;

$[*] on the 4th anniversary of the Effective Date

$75,000 on the 5th anniversary of the Effective Date and on each anniversary the Effective Date thereafter until expiration or earlier termination of this Amended and Restated Agreement.

Yearly maintenance payments are nonrefundable, but they are creditable each year as described in Section 7.7.

7.4 **Milestone Payments**.

(A) FAB will pay Stanford the following milestone payments:

- $[*] upon the first to occur of:
  - initiation of the first pre-clinical animal study for the first FAB Licensed Product in the Territory, or

- first successful [*] liter scale production of the first Licensed Product; or
- the [*] year anniversary of the Effective Date.

- $[*] upon the first to occur of:
  - enrollment of first patient for the first Phase I clinical trial for the first FAB Licensed Product in the Territory;
  - the [*] anniversary of the Effective Date.
- $[*] upon the first to occur or:
  - enrollment of first patient for first Phase II clinical trial for the first FAB Licensed Product in the Territory, or
  - first successful [*] liter scale production of the first Licensed Product; or
  - the [*] anniversary of the Effective Date.
- $[*] upon first to occur of:
  - enrollment of first patient in the first Phase III trial for the first FAB Licensed Product in the Territory; or
  - the [*] anniversary of the Effective Date.
- $750,000 upon first to occur of;
  - first commercial sale for the first FAB Licensed Product in the Territory; or
  - the fourteenth anniversary of the Effective Date.

(B) For the avoidance of doubt, it is understood and acknowledged that each of the milestone payments set forth in Section 7.4(A) shall be payable once and only once and that the total amount payable to Stanford under this Section 7.4 shall in no event exceed $930,000.

(C) It is further agreed that in the event that FAB receives a milestone payment from a sublicensee and the milestone event giving rise to such milestone payment also triggers a payment obligation on the part of FAB under this Section 7.4, FAB shall be obligated to pay to Stanford only a single payment, such payment to be the higher of the applicable milestone payment set forth in Section 7.4A above and the payment owing to Stanford under Section 4.5 above with respect to such milestone payment from such sublicensee.

7.5 **Earned Royalty**.

(A) FAB will pay Stanford an earned royally on sales of Licensed Products by FAB and its sublicensees as follows:

(1) [*]% of Net Sales of FAB Licensed Products sold by FAB sublicensees;

(2) [*]% of Net Sales of non-FAB Licensed Products (i.e., Licensed Products other than FAB Licensed Products) sold by FAB; and

(3) [*]% of the royalties received from sublicensees on sales of non-FAB Licensed Products (i.e., Licensed Products other than FAB Licensed Products) sold by the sublicensees.

(B) FAB will pay Stanford an earned royalty of [*]% of Net Services Revenue on sales of Licensed Services in countries where the sale or use of such Licensed Services would infringe a valid claim of the Licensed Patents.

7.6 **Earned Royalty if FAB Challenges the Patent**. Notwithstanding the above, should FAB initiate an action seeking to invalidate any Licensed Patent, FAB will pay royalties to Stanford at the rate of [*] percent ([*]%) of the Net Sales of all Licensed Products sold during the pendency of such action that would infringe such Licensed Patent but for the licenses granted herein. Moreover, should the outcome of such action determine that any claim of a patent challenged by FAB is both valid and infringed by a Licensed Product, FAB will pay royalties at the rate of [*] percent ([*]%) of the Net Sales of all Licensed Products sold that would infringe such Licensed Patent but for the licenses granted herein. For purposes of clarity, in the event that FAB files a counterclaim asserting invalidity of one or more Licensed Patents in response to an actual suit by Stanford, FAB shall not be deemed to have initiated an action to invalidate a Licensed Patent and this Section 7.6 shall not apply with respect to such action. Additionally, it is further agreed that in the event that Stanford threatens to bring an action against FAB with respect to the Licensed Patents, then FAB shall have the right to request from Stanford written assurances that Stanford will not bring such suit or action. In the event that Stanford does not provide such written assurances to FAB within thirty (30) days of FAB's request for such assurances, then this Section 7.6 shall not apply with respect to any action for declaratory judgment which FAB may subsequently file in response to such threatened suit or action.

7.7 **Creditable Payments**. The license maintenance fee for a year may be offset against earned royalty payments due on Net Sales occurring in that year.

For example:

(A) if FAB pays Stanford a $10 maintenance payment for year Y, and according to Section 7.5 $15 in earned royalties are due Stanford for Net Sales in year Y, FAB will only need to pay Stanford an additional $5 for that year's earned royalties.

(B) If FAB pays Stanford a $10 maintenance payment for year Y, and according to Section 7.5 $3 in earned royalties are due Stanford for Net Sales in year Y, FAB will not need to pay Stanford any earned royalty payment for that year. FAB will not be able to offset the remaining $7 against a future year's earned royalties.

7.8 **Sales in Non-Patent Countries**. The earned royalties set forth in Section 7.5 above shall be reduced by [*] ([*]%) with respect Licensed Products and Licensed Services sold in countries where the sale of such Licensed Products or Licensed Services would not infringe a valid claim of the Licensed Patents.

7.9 **Buy-out Option**. In the event of a Change of Control, FAB may, upon payment to Stanford of a one-time buy-out fee, terminate its royalty obligations under Sections 7.5(A)(2), 7.5(A)(3) and 7.5(B) as well as its obligation to pay yearly license maintenance fees under Section 7.3. The one-time buy-out fee shall be determined as set forth below:

- $[*] in the event that the aggregate consideration payable to FAB in such Change of Control (less any amounts necessary to satisfy outstanding debt obligations of FAB) does not exceed, on a per share basis, [*] the original issue price of FAB's then-most senior series of preferred stock (or other equivalent senior security); or
- In the event that the aggregate consideration payable to FAB in such Change of Control (less any amounts necessary to satisfy outstanding debt obligations of FAB) exceeds, on a per share basis, [*] the original issue price of FAB's then-most senior series of preferred stock (or other equivalent senior security), then the one-time buy-out fee shall be:
  - $[*] if the proceeds from such Change of Control are less than $[*], or
  - $[*] in the event the proceeds from such Change of Control equal or exceed $[*].

Notwithstanding the foregoing, in the event of a Change of Control in which FAB is acquired by a contract manufacturing organization or similar entity that is not engaged in the business of developing its own proprietary pharmaceuticals, biologics, or other therapeutic agents, then the buy-out option described in this Section 7.9 shall not be exercisable unless and until such acquirer files an Investigational New Drug Application (as defined in the U.S. Food, Drug and Cosmetic Act, as amended and the regulations promulgated thereunder) for a FAB Licensed Product.

7.10 **Obligation to Pay Royalties**. If this Agreement is not terminated in accordance with other provisions hereof, FAB's royalty obligations hereunder with respect to Licensed Products shall continue for so long as FAB, by its activities with respect to such Licensed Products, would, but for the license granted herein, infringe a valid claim of the Licensed Patents covering said activity. Nonetheless, if certain Licensed Products are made, imported, or offered for sale before the date this Agreement terminates, and those Licensed Products are sold after the termination date, FAB will continue to be obligated to pay Stanford an earned royalty on the sale of those Licensed Products; provided FAB's obligation to pay royalties will end one year after the expiration of the last to expire of the Licensed Patents.

7.11 **Currency**. FAB will calculate the royalty on sales in currencies other than U.S. Dollars using the appropriate foreign exchange rate for the currency quoted by the Bank of America (San Francisco) foreign exchange desk, on the close of business on the last banking day of each calendar quarter. FAB will make royalty payments to Stanford in U.S. Dollars.

7.12 **Non-U.S. Taxes**. FAB will pay all non-U.S. taxes related to royalty payments. These payments are not deductible from any payments due to Stanford.

7.13 **Interest**. Any undisputed payments not made when due will bear interest at the lower of (a) the Prime Rate published in the Wall Street Journal or (b) the maximum rate permitted by law.

8 ROYALTY REPORTS, PAYMENTS, AND ACCOUNTING

8.1 **Quarterly Earned Royalty Payment and Report**. Beginning with the first sale of a Licensed Product, FAB will submit to Stanford a written report (even if there are no sales) and an earned royalty payment (if any is due) within 60 days after the end of each calendar quarter. This report will be in the form of Appendix B and will state the number, description, and aggregate Net Sales of Licensed Product during the completed calendar quarter. With each report FAB will include any earned royalty payment due Stanford for the completed calendar quarter (as calculated under Section 7.5).

8.2 **No Refund**. In the event that a validity ornon-infringement challenge of a Licensed Patent initiated by FAB and subject to Section 7.6 is successful, FAB will have no right to recoup any royalties paid before or during the period challenge.

8.3 **Termination Report**. FAB will pay to Stanford all applicable royalties and submit to Stanford a written report within 90 days after the license terminates. FAB will, for the period set forth in Section 7.10 above, continue to submit earned royalty payments and reports to Stanford after the license terminates concerning royalties payable in accordance with Article 7 in connection with the sale of Licensed Products made or imported under the license.

8.4 **Accounting**. FAB will maintain records showing manufacture, importation, sale, and use of a Licensed Product for 3 years from the date of sale of that Licensed Product. Records will include general-ledger records showing cash receipts and expenses, and records that include: production records, customers, invoices, serial numbers, and related information in sufficient detail to enable Stanford to determine the royalties payable under this Agreement.

8.5 **Audit by Stanford**. FAB will allow its records to be examined once per calendar year during normal business hours and upon reasonable advanced notice by an independent certified public accountant selected by Stanford and acceptable to FAB, for the sole purpose of verifying payments made by FAB under this Agreement.

8.6 **Paying for Audit**. Stanford will pay for any audit done under Section 8.5. But if the audit reveals an underreporting of earned royalties due Stanford of [*]% or more for the period being audited, FAB will pay the audit costs.

8.7 **Self-audit**. FAB will conduct an independent audit of sales and royalties at least every 2 years if annual sales of Licensed Product are over $[*]. The audit will address, at a minimum, the amount of gross sales by or on behalf of FAB during the audit period, the amount of funds owed to Stanford under this Agreement, and whether the amount owed has been paid to Stanford and is reflected in the records of FAB. FAB will submit the auditor's report promptly to Stanford upon completion. FAB will pay for the entire cost of the audit.

8.8 All reports provided to Stanford under this Article 8, as well as all information concerning FAB provided to Stanford by its auditors in connection with Stanford's exercise of its audit rights under Section 8.5 above, shall be deemed the Confidential Information of FAB pursuant to Section 19.5.

9 WARRANTIES AND NEGATION OF WARRANTIES

9.1 **Warranties**. Stanford warrants and represents that (a) it has the right and authority to enter into this Agreement and to grant licenses of the scope granted in this Agreement and (b) Stanford has not previously granted any rights in the Licensed Patents other than the rights and licenses granted in the Pre-Existing Licenses and will not grant any further rights to the Licensed Patents that are inconsistent with the rights and licenses granted to FAB herein. For purposes of clarity, FAB acknowledges that it has been made aware by Stanford of the scope of the field of use of the Pre-Existing Licenses.

9.2 **Negation of Warranties**. Except as expressly set forth in this Agreement, Stanford makes no representations and extends no warranties of any kind, either express or implied. Among other things, Stanford disclaims any express or implied warranty:

(A) of merchantability, of fitness for a particular purpose,

(B) of non-infringement or

(C) arising out of any course of dealing.

9.3 **No Representation of Licensed Patent**. FAB also acknowledges that Stanford does not represent or warrant:

(A) the validity or scope of any Licensed Patent, or

(B) that the exploitation of Licensed Patent or Technology will be successful.

10 INDEMNITY

10.1 **Indemnification**. FAB will indemnify, hold harmless, and defend all Stanford Indemnitees against any and all third party claims for death, illness, personal injury, property damage, and improper business practices arising out of the manufacture, use, sale, or other disposition the Licensed Patents or Licensed Products by FAB or any sublicensee, unless resulting from a claimed breach by Stanford of its warranties or the gross negligence or willful misconduct of any Stanford Indemnitee; provided that:

(A) FAB receives prompt notice of any such claim,

(B) FAB shall not be obligated to indemnify any Stanford Indemnitee in connection with any settlement for any claim unless FAB consents writing to such settlement (which consent shall not be unreasonably withheld), and

(C) FAB shall have the first right to defend any such claim and, if FAB elects to exercise such first right the exclusive right to control the defense thereof.

Notwithstanding the foregoing, FAB shall have no obligations for any third party claim or demand that may be the subject of this Section 10.1 if the Stanford Indemnitee seeking indemnification makes any admission regarding such claim without the prior written consent of FAB, which consent shall not be unreasonably withheld.

10.2 **No Indirect Liability**. Neither party shall be liable for any special, consequential, lost profit, expectation, punitive or other indirect damages in connection with any claim arising out of or related to this Agreement, whether grounded in tort (including negligence), strict liability, contract, or otherwise arising out of or in connection with solely this Agreement under any theory of liability; provided, however, that the foregoing shall not apply to any right of action for infringement, contributory infringement or inducement of infringement Stanford may have under any applicable law. Except as provided in Section 9.1, Stanford shall not have any responsibilities or liabilities whatsoever with respect to Licensed Products.

10.3 **Workers' Compensation**. FAB will comply with all statutory workers' compensation and employers' liability requirements for activities performed under this Agreement.

10.4 **Insurance**. During the term of this Agreement, FAB will maintain Comprehensive General Liability Insurance, including Product Liability Insurance, with a reputable and financially secure insurance carrier to cover the activities of FAB and its sublicensees. Upon introduction of Licensed Product into humans, such insurance will provide minimum limits of liability of $[*] and will include all Stanford Indemnitees as additional insureds. Such insurance shall be written to cover claims incurred, discovered, manifested, or made during or after the expiration of this Agreement and must be placed with carriers with ratings of at least A- as rated by A.M. Best. Within 15 days of the introduction of Licensed Product into humans, FAB will furnish a Certificate of Insurance evidencing primary coverage and additional insured requirements. FAB will provide to Stanford 30 days prior written notice of cancellation or material change to this insurance coverage. FAB will advise Stanford in writing that it maintains excess liability coverage (following form) over primary insurance for at least the minimum limits set forth above. All insurance of FAB will be primary coverage; insurance of Stanford and Stanford Hospitals and Clinics will be excess and noncontributory. Notwithstanding the foregoing, if FAB proposes alternative coverage under this Section 10.4, Stanford shall not unreasonably withhold its consent to such alternative coverage in lieu of the coverage detailed in this Section 10.4, so long as the proposed coverage is reasonable and customary for the industry and reasonably protects Stanford's interests.

11 EXPORT

FAB warrants that FAB will not export or reexport the following, directly or indirectly, to any country, individual or entity except when such export or reexport is authorized in full compliance with the laws and regulations of the United States of America, as applicable:

(A) the licensed technology or software, or any portion thereof, or

(B) any foreign produced direct product (including equipment, processes or services) of the licensed technology or software; or

(C) any foreign produced direct product of a plant or major component of a plant if the direct product of the licensed technology is the plant itself or a major component of the plant.

Applicable laws and regulations may include, but are not limited to, the Export Administration Regulations, the International Traffic in Arms Regulations and the various economic sanctions regulations administered by the U.S Department of the Treasury.

12 MARKING

Before any Licensed Patent issues, FAB will mark Licensed Product with the words "Patent Pending." Otherwise, FAB will mark Licensed Product with the number of any issued Licensed Patent.

13 STANFORD NAMES AND MARKS

FAB will not identify Stanford in any promotional advertising or other promotional materials to be disseminated to the public, or otherwise use the name of any Stanford faculty member, employee, or student, or any trademark, service mark, trade name, or symbol of Stanford or Stanford Hospitals and Clinics, including the Stanford name, unless FAB has received Stanford's, or the individual's, prior written consent. Permission may be withheld at Stanford's sole discretion. However, FAB may reasonably utilize Stanford's name or names of Stanford employees in statements of fact (provided such statements do not imply endorsement of FAB's products or services), in legal proceedings, patent filings, regulatory filings or with the written prior consent of Stanford.

14 PROSECUTION AND PROTECTION OF PATENTS

14.1 **Patent Prosecution.** Following the Effective Date and subject to Stanford's approval, FAB will be responsible for preparing, filing, and prosecuting the Licensed Patents (including any interference or reexamination actions) for Stanford's benefit in major markets in the Licensed Territory and for maintaining all Licensed Patents. FAB will (i) keep Stanford reasonably informed as to the filing, prosecution and maintenance of such patents and patent applications, (ii) furnish to Stanford copies of documents relevant to any such filing, prosecution and maintenance and (iii) allow Stanford reasonable opportunity to comment on documents filed with any patent office which would affect the Licensed Patents. To aid FAB in this process, Stanford will provide information, execute and deliver documents and do other acts as FAB shall reasonably request from time to time. FAB will reimburse Stanford for Stanford's reasonable out-of-pocket costs incurred in complying with such requests. Stanford and FAB agree to the terms detailed in Appendix C and agree to have Appendix C fully executed by the appropriate parties upon execution of this Agreement.

14.2 **Patent Costs.** Within 30 days after receiving a statement from Stanford, FAB will reimburse Stanford for all reasonableout-of-pocket costs incurred by Stanford in filing, prosecuting and maintaining the Licensed Patents, including any interference or reexamination matters, incurred by Stanford after the Effective Date.

14.3 **Infringement Procedure.** FAB and Stanford will each promptly notify the other of any suspected infringement of any Licensed Patent by a third party or the filing by a third party of a declaratory judgment action relating to the Licensed Patents. During the Exclusive term of this Agreement only, FAB may have the right to institute a suit against this third party as provided in Sections 14.4 – 14.8.

14.4 **FAB Suit.** FAB, itself or through a designee, has the first right to institute suit or defend any action for declaratory judgment relating to the Licensed Patents, and may name Stanford as a party for standing purposes. If FAB decides to institute suit, it will notify Stanford in writing. We need the following section that's been deleted; FAB will bear the entire cost of the litigation. Stanford may be named as a party only if:

(A) FAB's and Stanford's respective counsel recommend that such action is necessary in its reasonable opinion to achieve standing or a court has required or will require such joinder to pursue the action;

(B) Stanford is not the first named party in the action; and

(C) the pleadings and any public statements about the action state that FAB is pursuing the action and that FAB has the right to join Stanford as a party

14.5 **Joint Suit.** If Stanford and FAB (itself or through a designee) so agree, they may institute suit jointly. If so, they will:

(A) prosecute the suit in both their names;

(B) bear the out-of-pocket costs equally; and

(C) agree how they will exercise control over the action.

14.6 **Stanford Suit.** If FAB does not initiate an enforcement action within 120 days of a request by Stanford to do so or does not elect to control a declaratory judgment action within 90 days of receiving notice that such action has been filed, Stanford may institute and prosecute a suit so long as it conforms with the requirements of this Section. Stanford will diligently pursue the suit and Stanford will bear the entire cost of the litigation, including expenses and counsel fees incurred by FAB. Stanford will keep FAB reasonably apprised of all developments in the suit, and will seek FAB's input and approval on any substantive submissions or positions taken in the litigation regarding the scope, validity and enforceability of the Licensed Patents. Stanford will not prosecute, settle or otherwise compromise any such suit in a manner that adversely affects FAB's interests without FAB's prior written consent.

14.7 **Recovery.**

(A) If FAB sues under Section 14.4, then any recovery in excess of litigation costs and fees will be shared with Stanford as follows:

(1) any payment for past or future sales will be deemed Net Sales, and FAB will pay Stanford royalties at the rates specified in Section 7.5;

(2) FAB and Stanford will negotiate in good faith appropriate compensation to Stanford for anynon-cash settlement or non-cash cross-license, provided that Stanford will not share in the portion of the recovery, if any, which is payment for "willful infringement".

(B) If the parties jointly initiate and control the enforcement or declaratory action, Stanford and FAB will determine prior to initiation of such suit how any recovery in excess of litigation costs and fees will be apportioned.

(C) If Stanford alone initiates and controls the enforcement or declaratory action, Stanford and FAB will determine prior to initiation of such suit how any recovery in excess of litigation costs and fees will be apportioned.

14.8 **Abandonment of Suit.** If either Stanford or FAB (or its designee) commences a suit under the provisions of Article 14 and then wants to abandon the suit, it will give timely notice to the other party. The other party may, if it so desires, continue prosecution of the suit at its own expense, in which case Stanford and FAB shall agree on the sharing of any recovery in the suit in excess of litigation costs.

14.9 **Cooperation.** The non-controlling party shall, at the reasonable request and expense of the party controlling any enforcement action under this Article 14, fully cooperate with such controlling party, including without limitation, using best efforts to cause its employees to testify at such an action, and to make available relevant records, papers, information, samples, specimens, and the like. The party controlling the enforcement action shall keep the non-controlling party reasonably informed of the progress of such action, and the non-controlling party shall have the right to participate in such enforcement action with counsel of its own choice at its own expense.

14.10 **Inventor Assignments.** Stanford shall promptly obtain written assignments from each inventor of the Licensed Patents assigning to Stanford all of such inventor's right, title and interest in the Licensed Patents.

15 TERMINATION

15.1 **Termination by FAB.**

(A) FAB may terminate this Agreement in its entirety by giving Stanford written notice at least 30 days in advance of the effective date of termination selected by FAB.

(B) FAB may terminate this Agreement as to any particular patent application or patent within the Licensed Patents by giving Stanford written notice at least 75 days in advance of the effective date of termination selected by FAB. From and after the effective date of termination under this subsection 15.1(B) with respect to a particular patent application or patent, such patent application or patent in the particular country shall cease to be within the Licensed Patents for purposes of this Agreement.

15.2 **Termination by Stanford.**

(A) Stanford may also terminate this Agreement on 30 days written notice if FAB:

(1) is in material default in payment of royalties or providing of reports;

(2) is subject to termination under the terms of Article 6;

(3) is in material breach of any provision of this Agreement; or

(4) provides any materially false report.

(B) Such notice will specify the nature of the default or breach and will take effect 30 days after receipt by FAB unless FAB remedies the problem in that 30-day period. Notwithstanding the foregoing if FAB disputes any default or material breach under 15.2(A) above in writing within such 30-day period, Stanford shall not have the right to terminate this Agreement unless and until a final determination, in an arbitration under Section 17 below, that such default or material breach was committed, and FAB fails to cure such default or material breach within thirty (30) days after such determination. The parties agree to use diligent efforts to conclude any arbitration initiated under this Section 15.2B within 120 days of FAB's written notice to Stanford disputing the applicable alleged material breach or default. For the purpose of clarity, this Section does not suspend any obligation of FAB to compensate Stanford for any undisputed amount, as provided for under any term of this Agreement, during the pendency of any determination of such default or material breach).

15.3 **Surviving Provisions.** Surviving any termination or expiration are:

(A) FAB's obligation to pay royalties accrued or accruable;

(B) any claim of FAB or Stanford, accrued or to accrue, because of any breach or default by the other party;

(C) the provisions of Sections 8.2, 8.3, 15.3 and Articles 2, 9, 10, 17 and 19.

(D) any sublicense granted hereunder, provided that the sublicensee agrees in writing to be bound by the applicable terms of this Agreement.

16 ASSIGNMENT

16.1 **Permitted Assignment by FAB.** Subject to Section 16.3, FAB may assign this Agreement as part of a sale, regardless of whether such a sale occurs through an asset sale, stock sale, merger or other combination, or any other transfer of:

(A) all or substantially all of FAB's business; or

(B) that part of FAB's business to which the license granted under this Agreement relates.

16.2 **Any Other Assignment by FAB.** Any other attempt to assign this Agreement by FAB without the prior written consent of Stanford shall be null and void.

16.3 **Conditions of Assignment.** Any assignment of this Agreement shall not be deemed approved until the following conditions have been met:

(A) FAB must provide Stanford with written notice of the assignment and with the new assignee's contact information within 30 days following such assignment; and

(B) the new assignee must agree in writing to Stanford to be bound by this Agreement; and

(C) Stanford must have received a $[*] assignment fee.

16.4 Notwithstanding Section 16.3(C) above, no assignment fee shall be due by FAB for any assignment or transfer of this Agreement in case of reincorporation or any other reorganization that does not involve a Change of Control.

16.5 **After the Assignment.** Upon a permitted assignment of this Agreement pursuant to Article 16, FAB will be released of liability under this Agreement and the term "FAB" in this Agreement will mean the assignee.

17 DISPUTE RESOLUTION

17.1 **Dispute Resolution by Arbitration.** Any dispute between the parties arising under or related to this Agreement, excluding any dispute relating to patent validity or infringement, will be settled by arbitration in accordance with the JAMS Arbitration Rules and Procedures.

17.2 **Request for Arbitration.** Upon request by either party, such arbitration will be by a third party arbitrator selected according to the JAMS rules or mutually agreed upon in writing by Stanford and FAB within 30 days of the arbitration request. The arbitrator's decision will be final and nonappealable and may be entered in any court having jurisdiction.

17.3 **Discovery.** The parties will be entitled to discovery as if the arbitration were a civil suit in the California Superior Court. The arbitrator may limit the scope, time, and issues involved in discovery in accordance with the JAMS Arbitration Rules and Procedures then in effect.

17.4 **Place of Arbitration.** The arbitration will be held in Santa Clara County, California unless the parties mutually agree in writing to another place.

17.5 **Patent Validity.** Any dispute regarding the validity of any Licensed Patent shall be litigated in the federal district courts located in the Northern District California, and the parties agree not to challenge personal jurisdiction in that forum.

18 NOTICES

18.1 **All Notices.** All notices under this Agreement are deemed fully given when written, addressed, and sent as follows:

All notices to FAB are mailed to:

Fundamental Applied Biology, Inc.
145 Adams Drive, Suite 1015,
Menlo Park. CA 94025
Attention: [*]

All general notices to Stanford are e-mailed or mailed to:

Office of Technology Licensing
1705 El Camino Real
Palo Alto, CA 94306-1106
info@otlmail.stanford.edu

All payments to Stanford are mailed to:

Stanford University
Office of Technology Licensing
Department #44439
P.O. Box 44000
San Francisco, CA 94144-4439

All progress reports to Stanford are e-mailed or mailed to:

Office of Technology Licensing
1705 El Camino Real
Palo Alto, CA 94306-1106
info@otlmail.stanford.edu

Either party may change its address with written notice to the other party. Notice shall be deemed effective as of the date actually received by the addressee at the address provide for by the addressee.

19 MISCELLANEOUS

19.1 **Waiver**. No term of this Agreement can be waived except by the written consent of the party waiving compliance.

19.2 **Choice of Law**. This Agreement shall be governed by the laws of the State of California, United States of America, applicable to agreements negotiated, executed, and performed within California.

19.3 **Exclusive Forum.** The state and federal courts having jurisdiction over Stanford, California, United States of America, provide the exclusive forum for any court action between the parties relating to this Agreement. FAB submits to the jurisdiction of such courts, and waives any claim that such a court lacks jurisdiction over FAB or constitutes an inconvenient or improper forum.

19.4 **Headings**. No headings in this Agreement affect its interpretation.

19.5 **Confidentiality**. Stanford will maintain the terms Articles 2, 4, 7 and 10 and Sections 4.5 and 6.1 of this Agreement, as well as the reports, audit results and

***Confidential Treatment Requested.**

any information provided by FAB to Stanford pursuant to Sections 4.4, 6.2, 8.1, 8.3, 8.5 and 8.7 in confidence and will not disclose this information to any third party, except as required by law. Stanford's obligation to confidentiality will be fulfilled by using at least the same degree of care with FAB's confidential information as it uses to protect its own confidential information.

19.6 **Severability**. In the event that any provisions of this Agreement are determined to be invalid or unenforceable by a court of competent jurisdiction, the remainder of the Agreement shall remain in full force and effect without said provision. The parties shall in good faith negotiate a substitute clause for any provision declared invalid or unenforceable, which shall most nearly approximate the intent of the parties in entering this Agreement.

19.7 **Entire Agreement**. This Agreement constitutes the entire agreement between FAB and Stanford and supersedes all prior communications, understandings and agreements with respect to the subject matter of this Agreement, including without limitation the Original License Agreement. This Agreement may not be amended except with a written agreement signed by FAB and Stanford.

19.8 **Counterparts**. This Agreement may be executed in counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument.

19.9 **Electronic Copy**. The parties to this document agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes for which the original signature may have been used. The parties further waive any right to challenge the admissibility or authenticity of this document in a court of law based solely on the absence of an original signature.

The parties execute this Agreement in duplicate originals by their duly authorized officers or representatives.

THE BOARD OF TRUSTEES OF THE LELAND
STANFORD JUNIOR UNIVERSITY

Signature	/s/ Katharine Ku
Name	Katharine Ku
Title	Director, Technology Licensing
Date	Oct 3, 2007

FUNDAMENTAL APPLIED BIOLOGY, INC.

Signature	/s/ Daniel Gold
Name	Daniel Gold, Ph.D.
Title	Chief Executive Officer
Date	October 3, 2007

APPENDIX A

1. FAB has already provided Stanford a preliminary business strategy in the form of power point slide set ("Business Plan"). Stanford will treat this Business Plan as confidential information and to protect it as Stanford would its own confidential information.
2. Within one hundred eighty (180) days of the Effective Date, FAB will have closed its series B financing pursuant to which it will have raised $[*] to proceed with the exploration and development of Licensed Product.
3. Within one hundred eighty (180) days of the Effective Date, FAB will provide to Stanford a listing of the management team or a schedule for the recruitment of key management positions.
4. Within twelve (12) months of the Effective Date, FAB will have completed a preliminary commercial strategy to identify potential FAB Licensed Products.
5. Within twenty (24) months of the Effective Date, FAB will have developed a collaboration strategy for the Company.
6. Within twenty four (24) months of the Effective Date. FAB will have identified at least one suitable protein drug candidate for development and commercialization as a FAB Licensed Product.
7. By [*], FAB will have the capability to conductnon-cGMP fermentations in a [*] (or greater) fermentor for the purpose of producing cells for *in vitro* extract production
8. Within [*], Licensee will have identified and initiated collaboration discussions with at least one (1) potential partner.

Additionally, following the fifth and tenth anniversaries of the Effective Date, the parties agree to meet and discuss in good faith whether additional milestones may be necessary, and if they mutually agree that they are, what such milestones should be.

APPENDIX B

SAMPLE REPORTING FORM

Stanford Docket No. S

This report is provided pursuant to the license agreement between Stanford University and FAB License Agreement Effective Date:

Report Covering Period	
Yearly Maintenance Fee	$
Number of Sublicenses Executed	
Net Sales	$
Royalty Calculation	
Royalty Subtotal	$
Credit	$
Royalty Due	$

Comments:

APPENDIX C

CLIENT AND BILLING AGREEMENT

The Board of Trustees of the Stanford Leland Junior University ("STANFORD"); and_____, a Corporation of the State of _____, with a principal place of business at_____, ("COMPANY"); have agreed to use the law firm of _____ ("FIRM") to prepare, file and prosecute the pending patent applications listed in Exhibit A attached hereto and maintain the patents that issue thereon ("Patents").

WHEREAS, FIRM desires to perform the legal services related to obtaining and maintaining the Patents; and

WHEREAS, STANFORD remains the client of the FIRM; and

WHEREAS, COMPANY is the licensee of STANFORD's interest in the Patents;

NOW THEREFORE, in consideration of the premises and the faithful performance of the convenants herein contained, IT IS AGREED:

1. FIRM can interact directly with COMPANY on all patent prosecution matters related to the Patents and will copy STANFORD on all correspondence. STANFORD will be notified by FIRM prior to any substantive actions and Stanford will have final approval and FIRM will provide STANFORD reasonable opportunity to comment on documents filed with any patent office which would affect the Patents. FIRM will keep Stanford reasonably apprised and copied on all material documents and proceedings.

2. COMPANY is responsible for the payment of all charges and fees by FIRM related to the prosecution and maintenance of the Patents. FIRM will invoice COMPANY and must copy STANFORD on all invoices. COMPANY must pay FIRM directly for all charges and must copy STANFORD on each payment.

3. Notices and copies of all correspondence should be sent to the following:

To COMPANY:	Name, Title Company Name Address
To STANFORD:	Name Office of Technology Licensing Stanford University 1705 El Camino Real Palo Alto, CA 94306-1106
To FIRM:	Attorney Name Law Firm Address

4. The parties to this document agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes for which the original signature may have been used. The parties further waive any right to challenge the admissibility or authenticity of this document in a court of law based solely on the absence of an original signature.

ACCEPTED AND AGREED TO:

STANFORD

By:
Name: Katharine Ku
Title: Director
Date: _____

Company Name

By:
Name:
Title:
Date: _____

Law Firm Name

By:
Name:
Title:
Date: _____

APPENDIX D

LICENSED PATENTS

S98-199

IMATTERNO	COUNTRY ID	SERIALNO	PATENTNO	PUBLNO	TITLE	STATUS
STAN-117CA	CANADA	2365668			IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	PENDING
STAN-117EP	EUROPEAN PATENT CONVENT	00923078.0			IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	PUBLISHED
STAN-117JP	JAPAN	2000-605770		2002-538832	IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	PUBLISHED
STAN-117	UNITED STATES	09/270,814	6,168,931		ENHANCED IN VITRO SYNTHESIS OF BIOLOGICAL MACROMOLECULES USING A NOVEL ATP REGENERATION SYSTEM	ISSUED
STAN-117CON	UNITED STATES	09/948,815	6,994,986	US-2002-0081660-A1	IN VITRO SYNTHESIS OF POLYPEPTIDES BY OPTIMIZING AMINO ACID METABOLISM	ISSUED
STAN-124PRV	UNITED STATES	60/125,463			ENHANCED IN VITRO PROTEIN SYNTHESIS USING CONDITIONS ENHANCED FOR AMINO ACID METABOLISM	EXPIRED
STAN-117WO	WIPO	US00/07095		WO00/5353	IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	NAT PHASE

S99-130

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-152CA		2428693			IN VITRO PROTEIN SYNTHESIS USING GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	ABANDONED
STAN-152PRV		60/145,438			IN VITRO SYNTHESIS USING GLUCLOSE GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	EXPIRED
STAN-152		09/621,339	6,337,191		IN VITRO PROTEIN SYNTHESIS USING GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	ISSUED
STAN-152WO		US00/31449			IN VITRO SYNTHESIS USING GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	NAT PHASE

S00-156

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-205AU	AU	2001288931	2001288931		ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	ISSUED
STAN-205CA	CA	2419996			ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PENDING
STAN-205EP	EP	01968701.1		1315826	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PUBLISHED
STAN-205JP	JP	2002-525824		2004-508050	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PUBLISHED
STAN-205PRV	US	60/230,381			ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	EXPIRED
STAN-205	US	09/948,052	6,548,276	US-2002-0058303-A1	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	ISSUED
STAN-205CIP	US	10/404,599	7,041,479	US-2004-0038332-A1	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	ISSUED
STAN-205WO	WO	US01/28159		WO 02/20818	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	NAT PHASE

S02-181

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-273AU	AU	2003259912			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-273CA	CA	2496437			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-273EP	EP	03788625.6		1539948	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-273JP	JP	2004-529558		2005-536206	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-273PRV	US	60/404,591			METHODS OF IN VITRO PROTEIN SYNTHESIS	EXPIRED
STAN-273	US	10/643,683		US 2004-0209321 A1	METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-273WO	WO	US03/25888		WO 2004/0167 78	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	NAT PHASE

S03-168

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-309AU	AU	2004259433			METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PENDING
STAN-309EP	EP	04778237 0		1649025	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PUBLISHED
STAN-309JP	JP	2006-521119		2006-527997	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PUBLISHED
STAN-309PRV	US	60/488,282			METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	EXPIRED
STAN-309	US	10/888,145		US-2005-0054032-A1	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PUBLISHED
STAN-309WO	WO	US2004/022632		WO 2004/022 632	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	NAT PHASE

S03-316

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-337AU	AU	2004293798			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337CN	CN	200480033981.4			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337EP	EP	04811533.1		1685240	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-337IN	IN	1741/CHENP/2006			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337JP	JP	2006-541404		2007-521023	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-337KR	KR	2006-7010314			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337NZ	NZ	546961			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337PRV	US	60/524.374			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	EXPIRED
STAN-337	US	10/579,711		US 2007-0154983 A1	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-337WO	WO	US2004/038830		WO 2005/052 117	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	NAT PHASE

S04-041

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-353AU	AU	2005230916			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353CA	CA	n/a2560504			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353CN	CN	200580009464.8			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	ABANDONED
STAN-353EA	EA	200601748			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353EP	EP	05733219.9		1730313	PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PUBLISHED
STAN-353ID	ID	W00 2006 02538		047.0258A	PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PUBLISHED
STAN-353JP	JP	2007-505063			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353KR	KR	10-2006-7019493			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353MX	MX	PA/a/2006/010918			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353NO	NO	20064735			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353NZ	NZ	549523			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353SG	SG	200606158-4			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353PRV	US	60/556,736			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	EXPIRED

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-353	US	10/599,310			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353WO	WO	US2005/009342		WO 2005/098048	PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	NAT PHASE

S05-044

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-405PRV	US	60/690,571			TOTAL AMINO ACID STABILIZATION DURING CELL-FREE PROTEIN SYNTHESIS	EXPIRED
STAN-405	US	11/447,367		US 2007-0004001 A1	TOTAL AMINO ACID STABILIZATION DURING CELL-FREE PROTEIN SYNTHESIS	PUBLISHED
STAN-405WO	WO	US2006/023032		WO 2006/138322	TOTAL AMINO ACID STABILIZATION DURING CELL-FREE PROTEIN SYNTHESIS	PUBLISHED

S05-339

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-459PRV	US	60/732,437			CELL-FREE SYNTHESIS OF MEMBRANE BOUND POLYPEPTIDES	EXPIRED
STAN-459WO	WO	US2006/042583		WO 2007/033655	CELL-FREE SYNTHESIS OF MEMBRANE BOUND POLYPEPTIDES	PUBLISHED

S06-146

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-534PRV	US	60/881,251			ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PENDING

S06-254

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-507PRV	US	60/817,915			CELL-FREE SYNTHESIS OF PROTEINS CONTAINING UNNATURAL AMINO ACIDS	EXPIRED
STAN-507WO	WO	US2007/015170			CELL-FREE SYNTHESIS OF PROTEINS CONTAINING UNNATURAL AMINO ACIDS	PENDING

S06-257

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-506PRV	US	60/817,772			VIRUS-LIKE PARTICLES WITH SITE SPECIFIC AMINO ACIDS	EXPIRED

Exhibit 10.15

[*] Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

EXECUTION VERSION

EXCLUSIVE PATENT LICENSE AND RESEARCH COLLABORATION AGREEMENT

by and between

SUTRO BIOPHARMA, INC.

and

MERCK SHARP & DOHME CORP.

EXCLUSIVE PATENT LICENSE AND RESEARCH COLLABORATION AGREEMENT

This Agreement ("**Agreement**") is effective as of July 23rd, 2018, (the "**Effective Date**") and is entered into by and between SUTRO BIOPHARMA, INC., a corporation organized and existing under the laws of Delaware ("**Sutro**") and MERCK SHARP & DOHME CORP., a corporation organized and existing under the laws of New Jersey ("**Merck**").

RECITALS:

WHEREAS, Sutro has developed Sutro Know-How and Pre-Existing Sutro Know-How (as hereinafter defined) and has rights to Sutro Patent Rights and Sutro Pre-Existing Patent Rights (as hereinafter defined);

WHEREAS, Merck has developed Merck Know-How (as hereinafter defined) and has rights to Merck Patent Rights (as hereinafter defined);

WHEREAS, Merck and Sutro desire to enter into a research collaboration to research and develop certain molecules which Bind a select functional cytokine receptor complex (Targets, as hereinafter defined) and in particular Compounds and Products of potential utility for treating Oncology Indications and Non-Oncology Indications (as those terms are hereinafter defined) upon the terms and conditions set forth herein, with the goal of identifying and/or optimizing novel molecules to be developed and commercialized by Merck;

WHEREAS, Merck desires to develop Collaboration IP (as hereinafter defined) and obtain a license or rights under Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How, Pre-Existing Sutro Know-How, Sutro Information and Inventions, and any Sutro interest in Joint Patent Rights and Joint Information and Inventions upon the terms and conditions set forth herein, and Sutro desires to collaborate with Merck to develop Collaboration IP and grant such license or rights;

NOW, **THEREFORE**, in consideration of the foregoing premises and the mutual covenants contained herein, the receipt and sufficiency of which are hereby acknowledged, Sutro and Merck hereby agree as follows:

ARTICLE 1. DEFINITIONS.

Unless specifically set forth to the contrary herein, the following terms, whether used in the singular or plural, shall have the respective meanings set forth below.

1.1 "**AAALAC**" shall mean the Association for Assessment and Accreditation of Laboratory Animal Care International.

1.2 "**Act**" shall mean, as applicable, the United States Federal Food, Drug and Cosmetic Act, 21 U.S.C. §§ 301 et seq., and/or the Public Health Service Act, 42 U.S.C. §§ 262 et seq., as amended from time to time.

1.3 "**Affiliate**" shall mean: (i) any corporation or business entity of which, now or hereafter, fifty percent (50%) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest are owned, controlled or held, directly or indirectly, by Merck or Sutro; or (ii) any corporation or business entity which, now or hereafter, directly or indirectly, owns, controls or holds fifty percent (50%) (or the maximum ownership

interest permitted by law) or more of the securities or other ownership interests representing the equity, the voting stock or, if applicable, the general partnership interest, of Merck or Sutro; or (iii) any corporation or business entity of which, now or hereafter, fifty percent (50%) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest are owned, controlled or held, directly or indirectly, by a corporation or business entity described in (i) or (ii).

1.4 "**Agreement**" shall have the meaning given such term in the preamble to this document.

1.5 "**Applicable Laws**" shall mean any and all applicable laws of any jurisdiction which are applicable to any of the Parties or their respective Affiliates in carrying out activities hereunder or to which any of the Parties or their respective Affiliates in carrying out the activities hereunder is subject, and shall include all statutes, enactments, acts of legislature, laws, ordinances, rules, regulations, notifications, guidelines, policies, directions, directives and orders of any statutory authority, tribunal, board, or court or any central or state government or local authority or other governmental entity in such jurisdictions, including the Act, GLPs, GCPs and GMPs.

1.6 "**Bind**" shall mean, with respect to a molecule and a Target, the molecule's [*] activity is mediated by modulating the Target.

1.7 "**Calendar Quarter**" shall mean the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31.

1.8 "**Calendar Year**" shall mean each successive period of twelve (12) months commencing on January 1 and ending on December 31.

1.9 "**Cell-Free Extract**" shall mean Sutro's proprietary non-cellular extract, XtractCF™ and XtractCF+™, prepared from cells, including *e. coli* cells, for use in the XpressCF™ process or XpressCF+™ process, [*], which contain the translational and transcriptional machinery sufficient to produce [*], and including all reagents necessary for such production, and shall also include the processes for making such proprietary non-cellular extract.

1.10 "**cGMP Facility**" shall mean Sutro's Facility located at 870 and 894 Industrial Rd., San Carlos, CA 94070 or such other Sutro facility for cGMP Manufacturing as agreed to by the Parties (Merck's agreement not to be unreasonably withheld).

1.11 [*]

1.12 "**Clinical Trial**" shall mean a Phase I Clinical Trial, Phase II Clinical Trial, Phase III Clinical Trial, and/or Post-Approval Clinical Trial.

1.13 "**Collaboration IP**" shall have the definition set forth in Section 2.11.

1.14 "**Combination Product**" shall mean a Product that includes one or more active pharmaceutical ingredients other than Compound in combination with Compound. All references to Product in this Agreement shall be deemed to include Combination Product unless expressly set forth otherwise in this Agreement.

1.15 "**Commercially Reasonable Efforts**" shall mean, with respect to the efforts to be expended by a Party with respect to any objective, such reasonable and diligent, good faith efforts to

accomplish such objective as such Party would normally use to accomplish a similar objective under similar circumstances. It is understood and agreed that with respect to the [*] of [*] by either Party, such efforts shall be [*] to those [*] used by such Party for [*] owned by it or to which it has rights, which product is at a [*] or [*] and is of [*] taking into account [*] of [*], the [*] and other [*] of the [*], the [*] of [*] given the [*], the [*] of the [*] including the [*] of [*] or other [*], other [*] and other relevant factors. Commercially Reasonable Efforts shall be determined on a [*] and [*] basis for a [*], and it is anticipated that the level of effort will be [*] for [*], and will [*] other things [*] of the [*] and the [*]. In addition to the foregoing, with respect to [*] to [*] activities under a [*], "Commercially Reasonable Efforts" shall also mean that [*] shall [*] to the [*] of the [*] a [*] to perform [*] and such [*] to [*] such [*] with such [*] at the same level as [*] for its [*].

1.16 "**Commercialization**" shall mean any and all activities related to the import, export, transportation, storage, marketing, detailing, promotion, distribution, sale or other disposition and/or other approved use of a Product in a country or region in the Territory, including: (a) strategic marketing, sales force detailing, advertising, medical affairs, reimbursement and market access activities and market and product support; and (b) all customer support, distribution matters, invoicing and sales activities. When used as a verb, "to Commercialize" and "Commercializing" means to engage in Commercialization, and "Commercialized" has a corresponding meaning. For clarity, Commercialization excludes any Research, Development or Manufacturing activities.

1.17 "**Common Stock Purchase Agreement**" shall mean that certain Common Stock Purchase Agreement entered into between Sutro and Merck contemporaneously with this Agreement.

1.18 "**Compound**" shall mean any molecule, including any cytokine or derivative thereof, identified [*]; or any derivative thereof; which molecule or derivative Binds to a Target including [*].

1.19 "**Confidential Information**" shall mean all Information, know-how or other proprietary information or materials furnished by or on behalf of one Party (the "**Disclosing Party**") to the other Party (the "**Receiving Party**") in connection with this Agreement, except to the extent that such information or materials: (a) was known by the Receiving Party at the time of its receipt, and not through a prior disclosure by the Disclosing Party under an obligation of confidentiality, as documented by the Receiving Party's business records; (b) is in the public domain by use and/or publication before its receipt from the Disclosing Party, or thereafter enters the public domain through no fault of the Receiving Party; (c) is subsequently disclosed to the Receiving Party by a Third Party who may lawfully do so and is not under an obligation of confidentiality to the Disclosing Party; or (d) is developed by the Receiving Party independently of Information received from the Disclosing Party, as documented by the Receiving Party's business records. Any combination of features or disclosures shall not be deemed to fall within the foregoing exclusions merely because individual features are published or available to the general public or in the rightful possession of the Receiving Party unless the combination itself and principle of operation are published or available to the general public or in the rightful possession of the Receiving Party.

1.20 "**Conflict**" shall mean (a) with respect to any Target that is proposed during [*] following the Effective Date, that prior to the date the Target is proposed by Merck either (i) the Target is currently the subject of [*] between Sutro and a Third Party, or (ii) the Target is the subject of an existing [*] with a Third Party, and (b) with respect to any Target that is proposed after [*] following the Effective Date, that any of the following apply as of the date the Target is proposed by Merck: (i) the Target is currently the subject of [*] between Sutro and a Third Party, (ii) the Target is [*] or (iii) the Target is a [*].

1.21 "**Control**", "**Controls**" or "**Controlled by**" shall mean with respect to any item of or right under Sutro Patent Rights, Sutro Background Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How, Pre-Existing Sutro Know-How, Merck Patent Rights, Merck Background Patent Rights, Merck Know-How, or Joint Patent Rights, or other intellectual property assets or rights, as applicable, the possession of (whether by ownership or license, other than pursuant to this Agreement) or the ability of a Party and/or any of its Affiliates to grant access to, or a license or sublicense of, such items or right as provided for herein without violating the terms of any agreement or other arrangement with any Third Party existing at the time or in effect during the time such Party or Affiliate would be required hereunder to grant the other Party such access or license or sublicense, [*]. For clarity, any such access to, license or sublicense from Merck to Sutro is limited to the Research Program Term.

1.22 "**Custom Reagents**" shall mean materials that are [*] used in the Manufacture of a Compound or Product from Cell-Free Extract and are [*] to be necessary or useful for the Manufacture of Compound or Product from Cell-Free Extract including [*], and any other materials as the Parties may identify and agree are Custom Reagents from time to time. For clarity, the Custom Reagents will not include the Cell-Free Extract itself.

1.23 "**Cytokine**" shall mean a protein involved in cell signaling, including a growth factor, tumor necrosis factor, colony-stimulating factor, chemokine, lymphokine, monokine, interleukin, and interferon, and any derivative thereof including a modification capable of extending the half-life of the substance, providing a target directing function to the substance, and/or enhancing the binding and/or functioning of the substance, including a mutant or mutein, fusion protein and/or conjugate.

1.24 "**Development**" shall mean any and all clinical drug development activities, Clinical Trials, statistical analysis and report writing, the preparation and submission of regulatory filings, regulatory affairs with respect to the foregoing and all other activities necessary or reasonably useful or otherwise requested or required by a Regulatory Authority as a condition or in support of obtaining or maintaining a regulatory approval for a Compound or Product, and "Develop", "Developed" and "Developing" will have corresponding meanings. For clarity, Development excludes any Research, Commercialization or Manufacturing activities.

1.25 "**Exclusions Lists**" shall be as defined in Section 1.106 (Violation).

1.26 "**Facilities**" shall mean both the Non-cGMP Facilities and the cGMP Facility(ies).

1.27 "**Field**" shall mean any and all purposes.

1.28 "**First Commercial Sale**" shall mean, with respect to any Product, the first sale for end use or consumption of such Product in a country, excluding, however, any sale or other distribution for use in a Clinical Trial.

1.29 "**FTE Rate**" shall mean US$ [*] to support one FTE per Calendar Year for activities conducted under the Research Program. The rate represents the fully burdened rate for each such FTE and includes related salary, benefits, administration, facilities costs and overhead. The Parties to discuss and agree upon an appropriate FTE Rates for other activities conducted pursuant to the agreement.

***Confidential Treatment Requested.**

1.30 "**Full Time Equivalent**" or "**FTE**" means the equivalent of a full-time scientist's work time over a Calendar Year consisting of a total of [*] hours per Calendar Year of work devoted to, and directly related to, conducting activities under a Research Program in accordance with the applicable Research Plan and this Agreement. Any individual who devotes less than [*] hours per Calendar Year to conducting activities under a Research Program shall be treated as an FTE on a pro-rata basis based upon the actual number of hours worked on conducting activities under the Research Program divided by [*] hours. No individual may be charged at greater than one (1) FTE in a given Calendar Year.

1.31 "**Gatekeeper**" shall mean a Third Party [*] that shall maintain a confidential list of those Targets that have Conflicts (pursuant to the criteria set forth in the Conflicts definition at the applicable period of time). Sutro shall update the list maintained by the Gatekeeper [*]. Sutro shall notify Merck of the Gatekeeper within [*] days following the Effective Date, and if Sutro changes the Gatekeeper, Sutro shall promptly notify Merck of the new Gatekeeper.

1.32 "**Good Clinical Practices**" or "**GCPs**" shall mean the applicable then-current Good Clinical Practices as such term or its equivalent is defined from time to time by the United States Food and Drug Administration or other relevant Regulatory Authority having jurisdiction over the Development, Manufacture or Commercialization of Product in the Territory pursuant to its regulations, guidelines or otherwise, as applicable.

1.33 "**Good Laboratory Practices**" or "**GLPs**" shall mean the applicable then-current standards for laboratory activities for pharmaceuticals or biologicals, as set forth in the Act and any regulations or guidance documents promulgated thereunder, as amended from time to time, together with any similar standards of good laboratory practice as are required by any Regulatory Authority in the Territory.

1.34 "**Good Manufacturing Practices**" or "**GMPs**" shall mean the applicable then-current Good Manufacturing Practices as such term or its equivalent is defined from time to time by the United States Food and Drug Administration or other relevant Regulatory Authority having jurisdiction over the Development, Manufacture or Commercialization of Product in the Territory pursuant to its regulations, guidelines or otherwise, as applicable.

1.35 "**IND**" shall mean an investigational new drug application, clinical study application, clinical trial exemption, or similar application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority.

1.36 "**IND Enabling Toxicology Studies**" shall mean the genotoxicity, acute toxicology, safety, pharmacology, and/or sub-chronic toxicology studies in species using applicable GLPs that in Merck's sole discretion satisfy applicable regulatory requirements and meet the standard necessary for submission as part of an IND filing with a Regulatory Authority.

1.37 "**Indication**" shall mean a separate and distinct disease or medical condition in humans which a Product that is in Clinical Trials is intended to treat, prevent and/or diagnose and/or for which a Product has received Marketing Authorization.

1.38 "**Information**" shall mean any and all information and data, including all Merck Know-How, all Pre-Existing Sutro Know-How, all Sutro Know-How, and all other scientific, pre-clinical, clinical, regulatory, manufacturing, marketing, financial and commercial information or data, whether communicated in writing or orally or by any other method, which is provided by one Party to the other Party in connection with this Agreement.

1.39 "**Initiation**" shall mean the first dosing of the first subject for the applicable Study.

1.40 "**Invention**" shall mean any process, method, composition of matter, article of manufacture, discovery or finding that is conceived and/or reduced to practice as a result of a Research Program.

1.41 "**Joint Chemistry, Manufacturing and Controls Committee**" or "**JCMCC**" shall mean the joint chemistry, manufacturing and controls committee established to facilitate the sharing of information related to the Manufacture of Compounds and Products as more fully described in Section 2.5.

1.42 "**Joint Information and Inventions**" shall mean all protocols, formulas, data, Inventions, know-how and trade secrets, patentable or otherwise, created or conceived [*] and developed or invented jointly by employee(s) of Merck and/or its Affiliates, and/or a Third Party acting on behalf of Merck and/or its Affiliates, on the one hand, and by employee(s) of Sutro and/or its Affiliates, and/or a Third Party acting on behalf of Sutro and/or its Affiliates, on the other hand.

1.43 "**Joint Patent Rights**" shall mean Patent Rights that claim or cover Joint Information and Inventions.

1.44 "**Joint Research Committee**" or "**JRC**" shall mean the joint research committee established to facilitate the Research Programs as more fully described in Section 2.4.

1.45 "**Know-How**" means all information and materials, including discoveries, improvements, processes, methods, protocols, formulas, data, inventions, know-how and trade secrets, patentable or otherwise, which during the term of this Agreement: (i) are Controlled by a Party or its Affiliates; and (ii) are not generally known.

1.46 "**Major Oncology Indication**" shall mean an Oncology Indication for which [*] for the applicable Compound at the time of Initiation of the Phase III Clinical Trial for this Indication is [*] within [*] in the United States.

1.47 "**Manufacturing**" means, with respect to any Compound, Product, or intermediate of any Compound or Product, the production, manufacture, synthesis, processing, filling, formulating, finishing, packaging, labeling, testing, shipping and holding; including sequencing, process development, Cell-Free Extracts, process qualification and validation, scale-up, commercial manufacture and analytic development, product characterization, stability testing, quality assurance, and quality control; of such Compound, Product or intermediate thereof. "Manufacturing" refers to both pre-clinical and clinical Manufacturing for Research and Development, and Manufacturing for Commercialization. "Manufacture" and "Manufactured" will have corresponding meanings. For clarity, "Manufacturing" excludes Research, Development or Commercialization activities.

1.48 "**Manufacturing Cost**" shall mean the fully allocated cost of manufacturing cGMP Compound, consisting of the following components:

1.48.1 Direct Manufacturing Costs

1.48.1.1 External manufacturing fees, including [*];

1.48.1.2 Purchased materials including: [*];

1.48.1.3 Direct labor [*]; and

1.48.2 Indirect Manufacturing Costs

1.48.2.1 Allocations of indirect factory overhead and site support costs, such as, [*], For avoidance, costs under this Section should not include allocations associated with [*].

Indirect Manufacturing Costs are allocated to products using allocation methodologies such as [*].

1.49 "**Marketing Authorization**" shall mean all approvals from the relevant Regulatory Authority necessary to market and sell a Product in the applicable country [*].

1.50 "**Merck**" shall have the meaning given such term in the preamble to this Agreement.

1.51 "**Merck Background Collaboration IP**" shall mean the Merck Background Collaboration Know-How and the Merck Background Collaboration Patent Rights.

1.52 "**Merck Background Collaboration Know-How**" shall mean Know-How under Collaboration IP that: (a) is not Program Collaboration Know-How; and (b) solely relates to Merck Background IP or an improvement to Merck Background IP.

1.53 "**Merck Background Collaboration Patent Rights**" shall mean Patent Rights under Collaboration IP that: (a) are not Program Collaboration Patent Rights and (b) solely relate to Merck Background IP or an improvement to Merck Background IP.

1.54 "**Merck Background IP**" shall mean the Merck Background Know-How and the Merck Background Patent Rights.

1.55 "**Merck Background Know-How**" shall mean Merck Know-How Controlled by Merck or any of its Affiliates during a Research Program Term that is necessary or reasonably useful for: (a) Research related to any Compounds or Targets, or (ii) the Development, Manufacture or Commercialization of Compounds or Products; but excluding Know-How within Collaboration IP.

1.56 "**Merck Background Patent Rights**" shall mean Patent Rights that are Controlled by Merck or any of its Affiliates during a Research Program Term that are necessary or reasonably useful for (a) Research related to any Compounds or Targets, or (ii) the Development, Manufacture or Commercialization of Compounds or Products; but excluding Patent Rights within Collaboration IP.

1.57 "**Merck Information and Inventions**" shall mean all protocols, formulas, data, Inventions, know-how and trade secrets, patentable or otherwise, created or conceived [*] and developed or invented solely by employee(s) of Merck and/or its Affiliates, and/or a Third Party acting on behalf of Merck and/or its Affiliates, and not employed by Sutro and/or its Affiliates.

1.58 "**Merck Know-How**" shall mean: (A) all information and materials, including discoveries, improvements, processes, methods, protocols, formulas, data, inventions (including Merck Information and Inventions and Merck's rights in Joint Information and Inventions), know-how and trade secrets, patentable or otherwise, which during the term of this Agreement: (1) are Controlled by Merck; (2) are not generally known; and (3) that Merck makes available to Sutro for the performance of its obligations under the Research Program in accordance with this Agreement and the Research Plan; and (B) Pre-Existing Sutro Know-How. For the avoidance of doubt, Merck Know-How includes Merck Background Know-How made available by Merck pursuant to (A)(3) of this Section.

1.59 "**Merck Patent Rights**" shall mean: (A) Patent Rights that during the term of this Agreement are Controlled by Merck or any of its Affiliates which claim or cover Merck Information and Inventions or Joint Information and Inventions, excluding, however, any Patent Rights which claim or cover Merck Information and Inventions or Joint Information and Inventions which: (1) constitute Sutro Background Collaboration Patent Rights, or (2) claim or cover Merck Background Collaboration Know-How; or (B) Pre-Existing Sutro Patent Rights. For the avoidance of doubt, Merck Patent Rights includes Merck Background Patent Rights.

1.60 "**NDA**" shall mean a new drug application, biologics license application, Marketing Authorization application, filing pursuant to Section 510(k) of the Act, or similar application or submission for Marketing Authorization of a Product filed with a Regulatory Authority to obtain marketing approval for a biological, pharmaceutical or diagnostic product in that country or in that group of countries.

1.61 "**Net Sales**" shall mean the gross invoice price (not including value added taxes, sales taxes, or similar taxes) of Product sold by Merck or its Related Parties to the first Third Party after deducting, if not previously deducted, from the amount invoiced or received:

1.61.1 trade and quantity discounts, other than early payment cash discounts;

1.61.2 returns, rebates, chargebacks and other allowances;

1.61.3 retroactive price reductions that are actually allowed or granted; and

1.61.4 deductions for Health Care Reform fees and similar deductions to gross invoice price of Product imposed by Regulatory Authorities or other governmental entities;

1.61.5 a fixed amount equal to [*] percent ([*]%) of the amount invoiced to cover bad debt, early payment cash discounts, transportation and insurance and custom duties; and

1.61.6 the standard inventory cost of devices or delivery systems used for dispensing or administering Product, to the extent applicable.

With respect to sales of Combination Products, Net Sales shall be calculated on the basis of the gross invoice price of Product(s) containing the same strength of Compound sold without other active ingredients. [*] In the event that Product is sold only as a Combination Product (i.e.

neither the Compound nor the other active ingredient is sold separately), then Net Sales shall be calculated on the basis of the gross invoice price of the Combination Product multiplied by a fraction, the numerator of which shall be the inventory cost of the Compound in the Product and the denominator of which shall be the inventory cost of all of the active ingredients in the Combination Product. Inventory cost shall be determined in accordance with Merck's regular accounting methods, consistently applied. The deductions set forth in Section 1.61.1 through Section 1.61.6 will be applied in calculating Net Sales for a Combination Product. In the event that Product is sold only as a Combination Product and either Party reasonably believes that the calculation set forth in this Paragraph does not fairly reflect the value of Compound relative to the other active ingredients in the Combination Product, the Parties shall reasonably negotiate, in good faith, other means of calculating Net Sales with respect to Combination Products, [*].

1.62 "**Non-cGMP Facility**" shall mean either Sutro's Facility at 310 Utah Ave., #150, South San Francisco, CA 94080 or Sutro's Facility at 240 E. Grand Ave., South San Francisco, CA 94080 or as otherwise agreed to by the Parties (Merck's agreement not to be unreasonably withheld). "Non-cGMP Facilities" shall mean all such Non-cGMP Facilities.

1.63 "**Non-Oncology Indication**" shall mean an Indication which is not an Oncology Indication.

1.64 "**Oncology Indication**" shall mean an Indication where the disease or medical condition being treated or cured is cancer.

1.65 "**Party**" shall mean Merck or Sutro, individually, and "Parties" shall mean Merck and Sutro, collectively.

1.66 "**Patent Rights**" shall mean any and all patents and patent applications in the Territory (which for the purpose of this Agreement shall be deemed to include certificates of invention and applications for certificates of invention), including divisionals, continuations, continuations-in-part, reissues, renewals, substitutions, registrations, re-examinations, revalidations, extensions, supplementary protection certificates, pediatric exclusivity periods and the like of any such patents and patent applications, and foreign equivalents of the foregoing.

1.67 "**Person**" means any individual, partnership, joint venture, limited liability company, corporation, firm, trust, association, unincorporated organization, governmental authority or agency, or any other entity not specifically listed herein.

1.68 "**Phase I Clinical Trial**" shall mean a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(a).

1.69 "**Phase II Clinical Trial**" shall mean a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(b).

1.70 "**Phase III Clinical Trial**" shall mean a human clinical trial in any country that would satisfy the requirements of 21 CFR 312.21(c).

1.71 "**Post-Approval Clinical Trial**" shall mean any clinical trial conducted in an Indication after the Regulatory Approval of such Indication.

1.72 "**Pre-Existing Sutro Know-How**" shall mean Sutro Know-How existing prior to the Effective Date related to: (a) molecules that Bind a Target including Compounds and Products, (b)

compositions containing such molecules, and/or (c) methods of use or processes of manufacture of such molecules or compositions; excluding any processes of manufacture that are both: (i) specifically and solely related to the manufacture or use of the Cell-Free Extract, and (ii) not specifically related to the Manufacture of Compound or Product.

1.73 "**Pre-Existing Sutro Patent Rights**" shall mean Patent Rights that recite or claim Pre-Existing Sutro Know-How.

1.74 "**Product(s)**" shall mean any pharmaceutical or biological preparation in final form containing a Compound: (i) for sale by prescription, over-the-counter or any other method; or (ii) for administration to human patients in a Clinical Trial, for any and all uses in the Field, including any Combination Product.

1.75 "**Program Collaboration IP**" shall mean the Program Collaboration Know-How and the Program Collaboration Patent Rights.

1.76 "**Program Collaboration Know-How**" shall mean:

1.76.1 all [*] related to: (A) molecules that Bind a Target including Compounds and Products; (B) compositions containing such molecules, and/or (C) methods of use or processes of manufacture of such molecules or compositions; [*]; and

1.76.2 Pre-Existing Sutro Know-How.

1.77 "**Program Collaboration Patent Rights**" shall mean: (A) Patent Rights that recite or claim Program Collaboration Know-How; or (B) Pre-Existing Sutro Patent Rights.

1.78 "**Regulatory Authority**" shall mean any applicable government regulatory authority involved in granting approvals for the manufacturing, marketing, reimbursement and/or pricing of a Product in the Territory, including, in the United States, the United States Food and Drug Administration and any successor governmental authority having substantially the same function.

1.79 "**Related Party**" shall mean each of Merck (or any subsequent assignee of Merck or the assets under this Agreement), its Affiliates, and their respective sublicensees (which term does not include distributors), as applicable.

1.80 "**Research**" means activities related to the design, discovery, identification, research, pre-clinical development, pre-clinical toxicology studies, profiling, characterization, improvement or optimization of a Compound or Product. For clarity, "Research" excludes Development, Commercialization or Manufacturing activities.

1.81 "**Research Plan**" shall mean the high-level Research and Manufacturing activities for the identification of molecules which Bind a given Target to be undertaken by the Parties for a given Research Program pursuant to ARTICLE 2, and an associated budget for such activities; which Research Plan may be revised from time to time pursuant to Section 2.1 or Section 2.2. The Research Plan shall capture among other things the optimal profile for such molecules. A Research Plan in a given Research Program can involve multiple work plans, which work plans collectively shall be referred to herein as the Research Plan for such Research Program. An initial work plan (and current Research Plan) for the first Research Program is attached as Schedule 2.1.

1.82 "**Research Program**" shall mean a Research program pursuant to ARTICLE 2 directed to the identification of molecules including cytokines or derivatives thereof that Bind a given Target upon the terms and conditions set forth in this Agreement.

1.83 "**Research Program Term**" shall be as defined in Section 2.1.5.

1.84 "**Royalty Period**" shall be as defined in Section 7.4.1.4.

1.85 [*]

1.86 "**Securities Act**" shall mean the Securities Act of 1933, as amended, or any successor federal statute, and the rules and regulations thereunder which shall be in effect at the time.

1.87 "**Series E Stock Purchase Agreement**" shall mean that certain Amended and Restated Series E Stock Purchase Agreement as shall be agreed to by the Parties and entered into within [*] from the Effective Date of this Agreement.

1.88 "**Stanford In-License**" means that certain license agreement by and between Sutro and The Board Of Trustees of the Leland Stanford Junior University, dated October 3, 2007, as may be amended from time to time subject to Section 8.3(c).

1.89 "**Supply Agreement**" means a definitive supply agreement entered into by the Parties pursuant to ARTICLE 4 containing the terms and conditions set out in Schedule 4.1 as well as such other terms and conditions consistent with the terms and conditions set out in Schedule 4.1 and this Agreement or as the Parties may otherwise agree upon in the course of good faith negotiations.

1.90 "**Supply Failure**" has the meaning set forth in Schedule 4.1.

1.91 "**Sutro**" shall have the meaning given such term in the preamble to this Agreement.

1.92 "**Sutro Background Collaboration IP**" shall mean the Sutro Background Collaboration Know-How and the Sutro Background Collaboration Patent Rights.

1.93 "**Sutro Background Collaboration Know-How**" shall mean Know-How under Collaboration IP that: (A) is not Program Collaboration Know-How; and (B) solely relates to Sutro Background IP or an improvement to Sutro Background IP, including processes of manufacture for the Cell-Free Extract provided they are not specifically related to the manufacture of a Compound or Product.

1.94 "**Sutro Background Collaboration Patent Rights**" shall mean Patent Rights under Collaboration IP that: (A) are not Program Collaboration Patent Rights and (B) solely relate to Sutro Background IP or an improvement to Sutro Background IP, including processes of manufacture for the Cell-Free Extract provided they are not specifically related to the manufacture of a Compound or Product.

1.95 "**Sutro Background IP**" shall mean the Sutro Background Know-How and the Sutro Background Patent Rights.

1.96 "**Sutro Background Know-How**" shall mean Sutro Know-How Controlled by Sutro or any of its Affiliates during a Research Program Term that is necessary or reasonably useful for: (A) Research related to any Compounds or Targets; or (B) the Development, Manufacture or Commercialization of Compounds or Products; in each case (A) or (B) excluding: (1) Know-How within Collaboration IP; and (2) Pre-Existing Sutro Know-How.

1.97 "**Sutro Background Patent Rights**" shall mean Patent Rights that are Controlled by Sutro or any of its Affiliates during a Research Program Term that are necessary or reasonably useful for: (A) Research related to any Compounds or Targets; or (B) the Development, Manufacture or Commercialization of Compounds or Products; in each case (A) or (B) excluding: (1) Patent Rights within Collaboration IP; and (2) Pre-Existing Sutro Patent Rights.

1.98 "**Sutro Information and Inventions**" shall mean all protocols, formulas, data, Inventions, know-how and trade secrets, patentable or otherwise, created or conceived [*] and developed or invented solely by employee(s) of Sutro and/or its Affiliates, and/or a Third Party acting on behalf of Sutro and/or its Affiliates, and not employed by Merck and/or its Affiliates.

1.99 "**Sutro Know-How**" shall mean all information and materials, including discoveries, improvements, processes, methods, protocols, formulas, data, inventions (including Sutro Information and Inventions and Sutro's rights in Joint Information and Inventions), know-how and trade secrets, patentable or otherwise, which during the term of this Agreement: (i) are Controlled by Sutro or its Affiliates, (ii) are not generally known, and (iii) are useful to Merck with respect to the Research, Development or Commercialization of the Compound in the Field including in connection with the Research Programs and for the Research, Development, Manufacture, Commercialization or use of Compound or Product in the Territory; excluding, however, any Merck Know-How or Pre-Existing Sutro Know-How. For the avoidance of doubt, Sutro Know-How includes Sutro Background Know-How.

1.100 "**Sutro Patent Rights**" shall mean: (A) Patent Rights that during the term of this Agreement are Controlled by Sutro or any of its Affiliates, including those listed on Schedule 1.96, which: (i) claim or cover molecules that Bind a Target including Compounds and Products, or a method of use or process of Manufacture thereof, including any improvements of the foregoing, or (ii) claim or cover Sutro Information and Inventions; excluding, however, any Program Collaboration Patent Rights or Merck Background Collaboration Patent Rights; and (B) Sutro Background Patent Rights; wherein both (A) and (B) exclude any Pre-Existing Sutro Patent Rights. For the avoidance of doubt, Sutro Patent Rights includes Sutro Background Patent Rights.

1.101 "**Target**" shall mean a functional Cytokine receptor or functional complex of Cytokine receptors, which is the subject of a Program pursuant to Section 2.1. For the First Research Program, the Target is [*]. The Targets of up to two (2) additional Research Programs shall be identified pursuant to Section 2.1.2 and Section 2.1.3.

1.102 "**Term**" is defined in Section 10.1.

1.103 "**Territory**" shall mean all of the countries in the world, and their territories and possessions.

1.104 "**Third Party**" shall mean an entity other than Merck and its Related Parties, and Sutro and its Affiliates.

1.105 "**Valid Patent Claim**" shall mean [*] a claim of an issued, unexpired and in-force patent included within the [*] that claims a Compound as a composition of matter, which claim has not been revoked or held unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction (which decision is not appealable or has not been appealed within the time allowed for appeal), and which claim has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination, supplemental examination or disclaimer or otherwise, [*].

1.106 "**Violation**" shall mean that a Party, or any of their respective officers or directors has been: (a) convicted of any of the felonies identified among the exclusion authorities listed on the U.S. Department of Health and Human Services, Office of Inspector General (OIG) website, including 42 U.S.C. 1320a-7(a) (https://oig.hhs.gov/exclusions/index.asp); and/or (b) identified in the OIG List of Excluded Individuals/Entities (LEIE) database (https://oig.hhs.gov/exclusions/exclusions_list.asp) or the U.S. General Services Administration's list of Parties Excluded from Federal Programs (https://www.sam.gov/portal/public/SAM/) (each of (a) and (b), singly and collectively, the "**Exclusions Lists**").

ARTICLE 2. RESEARCH PROGRAMS

2.1 **Research Programs.** Sutro and Merck shall engage in up to three (3) Research Programs, each Research Program directed to the identification of molecules including cytokines or derivatives thereof that Bind a given Target upon the terms and conditions set forth in this Agreement.

2.1.1 **First Research Program.** The Target of the first Research Program shall be the [*], composed of [*]; and the objective of the first Research Program and the activities associated therewith shall be to identify molecules which Bind to the Target and exhibit the functional characteristics desired and detailed in the Research Plan for the first Research Program. The high-level activities to be undertaken in the course of the First Research Program as agreed to by the Parties are set forth in the Research Plan for the First Research Program (Schedule 2.1), which may be revised from time to time upon mutual written agreement by authorized representative(s) of the Parties. The above Target, desired functional characteristics for molecules which Bind the Target, and agreed-upon high-level activities shall form the basis of the first Research Program ("**First Research Program**"). While not intending to be limiting as to the scope of molecules which Bind the Target of the First Research Program or the activities associated therewith, the initial focus of the first work plan for the First Research Program shall be to identify [*] cytokines that are [*]. It is anticipated that additional work plans under the first Research Plan may target improved [*] cytokines, [*] or other molecules capable of Binding to the Target.

2.1.2 **Second Research Program.** Within [*] after the Effective Date, Merck may propose a Target for the second Research Program by proposing the Target in writing to the Gatekeeper and at the same time notifying Sutro of Merck's notice to the Gatekeeper. The Gatekeeper shall notify Merck within [*] from such written proposal whether there is a Conflict with respect to the proposed Target.

2.1.2.1 **Pre-Existing Conflict.** If the Gatekeeper notifies Merck that there is a Conflict within the [*] period, the Target shall not become the subject of the second Research Program subject to Section 2.1.2. Merck may continue to propose other Targets to the Gatekeeper for the second Research Program during the [*] period after the Effective Date, until Sutro does not have a Conflict for the proposed Target; provided that if Merck submitted a proposed Target prior to the expiration of such [*]

period and the Target had a Conflict, then Merck shall have a one time extension [*] to present other Target(s) on a one-by-one basis to the Gatekeeper for the second Research Program using the same process for determining if a Conflict exists.

2.1.2.2 **No Pre-Existing Conflict.** If the Gatekeeper does not notify Merck that there is a Conflict within [*] after the written proposal by Merck, the Target shall be deemed accepted, after which such Target shall become a Target for any and all purposes under this Agreement and the Parties shall discuss and finalize a Research Plan for such Target. Upon approval of the finalized Research Plan by the Parties, Sutro shall promptly provide written notice to Merck accepting the Research Program ("**Program Acceptance Notice**"). The Research Plan may be revised from time to time upon mutual written agreement by authorized representative(s) of the Parties.

2.1.3 **Third Research Program.** Within [*] after the Effective Date, Merck may propose a Target for the third Research Program in writing to the Gatekeeper and at the same time notifying Sutro of the notice to the Gatekeeper. If the Gatekeeper does not notify Merck that there is a Conflict within [*] after the written proposal by Merck, the Target shall be deemed accepted and the Parties shall discuss and finalize a Research Plan for such Target. Any Conflicts shall be treated, *mutatis mutandis*, in accordance with Section 2.1.2. Upon approval of the finalized Research Plan by the Parties, Sutro shall promptly provide a Program Acceptance Notice. The Program Acceptance Notice for the third Research Program shall trigger an additional [*] payment due within [*] after such Program Acceptance Notice for the third Research Program pursuant to Section 7.1. The Research Plan may be revised from time to time upon mutual written agreement by authorized representative(s) of the Parties. If the Gatekeeper does notify Merck that there is a Conflict within [*] after the written proposal by Merck to the Gatekeeper, then Merck shall have a one time [*] extension to present other Target(s) on a one-by-one basis to the Gatekeeper for the third Research Program.

2.1.4 **Substitution.** For each Research Program, Merck shall have a one-time right prior to [*] for a Compound resulting from the applicable Research Program to substitute another Target through the acceptance process described in Section 2.1.2. If the Gatekeeper does not present a Conflict to Merck within [*] after the written proposal by Merck, the Target shall be deemed accepted and the Parties shall discuss and finalize a Research Plan for such Target and such Target shall be treated as a Target for any and all purposes under the Agreement. If the Gatekeeper does notify Merck that there is a Conflict within [*] after the written proposal by Merck to the Gatekeeper, then Merck shall have the right to present other replacement Target(s) to the Gatekeeper on a one-by-one basis until no Conflict is presented using the same process for determining if a Conflict exists but subject to the time limitations set forth in Section 2.1.2. Upon approval of the Research Plan by the Parties, Sutro shall promptly provide a Program Acceptance Notice. The term of such Research Program shall be the original Research Program Term that was substituted provided that if there is less [*] left in the original Research Program Term, then the Research Program Term will be extended by [*] from the end of the Research Program Term and subject to the option for [*] extension provided in Section 2.1.5.3. Merck shall reimburse Sutro for FTEs for any new Research Plan associated with such Research Program pursuant to Section 2.3. In the event the substitution is made after the payment of the [*] payment for [*]

for the first Compound resulting from the original Research Program, [*] for the substitute Research Program. For all other intents and purposes under the Agreement, the substitute Research Program will be treated as a Research Program under the Agreement. Upon any substitution of a Target under this Section 2.1.4, (a) the Target that was replaced shall no longer be a Target, and as such shall not be included within the scope of any licenses granted under, or the exclusivity obligations set forth in ARTICLE 5, and (b) the terms of Section 10.4 shall apply with respect to the replaced Target as if such Target were included in a terminated Research Program [*].

2.1.5 Research Program Terms.

2.1.5.1 **First Research Program.** The Research Program Term for the First Research Program shall commence on the Effective Date and continue for [*], unless extended by Merck at its sole discretion for [*] pursuant to Section 2.1.5.3 or earlier terminated pursuant to ARTICLE 10 or Section 11.2.

2.1.5.2 **Additional Research Programs.** The Research Program Terms for the second and third Research Programs shall commence upon the applicable Program Acceptance Notice and continue for [*], unless extended for [*] pursuant to Section 2.1.5.3 or earlier terminated pursuant to ARTICLE 10 or Section 11.2.

2.1.5.3 **Extension of a Research Program Term/Written Notice.** The Research Program Term for a Research Program may be extended by Merck at its sole discretion for [*]. To exercise an extension for a Research Program, Merck shall provide written notice of such request at least [*] prior to the expiration of the then current applicable Research Program Term and make the payment specified in Section 7.3.1. For each extension exercised pursuant to this Section 2.1.5.3, the Parties shall work together to mutually agree on a revised Research Plan. If Merck does not elect to extend an applicable Research Program Term, Merck will provide such notification [*] prior to the expiry of the Research Program Term, and in such case Merck shall pay an additional [*] FTE reimbursement after expiry of the Research Program Term to Sutro at a monthly rate equal to the average monthly FTE usage for such Research Program in the [*] period prior to the date of expiration of the Research Program Term. For clarity, if Merck provides notice that it is not electing to extend an applicable Research Program [*] prior to the expiry of the applicable Research Program Term, Merck shall pay Sutro an additional [*] FTE reimbursement beyond expiry of such Research Program Term. If Merck provides notice that it is not electing to extend an applicable Research Program [*] prior to the expiry of the applicable Research Program Term, Merck shall not pay Sutro any additional FTE reimbursement.

2.1.5.4 **Expiration of a Research Program Term.** Upon expiration of a given Research Program Term, (a) Sutro shall as soon as practicable (and in any case within [*]): (1) disclose to Merck any Collaboration IP not previously disclosed to Merck; (2) upon Merck's request, return or cause to be returned to Merck all Merck Information and materials provided by Merck in any medium under such Research Program; and (3) reimburse Merck

for any uncredited Research Funding under Section 2.3, including FTE fees paid by Merck and fees for services or materials not provided as of the date of expiration or termination under such Research Program; and (b) Merck shall as soon as practicable (and in any case within [*]) disclose to Sutro any Sutro Background Collaboration IP not previously disclosed to Sutro.

2.2 Conduct under Research Program. Sutro and Merck each shall proceed diligently with the work set out in the applicable Research Plan by using their [*] to allocate sufficient time, effort, equipment and facilities to their activities under the Research Programs and to use personnel with sufficient skills and experience as are required to accomplish the objectives of the Research Programs in accordance with the terms of this Agreement, the applicable Research Plan as may be revised from time to time pursuant to Section 2.1, or as otherwise agreed to in writing by the Joint Research Committee.

2.2.1 Use of Affiliates and Third Parties. Merck shall be entitled to utilize the services of its Affiliates and Third Parties to perform its Research Program activities, provided that all such Affiliates and Third Parties are bound or agree to be bound by confidentiality and non-use obligations no less stringent than that contained in this Agreement as well as ownership of intellectual property rights consistent with this Agreement. Sutro shall be entitled to utilize the service of Third Parties to perform its Research Program activities only upon Merck's prior written consent or as specifically set forth in the applicable Research Plan, provided that all such Third Parties are bound or agree to be bound by confidentiality and non-use obligations no less stringent than that contained in this Agreement as well as ownership of intellectual property rights consistent with this Agreement. Notwithstanding the foregoing, each Party shall remain at all times fully liable for its respective responsibilities under the Research Programs.

2.3 Use of Research Funding; FTEs. Sutro shall support its Research activities under the Research Program with a number of Sutro FTEs (employees) devoted to performing such activities as specifically set forth in the applicable Research Plan, such Research Plan to be agreed upon by both Parties and attached to this Agreement. Such Sutro FTEs shall have sufficient skill, training and competency to perform the proposed work, and similar training and competency as FTEs employed by Sutro to perform work on Sutro's internal programs and programs for Third Parties. The cost for such Sutro FTEs shall be paid by Merck to Sutro at the FTE Rate within [*] after Merck's receipt of a quarterly invoice from Sutro. The applicable payment shall be calculated based on the number of FTEs multiplied by the FTE Rate. Any other costs to be paid by Merck to Sutro shall be agreed to by the Parties and specifically set forth in a Research Plan and shall be paid within [*] after Merck's receipt of a quarterly invoice from Sutro. Apart from the foregoing or as otherwise set forth in this Agreement, each Party shall be responsible for its own cost and expense in carrying out its activities under the Research Programs. Merck shall not be required to fund any FTEs from and after the end of the Research Program Term.

2.4 Joint Research Committee. The Parties hereby establish a committee to facilitate the Research Programs as follows:

2.4.1 Composition of the Joint Research Committee. Research activities for a given Research Program shall be conducted under the direction of a joint research committee (the "**Joint Research Committee**") comprised of two (2) Merck representatives (who

shall be employees of Merck or its Affiliate, as applicable) and two (2) Sutro representatives (who shall be employees of Sutro or its Affiliate, as applicable). Each Party may change its representatives on the Joint Research Committee from time to time in its sole discretion, effective upon notice to the other Party of such change. These representatives shall have appropriate technical credentials, experience and knowledge, and ongoing familiarity with the Research Programs. Additional representative(s) or consultant(s) may from time to time, by mutual consent of the Parties, be invited to attend Joint Research Committee meetings, subject to such representative's or consultant's written agreement to comply with the requirements of Section 6.1. The Joint Research Committee shall be chaired by a representative of Merck. The role of the chairperson shall be to preside in person or telephonically at meetings of the Joint Research Committee. The chairperson or their designee (from either Party) shall prepare and circulate agendas for the meetings [*] of all Joint Research Committee meetings that reflect, without limitation, material decisions made at such meetings. The meeting minutes shall be sent to each member of the Joint Research Committee for review and approval reasonably promptly after each meeting. Such minutes will be deemed approved unless one or more of the members of the Joint Research Committee objects to the accuracy of such minutes within [*] after receipt. Decisions of the Joint Research Committee shall be made unanimously by the representatives. In the event that the Joint Research Committee cannot or does not, after reasonable good faith efforts, reach agreement on an issue, the resolution and/or course of conduct shall be determined by Merck, in its sole discretion.

2.4.2 **Scope of Joint Research Committee Oversight.** The Joint Research Committee shall be responsible to oversee Research Activities for each Research Program, including to: (i) review the Research Program activities for a given Research Program as set forth in the applicable Research Plan as may be revised from time to time pursuant to Section 2.1; (ii) review and coordinate the Parties' activities under the Research Programs; (iii) confer regarding the status of the Research Programs and the progress under the Research Programs and to advise the Parties and make determinations and decisions in connection with the activities under the Research Programs (including issues of priority); (iv) review relevant data under the Research Programs and review and confirm criteria around Compound selection and progression; (v) consider and advise on any technical issues that arise under the Research Programs; (vi) review and advise on any budgetary and economic matters relating to the Research Programs which may be referred to the Joint Research Committee; and (vii) to determine such other matters as allocated to the Joint Research Committee hereunder. The Joint Research Committee shall not have the authority to: (w) modify or amend the terms and conditions of this Agreement; (x) waive either Party's compliance with the terms and conditions of this Agreement; (y) determine any issue in a manner that would conflict with the express terms and conditions of this Agreement, including changing or substituting a Target (which must be done in accordance with the terms of this Agreement), or modifying the scope of the licenses or exclusivity granted hereunder; or (z) amend Research Program activities in a manner that would increase the financial or other resource obligations imposed on Sutro beyond the scope of those required under the then current planned activities, and if such amendment would increase such financial or other resource obligations, then such amendment must be mutually agreed to by the Parties in writing; provided that, for the avoidance of doubt if the work proposed in the amendment to the Research Program activities could be performed with the financial or other resource obligations then currently being funded by Merck and such work would not impose additional financial obligations on Sutro beyond the

then current Research Program activities, Sutro shall perform such work at no additional charge and the Research Program activities shall automatically be deemed to be amended to include such work as proposed by the Joint Research Committee.

2.4.3 **Meetings.** The Joint Research Committee shall meet in accordance with a schedule established by mutual written agreement of the Parties, but no less frequently than once per Calendar Quarter, with the location for such meetings alternating between Sutro and Merck facilities (or such other location may be determined by the Joint Research Committee). Alternatively, the Joint Research Committee may meet by means of teleconference, videoconference or other similar communications equipment. Each Party shall bear its own expenses related to the attendance of such meetings by its representatives.

2.4.4 **Disbandment of Joint Research Committee.** [*] following the expiration or termination of the latest to expire Research Program Term, the Joint Research Committee shall be disbanded and shall have no further authority with respect to the activities hereunder; unless the Parties agree in writing to extend the Joint Research Committee for an agreed upon period of time to complete the Research activities.

2.5 **Joint Chemistry, Manufacturing and Controls Committee ("JCMCC").** The Parties shall establish a joint chemistry, manufacturing and controls committee within [*] of the Effective Date to facilitate the sharing of Information related to the Manufacture and Regulatory aspects of Compounds and Products including Information regarding the Manufacture of Cell-Free Extract, Custom Reagents and/or any other materials used in the Manufacture of Compound or Product to facilitate and enable Merck's Development and Commercialization of Compounds and Products during the Term of this Agreement. After the Research Program Term and prior to the filing of the first IND, such JCMCC may be replaced by a Joint Manufacturing Committee ("**JMC**") that will, *inter alia*, deal with clinical or commercial supply and supply agreements. [*] Further details of the JCMCC and the JMC will be outlined in the applicable Supply Agreement.

2.6 **Alliance Managers.**

2.6.1 **Appointment.** Each Party shall appoint an employee who shall oversee interactions between the Parties for all matters related to this Agreement (each an "**Alliance Manager**"). Such persons shall endeavor to ensure clear and responsive communication between the Parties and the effective exchange of information, and may serve as a single point of contact for any matters arising under this Agreement. The Alliance Managers shall have the right to attend all Joint Research Committee meetings as non-voting participants and may bring to the attention of the Joint Research Committee any matters or issues either of them reasonably believes should be discussed, and shall have such other responsibilities as the Parties may mutually agree in writing. Each Party may designate different Alliance Managers by notice in writing to the other Party.

2.6.2 **Responsibilities of the Alliance Managers.** The Alliance Managers shall have the responsibility of creating and maintaining a constructive work environment between the Parties. Without limiting the generality of the foregoing, each Alliance Manager shall:

2.6.2.1 identify and bring disputes and issues that may result in disputes (including any asserted occurrence of a material breach by a Party) to the attention of the Joint Research Committee in a timely manner, and function as the point of first referral in all matters of conflict resolution;

2.6.2.2 provide a single point of communication for seeking consensus both internally within the Parties' respective organizations and between the Parties;

2.6.2.3 plan and coordinate cooperative efforts, internal communications and external communications between the Parties with respect to this Agreement; and

2.6.2.4 take responsibility for ensuring that meetings and the production of meeting agendas and minutes occur as set forth in this Agreement, and that relevant action items resulting from such meetings are appropriately carried out or otherwise addressed.

2.7 Patent Committee. The Parties hereby establish a committee to facilitate the filing, prosecution and maintenance of Patent Rights as follows:

2.7.1 Establishment. Within [*] after the Effective Date, the Parties shall establish a patent committee (the "**Patent Committee**") to discuss, oversee and coordinate the filing, prosecution, maintenance and enforcement of Collaboration IP and Pre-Existing Sutro Patent Rights in accordance with ARTICLE 9; and defense against claims of infringement of Third Party patents related to the intellectual property licensed or practiced under this Agreement. The Patent Committee will provide recommendations to the Parties regarding the filing, prosecution, maintenance and enforcement of such IP and Patent Rights and related intellectual property matters.

2.7.2 Membership; Meetings. The Patent Committee shall be composed of one (1) employee from each of Merck and Sutro knowledgeable in U.S. patent law and the technology areas that are the subject of this Agreement. The Patent Committee shall meet, in person, by teleconference, or by video-teleconference, at least one (1) time per Calendar Quarter, or more or less often as the Parties shall determine. In-person meetings shall alternate between Sutro and Merck locations within the United States whenever possible unless otherwise agreed by the Parties. The first such meeting shall be within [*] after the Effective Date. Any member of the Patent Committee may designate a substitute, who shall be an employee of the applicable Party, to attend with prior written notice to the other Party. Ad hoc guests who are subject to written confidentiality obligations at least as stringent as the provisions in ARTICLE 6 may be invited to Patent Committee meetings. Each Party may replace its Patent Committee members with other of its employees with the qualifications set forth in this Section 2.7.2, at any time, upon written notice to the other Party.

2.7.3 Recommendations; Limitations on Patent Committee. Recommendations of the Patent Committee shall be made by consensus, with each Party having collectively one (1) vote in all decisions. The Patent Committee shall have only such powers as are specifically delegated to it in this Agreement and such powers shall be subject to the terms and conditions set forth herein. Without limiting the generality of the foregoing, the Patent Committee shall have no power to amend this Agreement, the Research Programs or any written Research plan. Recommendations where the Patent Committee is unable to reach a consensus are determined as follows:

2.7.3.1 Subject to the terms of ARTICLE 9, Merck shall have final decision-making authority with respect to any dispute relating specifically to Program Collaboration IP, Merck Background Collaboration IP, Merck Other Information and Inventions (and Patent Rights associated therewith), and Pre-Existing Sutro Patent Rights;

2.7.3.2 Subject to the terms of ARTICLE 9, Sutro shall have final decision-making authority with respect to any dispute relating specifically to Sutro Background Collaboration IP, and Sutro Other Information and Inventions (and Patent Rights associated therewith), with the exception of Pre-Existing Sutro Patent Rights; and

2.7.3.3 The Patent Committee shall seek to resolve disputes concerning recommendations on Joint Other Information and Inventions. If the Patent Committee is unable to reach a consensus recommendation on a matter that relates to the Joint Other Information and Inventions within [*] after it has met and attempted to reach such recommendation, then either Party may refer such matter for resolution by nominated executives of each Party.

2.7.4 Updates. The Patent Committee shall provide status updates to the Joint Research Committee on a schedule agreed to by the Parties for as long as the Joint Research Committee is in existence and, thereafter, to the Parties. Sutro shall update Schedule 1.96 and provide such updated schedule to the Patent Committee on a monthly basis.

2.7.5 Duration of Patent Committee. The Patent Committee shall endure for the Term and, by mutual agreement, beyond the Term.

2.8 Additional Committees. The Parties may establish a Joint Manufacturing Committee, a Joint Steering Committee and/or any other committees which may be necessary or useful to facilitate or advance the Research, Development, Manufacture and/or Commercialization activities of the Parties as contemplated under this Agreement.

2.9 Exchange of Information. Following execution of this Agreement, and during the term of a given Research Program and [*] after the Research Program Term expires, Sutro shall on a quarterly basis and at least [*] before each Joint Research Committee meeting disclose to Merck in English and in writing or in an electronic format all Sutro Know-How or Pre-Existing Sutro Know-How not previously disclosed [*]. Further exchange of Sutro Know-How (or any Pre-Existing Sutro Know-How not previously disclosed) through the Term of the Agreement, and related to supply and Manufacture of Compound or Product, would go through the JCMCC or JMC as appropriate.

2.10 Records and Reports.

2.10.1 Records. Each Party shall maintain records, in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes, which shall fully and properly reflect all of its work done and results achieved in the performance of the Research Programs.

2.10.2 **Copies and Inspection of Records.** Merck shall have the right, during normal business hours and upon reasonable notice, to inspect and copy all such records of Sutro referred to in Section 2.10.1. Merck shall maintain such records and the information disclosed therein in confidence in accordance with Section 6.1. Merck shall have the right to arrange for its employee(s) and/or consultant(s) involved in the activities contemplated hereunder to visit the offices and laboratories of Sutro and any of its Third Party contractors as permitted under Section 2.2 during normal business hours and upon reasonable notice, and to discuss work under the Research Programs and their results in detail with the technical personnel and consultant(s) of Sutro. Upon request, Sutro shall provide copies of the records described in Section 2.10.1. [*] Merck [*] shall take reasonable and customary measures to avoid disclosure of Sutro's Cell-Free Extract Know-How to Merck's employees, agents, contractors, officers, and directors without an actual need for such Know-How and shall not use such Know-How for [*].

2.10.3 **Quarterly Reports.** Within [*] following the end of each Calendar Quarter during the term of a Research Program, Sutro shall provide to Merck a written progress report in English which shall describe in detail the work performed to date on the Research Programs, evaluate the work performed in relation to the goals of the Research Programs and provide such other information as may be reasonably required for a full evaluation of the Research Programs or reasonably requested by Merck relating to the progress of the goals or performance of the Research Programs. For clarity, all such reports shall be considered the Confidential Information of Merck, other than any [*]. Notwithstanding the foregoing, Parties shall discuss and communicate Information on an as needed basis, provided that [*].

2.11 **Research Information and Inventions.** All Sutro Information and Inventions, Joint Information and Inventions, Merck Information and Inventions, Pre-Existing Sutro Know-How; and any Patent Rights reciting or claiming such Information and Inventions orKnow-How shall constitute "**Collaboration IP**". The entire right, title and interest in:

2.11.1 Program Collaboration IP shall be owned solely by Merck; and Sutro shall assign and hereby assigns to Merck all its right, title and interest in and to any such Program Collaboration IP. With respect to the Pre-Existing Sutro Patent Rights, Sutro shall assign and hereby assigns such Patent Rights to Merck, which assignments shall be executed within [*] of the Effective Date;

2.11.2 Sutro Background Collaboration IP shall be owned solely by Sutro; and Merck shall assign and hereby assigns to Sutro all its right, title and interest in and to any such Program Collaboration IP;

2.11.3 Merck Background Collaboration IP shall be owned solely by Merck; and Sutro shall assign and hereby assigns to Merck all its right, title and interest in and to any such Program Collaboration IP;

2.11.4 Collaboration IP that is not Program Collaboration IP, Sutro Background Collaboration IP or Merck Background Collaboration IP ("**Other Collaboration IP**") shall be determined as follows:

2.11.4.1 If within Sutro Information and Inventions shall be owned solely by Sutro;

2.11.4.2 If within Merck Information and Inventions shall be owned solely by Merck; and

2.11.4.3 If within Joint Information and Inventions shall be owned jointly by Sutro and Merck.

Sutro shall as soon as reasonably practicable disclose to Merck in writing the development, making, conception or reduction to practice of Sutro Information and Inventions and Joint Information and Inventions constituting Program Collaboration IP, Merck Background Collaboration IP or Other Collaboration IP. Merck shall as soon as reasonably practicable disclose to Sutro in writing the development, making, conception or reduction to practice of [*]. For the purposes of determining ownership under this Section 2.11, inventorship shall be determined in accordance with United States patent laws (regardless of where the applicable activities occurred). Subject to the licenses granted to the other party under this Agreement and the other terms and conditions of this Agreement, each Party shall have the non-exclusive right to exploit its interest per this Section 2.11.4.3 in Joint Information and Inventions and Joint Patent Rights, and to grant licenses under its interest in such Joint Information and Inventions and Joint Patent Rights, as it deems appropriate, without the consent of, and without accounting to, the other Party; provided, however, that for clarity, such joint ownership rights shall not be construed as granting, conveying or creating any license or other rights to the other Party's intellectual property, unless otherwise expressly set forth in this Agreement. The non-exclusive license rights for any and all uses to the Joint Other Information and Inventions without the consent of, and without accounting to the other Party shall survive the termination or expiration of this Agreement.

2.12 Compliance with Law and Ethical Business Practices.

2.12.1 Sutro shall conduct the activities of the Research Programs in accordance with Applicable Laws, rules and regulations including all current governmental regulatory requirements concerning Good Laboratory Practices. Sutro shall notify Merck in writing of any deviations from applicable regulatory or legal requirements. Sutro hereby certifies that it has not and will not employ or otherwise use in any capacity the services of any person or entity debarred under Section 21 USC 335a in performing any services hereunder. Sutro shall notify Merck in writing immediately if any such debarment occurs or comes to its attention, and shall promptly remove any person or entity so disbarred from performing any activity or function or capacity related to the Research Programs. Merck shall have the right, in its sole discretion, to terminate this Agreement immediately in the event of any such debarment.

2.12.2 Sutro acknowledges that Merck's corporate policy requires that Merck's business must be conducted within the letter and spirit of the law. By signing this Agreement, Sutro agrees to conduct the services contemplated herein in a manner which is consistent with both law and good business ethics.

2.12.3 Specifically, Sutro warrants that none of its employees, agents, officers or other members of its management are officials, officers, agents, representatives of any government or international public organization. ***–NOTE: FOR A LIST OF*** "American institutions of research, public international organizations and designations

under the International Immunities Act" ***SEE Section 316.20 at*** http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=d2739abeb6ca1764c5defa8607248f64&n=8y1.0.1.3.68&r=PART&ty=HTML#8:1.0.1.3.68.0.1.14 Sutro shall not make any payment, either directly or indirectly, of money or other assets, including the compensation Sutro derives from this Agreement (hereinafter collectively referred as a "**Payment**"), to government or political party officials, officials of international public organizations, candidates for public office, or representatives of other businesses or persons acting on behalf of any of the foregoing (hereinafter collectively referred as "**Officials**") where such Payment would constitute violation of any law. In addition regardless of legality, Sutro shall make no Payment either directly or indirectly to Officials if such Payment is for the purpose of influencing decisions or actions with respect to the subject matter of this Agreement or any other aspect of Merck's business.

2.12.4 Sutro acknowledges that no employee of Merck or its Affiliates shall have authority to give any direction, either written or oral, relating to the making of any commitment by Sutro or its agents to any Third Party in violation of terms of this or any other provisions of this Agreement.

2.12.5 Sutro certifies to Merck that as of the date of this Agreement that Sutro has screened itself, and its officers, directors and employees against the Exclusions Lists and that it has informed Merck whether Sutro, or any of its officers or directors has been in Violation. After the execution of this Agreement, Sutro shall notify Merck in writing immediately if any such Violation occurs or comes to its attention.

2.12.6 Sutro's failure to abide by the provisions of Section 2.12 shall be deemed a material breach of this Agreement. Merck may in such case and with immediate effect terminate this Agreement at its sole discretion upon written notice to Sutro and without prejudice to any other remedies that may be available to Merck.

2.12.7 Sutro shall indemnify and hold Merck and any of its Affiliates harmless from and against any and all liabilities (including all costs and reasonable attorneys' fees associated with defending against such claims) that may arise by reason of the acts or omissions of Sutro or other Third Parties acting on Sutro's behalf its agents which would constitute a violation of Section 2.12.

2.12.8 Merck shall exercise its rights under this Agreement in accordance with Applicable Laws, rules and regulations including all current governmental regulatory requirements concerning Good Laboratory Practices. Merck hereby certifies that it has not and will not employ or otherwise use in any capacity the services of any person or entity debarred under Section 21 USC 335a in performing any services hereunder.

2.12.9 Merck agrees to exercise its rights under this Agreement in a manner which is consistent with both law and good business ethics.

2.12.10 Specifically, Merck warrants that none of its employees, agents, officers or other members of its management are officials, officers, agents, representatives of any government or international public organization. ***–NOTE: FOR A LIST OF*** "American institutions of research, public international organizations and designations under the International Immunities Act" ***SEE Section 316.20 at*** http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=d2739abeb6ca1764c5defa8607248f64&n=8y1.0.1.3.68&r=PART&ty=HTML#8:1.0.1.3.68.0.1.14 Merck shall not make any Payment to

Officials where such Payment would constitute violation of any law. In addition regardless of legality, Merck shall make no Payment either directly or indirectly to Officials if such Payment is for the purpose of influencing decisions or actions with respect to the subject matter of this Agreement or any other aspect of Sutro's business.

2.12.11 Merck acknowledges that no employee of Sutro or its Affiliates shall have authority to give any direction, either written or oral, relating to the making of any commitment by Merck or its agents to any Third Party in violation of terms of this or any other provisions of this Agreement

2.12.12 Merck certifies to Sutro that as of the date of this Agreement that Merck has screened itself, and its officers, directors and employees against the Exclusions Lists and that it has informed Sutro whether Merck, or any of its officers or directors has been in Violation.

2.12.13 Merck shall indemnify and hold Sutro and any of its Affiliates harmless from and against any and all liabilities (including all costs and reasonable attorneys' fees associated with defending against such claims) that may arise by reason of the acts or omissions of Merck or other Third Parties acting on Merck's behalf its agents which would constitute a violation of Section 2.12.

2.13 **Use of Human Materials.** If any human cell lines, tissue, human clinical isolates or similar human-derived materials ("**Human Materials**") have been or are to be collected and/or used in the Research Programs, Sutro represents and warrants: (i) that it has complied, or shall comply, with all Applicable Laws, guidelines and regulations relating to the collection and/or use of the Human Materials; and (ii) that it has obtained, or shall obtain, all necessary approvals and appropriate informed consents, in writing, for the collection and/or use of such Human Materials. Sutro shall provide documentation of such approvals and consents upon Merck's request. Sutro further represents and warrants that such Human Materials may be used as contemplated in this Agreement without any obligations to the individuals or entities ("**Providers**") who contributed the Human Materials, including any obligations of compensation to such Providers or any other Third Party for the intellectual property associated with, or commercial use of, the Human Materials for any purpose.

2.14 **Animal Research.** If animals are used in research hereunder, the Party conducting the study with animals will comply with the Animal Welfare Act or any other applicable local, state, national and international laws and regulations relating to the care and use of laboratory animals. Each Party is encouraged to use the highest standards, such as those set forth in the Guide for the Care and Use of Laboratory Animals (NRC, 1996), for the humane handling, care and treatment of such research animals. Each Party hereby certifies that it has and shall maintain current and valid accreditation from AAALAC during the Term. Any animals which are used in the course of the Research Programs, or products derived from those animals, such as eggs or milk, will not be used for food purposes, nor will these animals be used for commercial breeding purposes.

ARTICLE 3. DEVELOPMENT AND COMMERCIALIZATION.

3.1 **Development and Commercialization.** Merck shall use Commercially Reasonable Efforts, at its own expense, to Develop and Commercialize a Compound or Product in each of such

Research Programs. After expiration of the applicable Research Program and until the filing of the first NDA, Merck shall provide to Sutro an annual summary report that sets forth Merck's progress with respect to key development and regulatory milestones for Compounds or Products resulting from such Research Program.

3.2 **Excused Performance.** In addition to the provisions of ARTICLE 8, the obligations of Merck with respect to any Compound or Product under Section 3.1 are expressly conditioned upon the continuing absence of any adverse condition or event relating to the safety or efficacy of Compounds or Products. Should Merck in good faith [*] halt the Research, Development or Commercialization of any Compound or Product in order to analyze and investigate such adverse condition or event, the obligation of Merck pursuant to Section 3.1 to Research, Develop or Commercialize any such Compound or Product shall be delayed or suspended so long as in Merck's good faith determination any such condition or event exists. Where such adverse condition or event exists, Merck shall provide written notice as soon as practicable of a delay or suspension exercised under this Section 3.2. [*]

3.3 **Regulatory Matters.** In the event that Merck determines that any regulatory filings for any Compounds and/or Products are required for any activities hereunder (including any activities under the Research Programs), including INDs, NDAs and other Marketing Authorizations (as applicable), then as between the Parties, Merck (or its Affiliate or Related Party) shall have the sole right, in its discretion, to obtain such regulatory filings (in its (or its Affiliate's or its Related Party's) name) and as between the Parties, Merck (or its Affiliate or its Related Party) shall be the owner of all such regulatory filings. With respect to any section provided by Sutro that is incorporated into such regulatory filings, [*]. As between the Parties, Merck (or its Affiliate or Related Party) shall have the sole right to communicate and otherwise interact with Regulatory Authorities with respect to the Compounds and/or Products (including during the Research Program Terms). For clarity, Sutro shall have no right to, and shall not, make any regulatory filings related to any Compounds or Products or otherwise interact with any Regulatory Authorities with respect to the Compounds or Products.

3.4 **Sutro Support for Merck Regulatory Filings and Regulatory File Maintenance.** If not previously prepared and filed, Sutro will, at Merck's request, prepare and file a Drug Master File ("**DMF**") or similar document in applicable markets with Regulatory Authorities for [*]. Sutro shall also provide such other information and assistance as Merck may reasonably request, in connection with the completion of and submission of applications for Regulatory Approvals for [*] and the maintenance thereof. Merck and its Affiliates and Sublicensees may refer to such DMF or similar document in any filing made in connection with obtaining or maintaining a Regulatory Approval for [*]. Sutro shall be responsible for assuring that during the Term, such DMF or similar document shall be in the form appropriate for filing with all applicable Regulatory Authorities, including those in [*] according to a timeline mutually agreed upon by the Parties, and such DMF or similar document shall be maintained in full force and effect by Sutro during the Term and shall not be amended without the consent of Merck to the extent such amendment is potentially relevant to a Compound and/or Product or could possibly impact the development thereof. Sutro shall, on written request by Merck or its Affiliate or Sublicensee, provide to Merck and its Affiliates and Sublicensees and to any specified Regulatory Authority a letter, in the form reasonably required by Merck, acknowledging that Merck and its Affiliates and Sublicensees has a right of reference to any such DMF. If Merck and its Affiliates and Sublicenses intend to File with a Regulatory Authority that does not allow for reference to a DMF or similar document, or if Sutro cannot give Merck its Affiliate or Sublicensee a right of access or direct access to any and all Sutro Know-How required to be included in any Regulatory Filing, Sutro shall promptly provide

such Know-How to Merck's regulatory group [*]. Merck shall take reasonable and customary measures to avoid disclosure of Sutro's Know-How to Merck's employees, agents, contractors, officers, and directors without an actual need for suchKnow-How. [*] Sutro shall provide such other information and assistance, as Merck may reasonably require in connection with responding to Regulatory Authorities or any other activities required to maintain regulatory filings related to a Compound and/or Product. This includes any additional data (including raw data when required), production reports, authorizations, certificates, methodologies, specifications, stability reports, deviation reports and other documentation not included in the DMF but in the possession or under the control of Sutro. With respect to this Section 3.4, Merck shall [*].

3.5 Information Exchange. Prior to initiation of a Clinical Trial for a Product, the Parties shall meet and mutually agree on procedures for the exchange of any relevant safety information related to and regarding the Cell-Free Extract. Until such date, Sutro shall keep Merck fully informed of any safety or other concerns including regulatory issues that Sutro may encounter related to its Cell-Free Extract.

ARTICLE 4. SUPPLY.

4.1 non-cGMP Compound Supply for Preclinical Studies. Sutro shall Manufacture (or have Manufactured) and supply to Merck quantities of non-cGMP Compound as Merck may reasonably require in connection with the performance under the Research Programs. [*] The Parties acknowledge and agree that Sutro has identified to Merck its Non-cGMP Facilities, and has also identified its manufacturing capabilities at such facilities. All non-cGMP Compound shall be Manufactured at a non-cGMP Facility. In the event that Sutro is delayed in performing its obligations under this Section 4.1 for a period of [*] except to the extent that such delay is directly attributable to the act or omission of Merck, then on a Research Program-by-Research Program basis, the applicable Research Program Term shall be extended by a period equal to such delay, provided that Merck has notified Sutro once Merck becomes aware of such alleged delay.

4.2 cGMP Compound Supply for IND Enabling Toxicology Studies and Phase I and II Clinical Trials. Sutro shall Manufacture and supply to Merck cGMP quantities of Compound for Merck to conduct any IND Enabling Toxicology Study, Phase I or Phase II Clinical Trials as Merck may reasonably require. The Parties acknowledge and agree that Sutro has identified to Merck its cGMP Facility, and has also identified its manufacturing capabilities at such cGMP Facility. All cGMP Compound shall be Manufactured at such cGMP Facility unless otherwise agreed by the Parties. The Parties may agree to use non-cGMP Compound for IND Enabling Toxicology Studies provided said non-cGMP Compound is Manufactured and tested with controls adequate for use of the material for IND Enabling Toxicology Studies. Sutro shall identify the Non-cGMP Facility that will be used to Manufacture suchnon-cGMP Compound. The Parties shall negotiate and execute a supply agreement in support of IND Enabling Toxicology Studies and Phase I and II Clinical Trials containing the provisions set forth in Schedule 4.1, and such other terms and conditions that are customary for agreements of this type as the Parties mutually agree (the "**Clinical Supply Agreement**"). Such Clinical Supply Agreement and a clinical quality agreement shall be entered into no later than [*] after the Effective Date (or such longer period of time as the Parties may agree), but in any event prior to the commencement of any activities relating to such supply, and the Parties shall enter into specific statements of work ("**SOWs**") for each Compound. Without limiting the Clinical Supply Agreement, the following provisions of this Section 4.2 shall apply with respect to Manufacture of cGMP Compound on a Compound-by-Compound basis to be supplied by Sutro

under the Clinical Supply Agreement for the period commencing prior to the initiation of IND Enabling Toxicology Studies until completion of the Phase II Clinical Trial, or as otherwise agreed upon by the JRC, JCMCC or JMC as appropriate:

4.2.1 Manufacture by Sutro.

4.2.1.1 Initial Qualification Criteria. Sutro shall ensure that Merck has the right within [*] after the Effective Date, or such longer period of time as agreed to by Merck, to audit any of Sutro's Facilities, and the Parties may audit the facilities of all contract manufacturers of Sutro in accordance with Sutro's rights under its applicable manufacturing agreement and/or quality agreement with such contract manufacturer. Merck shall provide to Sutro an audit report [*]. Within [*] after receipt of such an audit report from Merck, whether such audit report is a result of an audit performed under this Section 4.2.1.1 or is based on the due diligence audit performed by Merck prior to the Effective Date, Sutro shall deliver to Merck a corrective action plan addressing observations from the audit. Upon acceptance of the corrective action plan by Merck, [*] Sutro shall address and correct all audit observations provided by Merck to Merck's reasonable satisfaction prior to Manufacturing of cGMP Compound for Merck.

4.2.1.1.1 As part of Merck's audit of any of Sutro's Facilities, Merck's audit may include an audit of Sutro's supplier qualification procedures, risk assessments, audit reports or supplier questionnaires and associated corrective actions and Environmental Health and Safety assessments.

4.2.1.1.2 All future audits shall be conducted pursuant to Schedule 4.1 and Clinical Supply Agreement and associated quality agreement.

4.2.1.1.3 Sutro shall cause any and all subcontractors manufacturing the Cell-Free Extract, Custom Reagents, Compound or Product or other materials (including, *e.g.*, plasmid and non-natural amino acids) used to Manufacture Compound to comply with the applicable terms and conditions of this Section 4.2.1.1 and any applicable Supply Agreement or quality agreement (including any applicable terms and conditions with respect to audit and inspection rights and compliance, operation and maintenance of the Facilities and equipment), provided that [*]. Any subcontracting of any Manufacturing or other activities under this Section 4.2.1.1 and any applicable Supply Agreement or quality agreement shall be subject to the other applicable terms and conditions of this Section 4.2.1.1 and any applicable Supply Agreement, in each case, to the extent applicable.

4.2.1.2 If Sutro fails to address and correct any and all audit observations provided by Merck to Merck's reasonable satisfaction as described in Section 4.2.1.1 prior to Manufacturing of cGMP Compound for Merck, or is not in compliance with the Clinical Supply Agreement or the clinical quality

agreement, including failure to address any material audit observations by Merck or a Regulatory Authority with respect to a Compound, or at Merck's written request and at Merck's election, then, on a Compound-by-Compound basis, Sutro shall provide to Merck within [*] after such request) a facility fit documentation package (which outlines the Manufacturing process and includes all relevant requirements, including any facility, equipment and process parameters) sufficient for Merck to: (i) determine that it will Manufacture the Compound from the Cell-Free Extract; or (ii) select a Third Party manufacturer to Manufacture the Compound from the Cell-Free Extract. Once Merck determines where the Compound will be Manufactured, Sutro shall either: (a) transfer to Merck the Know-How Controlled by Sutro as necessary for the Manufacture of Compound from the Cell-Free Extract (excluding any Sutro Know-How regarding the methods of preparing the Cell-Free Extract) such that Merck is able to successfully Manufacture Compound from the Cell-Free Extract (the "Transferred Technology"); or (b) transfer the Transferred Technology to a Third Party manufacturer. In either case of clauses (a) or (b) above, Sutro shall supply to Merck or such Third Party manufacturer the Cell-Free Extract and Custom Reagents at Manufacturing Cost plus [*] ([*]%), in each case in accordance with the terms of this Section and Schedule 4.1. If Merck desires to have a Third Party manufacturer supply the Compound, Merck shall be entitled to enter into a manufacturing and supply agreement with such Third Party on the following terms and conditions: (i) the designation of such Third Party supplier by Merck (such supplier, the "**Merck CMO**"); (ii) Sutro shall license and transfer to such Merck CMO the Transferred Technology; and (iii) Sutro shall supply all necessary quantities of Cell-Free Extract to such Merck CMO as necessary for such Manufacture and supply. In either case of (a) or (b) above, Sutro shall review anticipated technical transfer expenses with Merck [*]. Merck promptly shall reimburse Sutro for such costs incurred by Sutro in connection with such activities, unless such Technology Transfer is due to Sutro's failure to address and correct any and all audit observations provided by Merck as described in Section 4.2.1.1 to Merck's reasonable satisfaction prior to Manufacturing of cGMP Compound for Merck or if Sutro is not in material compliance with the Clinical Supply Agreement or the clinical Quality Agreement which would impact compliant or timely supply of Compound or Product from Sutro to Merck, in which case Sutro shall be responsible for all costs associated with the Technology Transfer. [*]

4.3 cGMP Supply For Registrational Study and Commercial Supply. The following provisions of this Section 4.3 shall apply with respect to Manufacture of cGMP Compound for Phase III Clinical Trials and commercial supply on a Compound-by-Compound basis from and after the earlier of: (a) initiation of the first Phase II Clinical Trial for such Compound; or (b) [*] prior to the initiation of such Phase III Clinical Trial for such Compound, or earlier as agreed to by the Parties:

4.3.1 Solicitation of Manufacturers. At Merck's request, Sutro shall provide to Merck (within [*] after such request) a facility fit documentation package sufficient for Merck to: (i) determine that it will Manufacture the Compound from the Cell-Free Extract; or (ii) select a Third Party manufacturer to Manufacture the Compound from the Cell-

Free Extract for supply of Phase III Clinical Trials and/or commercial supply. During such [*] period, at the option of Sutro, Sutro may inform Merck of Sutro's desire to be considered by Merck to Manufacture cGMP Compound following the provision of written notice for a given Compound. If Sutro so notifies Merck and Merck has determined that it will select a Third Party manufacturer to Manufacture Compound, Merck shall consider Sutro for Manufacturing of such cGMP Compound as part of the Merck process for identifying and selecting a Third Party manufacturer, and Sutro shall submit to Merck a detailed proposal outlining the proposed cost to Merck of such cGMP Compound. To ensure that proposals received from Third Party manufacturers are all based on a common understanding of the technical requirements for the Manufacturing of the relevant cGMP Compound, Sutro agrees, upon reasonable request of Merck, to provide responses to technical questions from other potential Third Party manufacturers in writing and/or via participation in meetings or teleconferences with Merck and other potential Third Party manufacturers. Merck shall communicate to Sutro within [*] after the conclusion of Merck's analysis, Merck's preliminary conclusion regarding whether or not Sutro has been selected as manufacturer for the cGMP Compound. Following such communication by Merck and at the request of Sutro, Merck shall discuss with Sutro potential changes to Sutro's proposal and thereafter Sutro shall have [*] to modify its original proposal if it so chooses. Within [*] after receipt of Sutro's modified proposal, Merck shall communicate to Sutro Merck's final decision whether Merck's preliminary conclusion has changed based on Sutro's modified proposal. Notwithstanding the foregoing, Merck shall have no obligation to contravene any of its internal business policies or delay its decision making for such matter.

4.3.2 **Use of Alternative Manufacturer.** If, in Merck's reasonable judgment, Merck concludes that Merck and/or one or more Third Part(ies) manufacturers is better able to meet Merck's requirements for the Manufacture and supply of cGMP Compound, or if Sutro does not inform Merck of Sutro's desire to be considered by Merck to Manufacture cGMP Compound in writing and elect to demonstrate its capabilities to supply such cGMP Compound to Merck pursuant to Section 4.3.1, Merck shall be free to Manufacture such cGMP Compound itself and/or to obtain such cGMP Compound from one or more Third Party manufacturers and, in such case, Sutro shall effect, at Merck's reasonable cost and expense, one (1) technology transfer solely for such Compound (and for no other Compounds) to Merck and/or one or more Third Party manufacturers pursuant to Section 4.2.1.2 in order to permit Merck and/or such Third Party manufacturers to Manufacture such cGMP Compound (from the Cell-Free Extract to be supplied by Sutro) to meet Merck's requirements. For clarity, each Compound may be separately subject to a technology transfer in accordance with this Section 4.3.2.

4.3.3 **Manufacture by Sutro.** In the event Merck chooses to obtain supply of cGMP Compound from Sutro for Phase III Clinical Trials and commercial supply pursuant to this Section 4.3, the Parties shall enter into an applicable Supply Agreement ("**Commercial Supply Agreement**") and commercial quality agreement for the Manufacture and supply of such cGMP Compound from Sutro to Merck and any such Commercial Supply Agreement shall contain the provisions set forth in Schedule 4.1 and shall be consistent with supply and quality agreements that are customary for agreements of this type that Merck utilizes with other non-affiliated Third Party manufacturers. If Sutro is chosen as the manufacturer, then, at Merck's option, Sutro shall support qualification of Merck or one or more Third Party manufacturers as a

second source manufacturer and supplier of cGMP Compound in order to ensure an ability to meet Merck's needs for Phase III Clinical Trial and commercial supply of such cGMP Compound should Sutro become unable to supply Merck's requirements therefor. Any Commercial Supply Agreement would include a mechanism for the Parties to share in efficiencies gained in Manufacturing process improvements.

4.4 **Consult.** Merck may, at Merck's discretion and to the extent determined by Merck, consult with Sutro regarding cGMP quality, regulatory requirements, technical matters, and performance standards related to any aspect of the supply and Manufacture of Compound, Product, Cell-Free Extract, Custom Reagents and/or any other materials used in the Manufacture of Compound or Product; provided that Sutro is not obligated to provide any Cell-Free Extract Know-How pursuant to the foregoing except as expressly provided in this Section 4.4, Section 3.4, or Schedule 4.1, and as may be agreed to in any Supply Agreement or associated quality agreement subsequently entered into by the Parties. Any such consultation that is related to Cell-Free Extract Know-How shall be discussed and operationalized by the JCMCC. If the results of such consultation and discussion by the JCMCC is the identification of a technical, regulatory or quality issue potentially related to the Cell-Free Extract that may adversely impact either clinical or commercial supply to Merck and for which Merck reasonably needs access to Cell-Free Extract Know-How to resolve or assist Sutro in resolving such technical, regulatory or quality issue, then Sutro shall promptly provide such necessary Know-How to [*] for the purpose of addressing such technical, regulatory or quality issue [*]. [*] reasonable and customary measures to avoid disclosure of Sutro's Know-How to Merck's employees, agents, contractors, officers, and directors without an actual need for such Know-How [*].

4.5 **Cell-Free Extract.** At the written request of Merck and in accordance with Section 4.2.1, Sutro shall manufacture and supply Cell-Free Extract to Merck in place of Compound or to a Third Party manufacturer. Upon such request, the Parties shall negotiate and execute a supply agreement and quality agreement in support of such manufacture and supply of Cell-Free Extract which shall include the terms set forth in this ARTICLE 4 and Schedule 4.1, *mutatis mutandis* as applied to Cell-Free Extract instead of Compound; provided that Sutro is not obligated to provide any Cell-Free Extract Know-How pursuant to the foregoing except as expressly provided below or as otherwise provided in this Agreement or applicable Supply Agreement or quality agreement. If Sutro materially breaches its obligation [*] with respect to providing information regarding Cell-Free Extract as required in those Sections or upon the filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings by Sutro, or upon an assignment of a substantial portion of the assets for the benefit of creditors by Sutro, then upon Merck's written request Sutro shall conduct a technical transfer of the Cell-Free Extract manufacturing process to Merck to enable Merck to manufacture or have manufactured Cell-Free Extract to support ongoing uninterrupted supply of Compound or Product. If Sutro provides such information regarding Cell-Free Extract to Merck, such information shall continue to be treated as Confidential Information of Sutro's, to be used and disclosed by Merck only as permitted pursuant to this Agreement.

4.6 **Second Source.** Sutro shall establish a second source for the supply of Cell-Free Extract acceptable to Merck prior to Merck conducting [*] for any Compound. If Merck determines that a second source for the supply of Cell-Free Extract needs to be established by Sutro which is separate and in addition to Sutro's established second source and which shall be used exclusively for the supply of Cell-Free Extract to Merck, then, upon the written request of Merck at any time after Merck has committed to conducting [*] for any Compound and at Merck's expense, Sutro shall transfer to a Third Party manufacturer selected by Merck and

reasonably acceptable to Sutro all relevant technology, Know-How, information and processes to enable such Third Party manufacturer to manufacture and supply the Cell-Free Extract to Merck or the Merck CMO. Sutro shall manage such Third Party manufacturer and all orders for Cell-Free Extract shall be made to Sutro; provided in the event that there has been a Supply Failure Merck shall manage such Third Party manufacturer.

4.7 **Product.** At the request of Merck, and if agreed to by the Parties, such agreement not to be unreasonably withheld, conditioned or delayed, the Parties shall discuss and agree on the terms pursuant to which Sutro would Manufacture and supply Product to Merck either in addition to or in place of Compound. If the Parties agree to enter into an agreement with respect to the Manufacture and supply of Product, such agreement shall include appropriate terms and conditions, including the terms set forth in this ARTICLE 4 and Schedule 4.1 *mutatis mutandis* as applied to Product instead of Compound.

ARTICLE 5. LICENSE.

5.1 **Exclusive License Grants.**

5.1.1 Sutro hereby grants to Merck an exclusive license (even as to Sutro) in the Territory under Sutro Patent Rights, Sutro Know-How and Sutro's interest in Joint Patent Rights, and Pre-Existing Sutro Patent Rights or Pre-Existing Sutro Know-How (to the extent not yet assigned to Merck hereunder), with the right to grant and authorize sublicenses in the Field: (i) to make, have made, use, import, sell, offer to sell and otherwise exploit (including to Research, Develop, Manufacture and Commercialize) Compound(s) and/or Product(s); (ii) to otherwise perform its activities under the Research Programs; and (iii) to otherwise carry out activities contemplated under this Agreement. The foregoing license does not include any rights under the Sutro Patent Rights, Sutro Know-How or Sutro's interest in Joint Patent Rights with respect to distinct and separate active pharmaceutical ingredients that may be included in a Product in combination with the Compound where such ingredients are not themselves also a component of the Compound. The licenses granted under this Section 5.1.1 (with respect to the Sutro Background Patent Rights inlicensed from Stanford identified in Schedule 1.96) shall be [*] Stanford In-License, and Merck agrees to [*]; provided that: (a) [*] of the Stanford In-License. The licenses granted under this Section 5.1.1 (with respect to the [*]) shall be [*]; provided that: (a) [*]. Notwithstanding the foregoing, the Stanford In-License and [*] In-License shall continue to be [*].

5.1.2 Notwithstanding the scope of the exclusive licenses granted to Merck under Section 5.1.1, Sutro shall retain the rights under Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How, Pre-Existing Sutro Know-How and Sutro's interest in Joint Patent Rights: (a) during a given Research Program Term within the Field necessary solely in connection with performing Sutro's obligations under such Research Program in accordance with this Agreement; and (b) during the Term within the Field necessary solely in connection with performing Sutro's obligations under a Supply Agreement.

5.2 **Non-Exclusive License Grants.**

5.2.1 In the event that the making, having made, use, import, offer for sale and/or sale in the Territory by Merck or its Related Parties of Compound(s) and/or Product(s) would infringe during the Term of this Agreement a claim of an issued letters patent that Sutro (or its Affiliate) Controls and which patents are not covered by the grant in Section 5.1,

Sutro hereby grants to Merck, to the extent Sutro is legally able to do so, a non-exclusive, sublicensable, royalty-free license in the Territory under such issued letters patent for Merck and its Related Parties to make, have made, use, import, sell, offer for sale and/or otherwise exploit (including to Research, Develop, Manufacture and Commercialize) Compound(s) and/or Product(s) in the Territory. The foregoing license does not include any rights under such letters patent with respect to distinct and separate active pharmaceutical ingredients that may be included in a Product in combination with the Compound where such ingredients are not themselves also a component of the Compound.

5.2.2 Sutro hereby grants to Merck a non-exclusive, perpetual, irrevocable, royalty-free, sublicensable license in the Territory under: (a) Sutro Background Collaboration IP; or (b) Sutro's interest in Joint Other Information and Inventions; which in each of (a)-(b) recites or claims Merck Information and Inventions or Joint Information and Inventions for [*].

5.2.3 Merck hereby grants to Sutro a non-exclusive, perpetual, irrevocable, royalty-free, sublicensable license in the Territory under: (a) Merck Background Collaboration IP; or (b) Merck's interest in Joint Other Information and Inventions; which in each of (a)-(b) recites or claims Sutro Information and Inventions or Joint Information and Inventions for [*].

5.2.4 Merck hereby grants to Sutro during the Research Program Term a non-exclusive, non-transferable, non-sublicensable license to Sutro under the Merck Patent Rights, Pre-Existing Sutro Patent Rights, Merck Background Patent Rights, Pre-Existing Sutro Know-How and Merck Know-How, as applicable, solely to perform Sutro's activities under the Research Program in accordance with this Agreement and the Research Plan.

5.3 No Implied Licenses. Except as specifically set forth in this Agreement, neither Party shall acquire any license or other intellectual property interest, by implication or otherwise, in any Information disclosed to it under this Agreement or under any patents or patent applications Controlled by the other Party or its Affiliates.

5.4 No Grant of Inconsistent Rights by Sutro. Sutro shall not (and shall cause its Affiliates not to) assign, transfer, convey or otherwise grant to any Person or otherwise encumber (including through lien, charge, security interest, mortgage, encumbrance or otherwise): (i) any rights to any Sutro Know-How, Pre-Existing Sutro Know-How, Sutro Patent Rights, Pre-Existing Sutro Patent Rights, or Sutro's interest in Joint Patent Rights (or any rights to any intellectual property that would otherwise be included in the Sutro Know-How, Pre-Existing Sutro Know-How, Sutro Patent Rights, Pre-Existing Sutro Patent Rights or Joint Patent Rights), in any manner that is inconsistent with or would interfere with the grant of the rights or licenses to Merck hereunder; or (ii) any rights to molecules that Bind a Target including Compounds or Products, and/or compositions containing such molecules, or methods of use or processes of manufacture of such molecules or compositions (provided that Sutro shall grant to Merck the rights of (i) and (ii) as set forth herein), in any manner that is inconsistent with or would interfere with the grant of the rights or licenses to Merck hereunder.

5.5 Exclusive Efforts. Sutro shall be (and shall cause its Affiliates to be) exclusive to Merck with respect to the Research, Development and Commercialization of molecules that Bind to the selected Targets, except with respect to certain pre-existing assets of an acquirer as more fully set forth below. Without limiting the foregoing, during the Term, (x) Sutro shall not (and shall

cause its Affiliates not to) make, have made, use, sell, offer for sale, import or otherwise exploit including to Research, Develop, Manufacture and Commercialize (and shall not grant to any Third Party the right to make, have made, use, sell, offer for sale, import or otherwise exploit including to Research, Develop, Manufacture and Commercialize): (1) molecules that Bind a Target including Compounds or Products (but only with respect to the Compound portion of any Product, and not to any other distinct and separate active pharmaceutical ingredient that may be included in such Product, where such ingredients are not themselves also a component of the Compound), and further provided that with respect to a Target that is a functional complex of cytokine receptors, the foregoing only applies to molecules that Bind to the complex as a group, and not to each individual subunit (unless the subunit is named as a separate Target); (2) compositions containing such molecules; and/or (3) methods of use or processes of manufacture specific to such molecules or compositions; for any purposes (including the research, development, manufacturing or commercialization thereof), except for Sutro's performance of the activities to be performed by Sutro under a Research Plan or Supply Agreement in accordance with this Agreement, and (y) Sutro shall and shall cause its Affiliates not to provide or otherwise transfer to any Third Parties any Program Collaboration Know-How for use in the Field. Notwithstanding the foregoing, it shall not be a breach of this Section 5.5 if Sutro itself, or in collaboration with a Third Party, generates a molecule that [*] (and further Researches, Develops, Manufactures or Commercializes such molecule) provided that each of the following applies to such molecule: (i) such molecule was generated in a program that was [*], (ii) the [*]; and (iii) upon learning that the molecule binds to the Target, neither Sutro nor such Third Party shall further Develop the product with respect to the pharmacological activity resulting from the binding of the Target. Any assignment, transfer, conveyance or grant from Sutro to any Person or encumbrance not in accordance with this Section 5.5 shall be void *ab initio*. The foregoing restrictions shall not apply to (a) the [*]; and wherein such [*]. The existence of [*] prior to the date of acquisition shall be a matter of Third Party review upon Merck's request after the closing of such transaction. Further, [*], Sutro or the acquiring entity, or affiliates, shall not use Sutro Know-How, Pre-Existing Sutro Know-How, Sutro Patent Rights, or Sutro employees that were involved in the collaboration between Merck and Sutro under this Agreement to progress [*].

5.6 **Sublicenses.** Merck shall have the right to sublicense (through multiple tiers of sublicenses) any or all of the licenses granted to Merck hereunder. Merck shall be responsible for ensuring that the performance by any of its sublicensees hereunder that are exercising rights under a sublicense hereunder is in accordance with the applicable terms of this Agreement, and the grant of any such sublicense shall not relieve Merck of its obligations under this Agreement (except to the extent they are performed by any such sublicensee(s) in accordance with this Agreement).

ARTICLE 6. CONFIDENTIALITY AND PUBLICATION.

6.1 **Nondisclosure Obligation.** All Confidential Information shall be maintained in confidence by the Receiving Party and shall not be disclosed to any Third Party or used for any purpose except as set forth herein without the prior written consent of the Disclosing Party, except to the extent that such Information:

6.1.1 is disclosed to governmental or other regulatory agencies in order to obtain patents on Inventions in accordance with ARTICLE 9 herein or to gain or maintain approval to conduct clinical trials on Compound or Product or to market Product, but such disclosure may be only to the extent reasonably necessary to obtain such patents or approvals;

6.1.2 is deemed necessary by Merck to be disclosed to Related Parties, agent(s), consultant(s), and/or other Third Parties for any and all purposes Merck and its Affiliates deem necessary or advisable in the ordinary course of business to achieve the objectives of this Agreement on the condition that such Third Parties agree to be bound by confidentiality and non-use obligations that substantially are no less stringent than those confidentiality and non-use provisions contained in this Agreement; provided, however, that the term of confidentiality for such Third Parties shall be no less than [*];

6.1.3 is deemed necessary by counsel to the Receiving Party to be disclosed to such Party's attorneys, independent accountants or financial advisors for the sole purpose of enabling such attorneys, independent accountants or financial advisors to provide advice to the Receiving Party, on the condition that such attorneys, independent accountants and financial advisors agree to be bound by the confidentiality and non-use obligations contained in this Agreement; provided, however, that the term of confidentiality for such attorneys, independent accountants and financial advisors shall be no less than [*]; or

6.1.4 [*]

If a Party is required by judicial or administrative process (including a request for discovery received in an arbitration or litigation proceeding), or by a statute, regulation or rule of law (e.g., securities laws, rules and regulations), to disclose information that is subject to the non-disclosure provisions of this Section 6.1 or Section 6.2, such Party shall promptly inform the other Party of the disclosure that is being sought in order to provide the other Party an opportunity to challenge or limit the disclosure obligations. Information that is disclosed by judicial or administrative process shall remain otherwise subject to the confidentiality and non-use provisions of this Section 6.1 and Section 6.2, and the Party disclosing information pursuant to law or court order shall take all steps reasonably necessary, including obtaining an order of confidentiality, to ensure the continued confidential treatment of such information. The Parties shall consult and cooperate fully with each other on the provisions of this Agreement to be redacted in any filings made by the Parties with the Securities and Exchange Commission or similar governmental agency in the U.S. or abroad, or as otherwise required by law.

6.2 **Sutro Know-How.** Sutro agrees to keep all Pre-Existing Sutro Know-How and Collaboration IP (with the exception of Sutro Background Collaboration IP) confidential subject to Section 6.1.

6.3 **Publication.** Sutro shall have no right to publish results of the Research Programs. Merck shall have the sole right to publish results of the Research Programs and any future developments or results from Merck's activities under the Agreement.

6.4 **Publicity/Use of Names/Press Releases.** No disclosure of the existence, or the terms, of this Agreement may be made by a Party, and neither Party shall use the name, trademark, trade name or logo of the other Party, its Affiliates or their employee(s) in any publicity, promotion, news release or disclosure relating to this Agreement or its subject matter, without the prior express written permission of the other Party, except as may be required by Applicable Law. Notwithstanding the foregoing, the Parties have agreed to the press release attached as Schedule 6.1 to this Agreement. Any subsequent references to this Agreement shall be limited to the contents of Schedule 6.1.

ARTICLE 7. PAYMENTS; ROYALTIES AND REPORTS

7.1 **Up-Front Fees.** In consideration for Sutro's performance of its obligations under the Research Programs and the licenses and other rights granted to Merck herein under the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How, Pre-Existing Sutro Know-How, and Sutro's interest in Joint Patent Rights and Joint Information and Inventions, upon the terms and conditions contained herein, Merck shall pay to Sutro a non-refundable, non-creditable payment of US$ 60,000,000 (sixty million) payable by the later of: (i) [*] after the Effective Date; or (ii) [*] after any consent, approval or clearance with respect to, or terminations or expiration of any applicable mandatory waiting period (and any extensions thereof), imposed under Applicable Law. Merck shall pay an additional non-refundable, non-creditable payment of [*] within [*] after the Program Acceptance Notice for the third Research Program pursuant to Section 2.1.3. Each such payment shall be payable by wire transfer of immediately available funds in accordance with Section 7.7.

7.2 **Equity Investments.** Pursuant to and as further detailed in the Series E Stock Purchase Agreement, Merck will make an initial equity investment, at the Closing (as defined in the Stock Purchase Agreement), of Twenty Million Dollars ($20,000,000.00), and will have certain other additional rights and obligations with respect to the capital stock of Sutro. In addition, pursuant to and as further detailed in the Common Stock Purchase Agreement, in the event Sutro consummates an initial public offering, then Merck may acquire up to Ten Million Dollars ($10,000,000.00) of additional equity in Sutro concurrently with the closing of Sutro's initial public offering.

7.3 **Milestone Payments.** Subject to the terms and conditions of this Agreement, Merck shall pay to Sutro the following milestone payments, for which Merck or any Related Party achieves, the following milestone events hereunder during the Term pursuant to the payment procedures set forth in Section 7.3.5:

7.3.1 One-Time Research Milestones [*].

	Milestone Event	Payment to Sutro
1.	Upon written notice by Merck pursuant to Section 2.1.5.3 [*]	US$ [*]
2.	Initiation of the first IND Enabling Toxicology Study for the first Compound resulting from a given Research Program	US$ [*]

7.3.2 Development and Regulatory Milestones [*].

7.3.2A – First Indication

	Milestone Event One-Time Payment for the first of: [*]	A Payment to Sutro for [*]	B Payment to Sutro for [*]
1.	Initiation of the first Phase I Clinical Trial under a [*] for the first Indication for the first Compound resulting from a given Research Program to have achieved this milestone	US$ [*]	US$ [*]
2.	Initiation of the first Phase II Clinical Trial under a [*] for the first Indication for the first Compound resulting from a given Research Program to have achieved this milestone	US$ [*]	US$ [*]
3.	Initiation of the first Phase III Clinical Trial under a [*] for the first Indication for the first Compound resulting from a given Research Program to have achieved this milestone	US$ [*]	US$ [*]
4.	First Commercial Sale in the [*] for the first Indication for the first Product to have achieved this milestone	US$ [*]	US$ [*]
5.	First Commercial Sale achieved in [*] for the first Indication for the first Product to have achieved this milestone	US$ [*]	US$ [*]
6.	First Commercial Sale in [*] for the first Indication for the first Product to have achieved this milestone	US$ [*]	US$ [*]

7.3.2B – Second or Additional Indication

	Milestone Event One-Time Payment for the first of: [*]	(A) – [*] Payment to Sutro	(B) – [*] Payment to Sutro
7.	Initiation of the first Phase III Clinical Trial under a [*] for the first Compound resulting from a given Research Program to have achieved this milestone.	US$ [*]	US$ [*]
8.	First Commercial Sale in the [*] for the first Product to have achieved this milestone	US$ [*]	US$ [*]
9.	First Commercial Sale achieved in [*] for the first Product to have achieved this milestone	US$ [*]	US$ [*]
10.	First Commercial Sale in [*] for the first Product to have achieved this milestone	US$ [*]	US$ [*]

With respect to milestone payments (2), (3) and (7) under Section 7.3.2 (A) and (B), if the applicable milestone event does not occur for a Product, but an NDA is filed for that Product then Merck shall [*] upon the first Filing of such NDA in the U.S., EU or Japan with respect to such Product for such Indication. Each milestone payment hereunder shall be noncreditable and nonrefundable. [*]

7.3.3 Net Sales Milestones during the Royalty Period [*].

Milestone Event	Payment to Sutro
11. The first Calendar Year in which annual Net Sales equals or exceed US$ [*] for a Product	US$ [*]
12. The first Calendar Year in which annual Net Sales equals or exceed US$ [*] for a Product	US$ [*]
13. The first Calendar Year in which annual Net Sales equals or exceed US$ [*] for a Product	US$ [*]

7.3.4 Modifications to Milestone Payments. With respect to the milestone payments under Section 7.3.1, Section 7.3.2 (A) and (B) or Section 7.3.3,

7.3.4.1 Substituted Research Program. The milestone pursuant to Section 7.3.1 for Initiation of the first IND Enabling Toxicology Study for the first Compound resulting from a given Research Program shall not become due for achievement of such milestone for a Compound resulting from a substitute Research Program pursuant to Section 2.1.4 where such milestone was paid for a Compound resulting from the original Research Program that was replaced.

7.3.4.2 [*]

7.3.5 Payment of Milestones. Merck shall notify Sutro in writing within [*] following the achievement of each milestone set forth in Section 7.3. With respect to the achievement of a milestone under Section 7.3.1 or Section 7.3.2 (A) and (B), Merck shall make the appropriate milestone payment within [*] after the achievement of such milestone. With respect to the achievement of a milestone under Section 7.3.3, Merck shall make the appropriate milestone payment within [*] after the close of the Calendar Quarter in which such milestone was achieved. The milestone payments pursuant to Section 7.3 shall be payable only upon the initial achievement of such milestone and no amounts shall be due hereunder for subsequent or repeated achievement of such milestone, [*]. An eligible Compound or Product can trigger milestones for a maximum of two (2) Indications through Section 7.3.2 (A) and (B). For clarity, no Product can exceed a total of $USD [*] to be paid for milestones 1-10 collectively under Section 7.3.2 (A) and (B).

7.4 Royalties.

7.4.1 Royalties Payable By Merck. Subject to the terms and conditions of this Agreement, Merck shall pay Sutro royalties, calculated on a Product-by-Product and country-by-country basis, as set forth in this Section 7.4.

7.4.1.1 Patent Royalties. Subject to the provisions of Section 7.4.1.2, Merck shall pay Sutro royalties in an amount equal to the following percentage of Net Sales of Products by Merck or its Related Parties where the sale of Product would infringe a Valid Patent Claim in the country of sale:

7.4.1.1.1 [*] percent ([*]%) of Net Sales in the Territory in each Calendar Year up to and including **$USD [*]**;

7.4.1.1.2 [*] ([*]%) of Net Sales in the Territory in each Calendar Year for the portion of Net Sales exceeding **$USD [*]** up to and including **$USD [*]**;

7.4.1.1.3 [*] ([*]%) of Net Sales in the Territory in each Calendar Year for the portion of Net Sales exceeding **$USD [*]** up to and including **$USD [*]**; and

7.4.1.1.4 [*] percent ([*]%) of Net Sales in the Territory in each Calendar Year for the portion of Net Sales exceeding **$USD [*]**.

7.4.1.2 [*] Merck shall pay Sutro a royalty pursuant to this ARTICLE 7 for such country at a rate reduced by [*].

7.4.1.3 Know-How Royalty. Notwithstanding the provisions of Section 7.4.1.1, in countries where the sale of Product by Merck or its Related Parties would not infringe a Valid Patent Claim, Merck shall pay royalty rates that shall be set at [*] of the applicable royalty rate determined according to Section 7.4.1.1. Such royalties shall be calculated after first calculating royalties under Section 7.4.1.1.

7.4.1.4 Calculation of Royalty Tiers. Royalty tiers pursuant to Section 7.4.1.1 and Section 7.4.1.2 shall be calculated based on Net Sales of each Product in the Territory; provided that the determination of whether the royalty shall be calculated under Section 7.4.1.1 or Section 7.4.1.2 shall be determined on a country-by-country basis; and provided further that where the Net Sales of the Product are for aNon-Oncology Indication, the royalties calculated pursuant to Section 7.4.1.1 and Section 7.4.1.2 shall be [*] of such royalties. If the same Product is sold for use both in an Oncology Indication and in a Non-Oncology Indication (with no obvious price, presentation or dose differential), then the Parties shall work together in good faith to determine the appropriate methodology for allocation of Net Sales of such Product between such Oncology Indication

and Non-Oncology Indication, potentially through the use of a Third Party data aggregator such as IMS. Royalties on each Product at the rates set forth above shall continue on a country-by-country basis until the expiration of the later of: (i) the last-to-expire Valid Patent Claim claiming the Compound; or (ii) for a period of ten (10) years after First Commercial Sale of such Product in such country (the "**Royalty Period**").

7.4.1.5 [*]

7.4.1.6 All royalties are subject to the following conditions:

7.4.1.6.1 that only one royalty shall be due with respect to the same unit of Product;

7.4.1.6.2 that no royalties shall be due upon the sale or other transfer among Merck or its Related Parties, but in such cases the royalty shall be due and calculated upon Merck's or its Related Party's Net Sales to the first independent Third Party;

7.4.1.6.3 no royalties shall accrue on the sale or other disposition of Product by Merck or its Related Parties for use in a Clinical Trial; and

7.4.1.6.4 no royalties shall accrue on the disposition of Product in reasonable quantities by Merck or its Related Parties as samples (promotion or otherwise) or as donations (for example, to non-profit institutions or government agencies for a non-commercial purpose).

7.4.2 **Compulsory Licenses.** If a compulsory license is granted to a Third Party with respect to Compound or Product in any country in the Territory with a royalty rate lower than the royalty rate provided by Section 7.4.1, then the royalty rate to be paid by Merck on Net Sales in that country under Section 7.4.1 shall be reduced to the rate paid by the compulsory licensee.

7.4.3 **Third Party Licenses.** Following the Effective Date, in the event that Merck or its Related Party obtains after the Effective Date a license under Patent Rights from any Third Party(ies) that may be necessary or useful in order to research, develop, make, have made, use, import, offer to sell and/or sell Product(s) (but not with respect to any distinct and separate active pharmaceutical ingredients that may be included in a Product in combination with the Compound where such ingredients are not themselves also a component of the Compound) or Compound(s) contained in such Product(s) (hereinafter "**Third Party Licenses**"), [*] of [*] under such Third Party Licenses by Merck or its Related Parties in connection with the Manufacture, use, sale or import, as applicable, of Product(s) (but not with respect to any distinct and separate active pharmaceutical ingredients that may be included in a Product in combination with the Compound, where such ingredients are not themselves also a component of the Compound) or Compound(s) contained in such Product(s) for a Calendar Quarter shall be creditable against [*] payments due Sutro by Merck with respect to the sale of such Product in such Calendar Quarter. Notwithstanding the foregoing, in no event shall the royalties owed by Merck to Sutro for such Calendar Quarter be reduced pursuant

to this Section by more than [*] of the royalties owed under ARTICLE 7 pursuant to the provisions of this Section 7.4.3 (provided, however, that if Merck is not able to fully recover the [*] paid by Merck or its Related Parties under any Third Party License as a result of the foregoing restriction, then Merck shall be entitled to carry forward such right of off-set to future Calendar Quarters with respect to such excess amount). At the request of Merck, Sutro shall provide reasonable assistance to Merck (or its Related Parties) in obtaining any such Third Party Licenses or otherwise taking action with respect to Patent Rights or know-how or other intellectual property of any Third Party(ies) that may be necessary or useful in order to research, develop, make, have made, use, import, offer to sell and/or sell Product(s) (or Compound(s) contained in such Product(s)).

7.5 Reports; Payment of Royalty. During the term of this Agreement following the First Commercial Sale of a Product, Merck shall furnish to Sutro a quarterly written report for the Calendar Quarter showing the Net Sales of all Products subject to royalty payments sold by Merck and its Related Parties in the Territory during the reporting period and the royalties payable under this Agreement. Reports shall be due on the [*] following the close of each Calendar Quarter. Royalties shown to have accrued by each royalty report shall be due and payable on the date such royalty report is due. Merck shall keep complete and accurate records in sufficient detail to enable the royalties payable hereunder to be determined.

7.6 Audits.

7.6.1 Upon the written request of Sutro and not more than once in each Calendar Year, following the First Commercial Sale Merck shall permit an independent certified public accounting firm of nationally recognized standing selected by Sutro and reasonably acceptable to Merck, at Sutro's expense, to have access during normal business hours to such of the records of Merck as may be reasonably necessary to verify the accuracy of the royalty reports hereunder for any Calendar Year ending not more than [*] prior to the date of such request. The accounting firm shall disclose to Sutro only whether the royalty reports are correct or incorrect and the amount of any discrepancy. No other information shall be provided to Sutro.

7.6.2 If such accounting firm correctly identifies a discrepancy made during such period, the appropriate Party shall pay the other Party the amount of the discrepancy within [*] after the date Sutro delivers to Merck such accounting firm's written report so correctly concluding, or as otherwise agreed upon by the Parties. The fees charged by such accounting firm shall be paid by Sutro, except in the situation that the accounting firm determines that Merck has underpaid by the greater of at least [*] or [*] dollars (US$ [*]) the royalties it owed for any Calendar Year reviewed by the accounting firm. If such accounting firm correctly identified an overpayment by Merck during such period, then such overpayment shall be withheld from a next payment due from Merck to Sutro.

7.6.3 Merck shall include in each sublicense granted by it pursuant to this Agreement a provision requiring the sublicensee to make reports to Merck, to keep and maintain records of sales made pursuant to such sublicense and to grant access to such records by Sutro's independent accountant to the same extent required of Merck under this Agreement.

7.6.4 Upon the expiration of [*] following the end of any Calendar Year, the calculation of royalties payable with respect to such Calendar Year shall be binding and conclusive upon Sutro, and Merck and its Related Parties shall be released from any liability or accountability with respect to royalties for such Calendar Year.

7.6.5 Sutro shall treat all financial information subject to review under this Section 7.6 or under any sublicense agreement in accordance with the confidentiality and non-use provisions of this Agreement, and shall cause its accounting firm to enter into an acceptable confidentiality agreement with Merck and/or its Related Parties obligating it to retain all such information in confidence pursuant to such confidentiality agreement.

7.7 Payment Exchange Rate. All payments to be made by Merck to Sutro under this Agreement shall be made in United States dollars and shall be paid by bank wire transfer in immediately available funds to such bank account in the United States as may be designated in writing by Sutro from time to time. In the case of sales outside the United States, the rate of exchange to be used in computing the monthly amount of currency equivalent in United States dollars due Sutro shall be made at the monthly rate of exchange utilized by Merck in its worldwide accounting system.

7.8 Income Tax Withholding. Sutro shall be liable for all income and other taxes (including interest) ("**Taxes**") imposed upon any payments made by Merck to Sutro under this ARTICLE 7 ("**Agreement Payments**"). If Applicable Laws, rules or regulations require the withholding of Taxes, Merck shall make such withholding payments and shall subtract the amount thereof from the Agreement Payments. Merck shall submit to Sutro appropriate proof of payment of the withheld Taxes as well as the official receipts within a reasonable period of time. Merck shall provide Sutro reasonable assistance in order to allow Sutro to obtain the benefit of any present or future treaty against double taxation which may apply to the Agreement Payments.

ARTICLE 8. REPRESENTATIONS AND WARRANTIES; INDEMNIFICATION

8.1 Representations and Warranties of Each Party. Each Party represents and warrants to the other Party that as of the Effective Date:

8.1.1 such Party is duly organized and validly existing under the laws of the state or jurisdiction of its organization and has full corporate right, power and authority to enter into this Agreement and to perform its obligations hereunder;

8.1.2 the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby have been duly authorized by the necessary corporate actions of such Party. This Agreement has been duly executed by such Party. This Agreement and any other documents contemplated hereby constitute valid and legally binding obligations of such Party enforceable against it in accordance with their respective terms, except to the extent that enforcement of the rights and remedies created thereby is subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws of general application affecting the rights and remedies of creditors; and

8.1.3 the execution, delivery and performance by such Party of this Agreement and any other agreements and instruments contemplated hereunder shall not: (i) in any respect violate any statute, regulation, judgment, order, decree or other restriction of any governmental authority to which such Party is subject; (ii) violate any provision of the

corporate charter, by-laws or other organizational documents of such Party; or (iii) constitute a material violation or breach by such Party of any provision of any material contract, agreement or instrument to which such Party is a party or to which such Party may be subject although not a party.

8.2 Sutro Representations and Warranties. Sutro represents and warrants to Merck that as of the date of this Agreement:

8.2.1 all Patent Rights within the Sutro Patent Rights and Pre-Existing Sutro Patent Rights are in full force and effect, and, to Sutro's knowledge, the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How and Pre-Existing Sutro Know-How exist and are not invalid or unenforceable, in whole or in part;

8.2.2 it has the full right, power and authority to enter into this Agreement, to perform the activities hereunder, including the identified Research Programs, and to grant the licenses granted hereunder (including under ARTICLE 5);

8.2.3 except as specifically disclosed to Merck and set forth on Schedule 8.2, it (and its Affiliates) has not prior to the Effective Date: (i) assigned, transferred, conveyed or otherwise encumbered its right, title and interest in Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How or Pre-Existing Sutro Know-How; or (ii) otherwise granted any rights to any Third Parties; in each case (i) and (ii) that would conflict with the rights granted to Merck hereunder;

8.2.4 except as specifically disclosed to Merck and set forth on Schedule 8.2, to Sutro's knowledge, it is the sole and exclusive owner of the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How and Pre-Existing Sutro Know-How, all of which are (and shall be, in the case of Sutro Information and Inventions) free and clear of any liens, charges and encumbrances that could adversely impact the licenses granted to Merck under Section 5.1 or Sutro's ability to perform under this Agreement, and no other person, corporate or other private entity, or governmental entity or subdivision thereof, has or shall have any claim of ownership whatsoever with respect to the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How and Pre-Existing Sutro Know-How;

8.2.5 [*] the exercise of the license granted to Merck under the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How and Pre-Existing Sutro Know-How, including the use of the Cell-Free Extract do not interfere with or infringe any intellectual property rights possessed (whether by ownership or license) by any Third Party;

8.2.6 except as specifically disclosed to Merck and set forth on Schedule 8.2, there are no claims, judgments or settlements against or owed by Sutro (or any of its Affiliates) and there is no pending or threatened claims or litigation relating to the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How and Pre-Existing Sutro Know-How;

8.2.7 Sutro has disclosed to Merck all reasonably relevant information known to Sutro regarding the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How and Pre-Existing Sutro Know-How licensed under this Agreement, [*];

8.2.8 Sutro has disclosed to Merck the existence of any patent opinions related to the Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How, and Pre-Existing Sutro Know-How licensed under this Agreement;

8.2.9 neither it nor any of its Affiliates has received any written notification from a Third Party that the research, development, manufacture, use, sale or import of molecules that Bind the first Target including the manufacture and use of the Cell-Free Extract infringes or misappropriates the Patent Rights or know-how possessed (whether by ownership or license) by such Third Party, and Sutro has no knowledge that a Third Party has any basis for any such claim;

8.2.10 Sutro has complied with all existing country-specific laws and regulations involving inventor remuneration associated with the Sutro Patent Rights and Pre-Existing Sutro Patent Rights, including Article 6 of the Third Amendment of Chinese Patent Law;

8.2.11 Schedule 1.96 sets forth a true, correct and complete list of Sutro Patent Rights and Pre-Existing Sutro Patent Rights existing as of the Effective Date and such schedule contains all application numbers and filing dates, registration numbers and dates, jurisdictions and owners;

8.2.12 Sutro has disclosed to Merck all material information and data and all material correspondences to/from any Regulatory Authority in each case related to molecules that Bind the first Target or the manufacture thereof, regardless of whether such data and information would have a positive, negative or neutral impact on the potential commercial, scientific or strategic value or attractiveness of the Research Programs and the Manufacture of Compounds thereunder;

8.2.13 Sutro has obtained all necessary consents, approvals and authorizations of all governmental authorities and other Persons required to be obtained by it as of the Effective Date, as applicable, in connection with the execution, delivery and performance of this Agreement;

8.2.14 Sutro has an IND filing for a product made using the Cell-Free Extract in the U.S., and has disclosed to Merck any material information including all material correspondences to/from any Regulatory Authority regarding such Cell-Free Extract which would impact the use thereof in the Development or Commercialization of Compound pursuant to this Agreement;

8.2.15 Sutro has disclosed to Merck all reasonably relevant information known to Sutro regarding safety information related to the Cell-Free Extract; any material, or relevant and unresolved, manufacturing (including yield) issues related to the Cell-Free Extract that could negatively impact Merck's Manufacture, Development and Commercialization of Compound or Product; and regulatory issues raised by a Regulatory Authority related to the Cell-Free Extract;

8.2.16 neither Sutro nor any of its Affiliates has obtained, or filed for, any INDs, NDAs, or Marketing Authorizations for any molecules that Bind the first Target, and, to Sutro's knowledge, no other Person has obtained, or filed for, any INDs, NDAs or Marketing Authorizations for any molecules that Bind the first Target that were identified by or on behalf of Sutro or its Affiliates;

8.2.17 Sutro (and its Affiliates) has not employed or otherwise used in any capacity, and shall not employ or otherwise use in any capacity, the services of any Person debarred under United States law, including under Section 21 USC 335a or any foreign equivalent thereof, with respect to performing any portion of a Research Program;

8.2.18 all of Sutro's research, manufacture and development (including non-clinical studies) related to any molecules that Bind the first Target or the Cell-Free Extract prior to the Effective Date have been conducted in accordance with all Applicable Laws;

8.2.19 except for the Third Party Licenses set forth on Schedule 8.3, there are no agreements (including any licenses), written or oral, granting any licenses or other rights to (or from) Sutro (or any of its Affiliates) relating to molecules that Bind the first Target, compositions containing such molecules, or methods of use or processes of manufacture of such molecules including with respect to the manufacture of Cell-Free Extract within Pre-Existing Sutro Know-How, Pre-Existing Sutro Patent Rights, Sutro Know-How or Sutro Patent Rights;

8.2.20 with respect to each Third Party license: (i) it is in full force and effect; (ii) neither Sutro nor any of its Affiliates is in breach thereof; (iii) neither Sutro nor any of its Affiliates has received any notice of breach or notice of threatened breach thereof; and (iv) neither Sutro nor any of its Affiliates has received any notice from the counterparty to such Third Party license of intent to reduce the scope of the field thereof or render any of the licenses thereunder non-exclusive, and no event, act or omission has occurred which could give rise to the right of the counterparty to such Third Party license to reduce the scope of the field thereof or render any of the licenses thereunder non-exclusive;

8.2.21 to Sutro's knowledge, all information and data provided by or on behalf of Sutro to Merck on or before the Effective Date in contemplation of this Agreement was and is true and accurate and complete in all material respects, and Sutro has not [*] disclosed, failed to disclose, or cause to be disclosed, any information or data that would reasonably be expected to cause the information and data that has been disclosed to be misleading in any material respect; and

8.2.22 it has or ensures that it shall have the resources and capabilities to do the work contemplated by the Research Programs including all supply-related obligations pursuant to this Agreement.

For purposes of the above representations, the phrase "**to Sutro's knowledge**" means that the employee(s) of Sutro with responsibility for the matter have conducted a reasonable internal inquiry regarding such matter.

8.3 **Sutro Third Party License Agreements Representations, Warranties and Covenants.** Sutro represents and warrants to Merck that it has provided to Merck as of the Effective date a true, correct and complete copy of each Sutro Third Party license agreement which is relevant to the first Research Program as of the Effective Date attached hereto as Schedule 8.3 (the "**Initial Third Party License Agreements**"), and each such copy includes any and all amendments, restatements, side letters, and other modifications thereto, as each such Sutro Initial Third Party License Agreement is in effect as of the Effective Date. Sutro further covenants and agrees that during the Term: (a) it shall promptly provide Merck with any additional Sutro Third Party license agreements relevant to a Research Program (the

"**Subsequent Third Party License Agreements**"; collectively with the Initial Third Party License Agreements, the "**Third Party License Agreements**"); (b) it shall satisfy all of its obligations under (including making all payments), and take all steps to maintain in full force and effect, each relevant Sutro Third Party License Agreement; (c) it shall not assign (except an assignment to a party to which this Agreement has been assigned as permitted under Section 11.2), amend, restate, amend and restate, terminate in whole or in part, or otherwise modify any of the Sutro Third Party License Agreements that could potentially impact Merck's exercise of the rights granted in this Agreement without the prior written consent of Merck; (d) it shall provide Merck with prompt notice of any claim of a breach under any of the Sutro Third Party License Agreements or notice of termination of any of the Sutro Third Party License Agreements, made by either Sutro or the counterparty to such Sutro Third Party License Agreement (or any party acting on behalf of such counterparty); and (e) it shall promptly send to Merck copies of all other material correspondence to or from the counterparty to such Sutro Third Party License Agreement related to such Sutro Third Party License Agreement relevant to the licenses granted in this Agreement. For the purposes of clarity, Sutro (and not Merck) shall be responsible for all of the financial and other obligations of Sutro (and/or any of its Affiliates) under any of the Sutro Third Party License Agreements, including any and all financial obligations thereunder with respect to Net Sales of Merck and its Related Parties. Merck shall have the right, in its sole discretion, to terminate this Agreement immediately upon written notice to Sutro pursuant to Section 10.3, in the event that Sutro is in breach of this Section 8.3.

8.4 Indemnification; Insurance.

8.4.1 Indemnification by Sutro. Sutro shall defend, indemnify and hold Merck, its Affiliates and their respective directors, officers, employees, and agents, and their respective successors and permitted assigns, harmless from any and all Third Party claims, actions, causes of action, liabilities, losses, damages, costs or expenses, including reasonable attorneys' fees, which directly or indirectly arise out of or relate to (i) a breach by Sutro of any of its representations, warranties or covenants; or (ii) the gross negligence or willful misconduct of Sutro in the performance of its obligations under this Agreement.

8.4.2 Indemnification by Merck. Merck shall defend, indemnify and hold Sutro, its Affiliates and their respective directors, officers, employees, and agents, and their respective successors and permitted assigns, harmless from any and all Third Party claims, actions, causes of action, liabilities, losses, damages, costs or expenses, including reasonable attorneys' fees, which directly or indirectly arise out of or relate to (i) a breach by Merck of any of its representations, warranties or covenants; or (ii) the gross negligence or willful misconduct of Merck in the performance of its obligations under this Agreement.

8.4.3 Indemnification Procedure. Each Party (the "**Indemnitee**") promptly shall notify the other Party (the "**Indemnitor**") of any liability or action in respect of which the Indemnitee intends to claim indemnification, and the Indemnitor shall have the right to assume the defense thereof with counsel selected by the Indemnitor. The indemnity in this Section shall not apply to amounts paid in settlement of any loss, claim, damage, liability or action if such settlement is effected without the consent of the Indemnitor. The failure to deliver notice to the Indemnitor within a reasonable time after the commencement of any such action, if prejudicial to its ability to defend such action, shall relieve the Indemnitor of any liability to the Indemnitee under this Section. The Indemnitee under, its employees and agents, shall cooperate fully with the Indemnitor and its legal representatives in the investigation and defense of any action, claim or liability covered by this indemnification.

8.4.4 **Insurance.** Each Party shall maintain, at its costs, a program of insurance and/or self insurance against liability and other risks associated with its activities and obligations under this Agreement, including as applicable its Clinical Trials, the commercialization of any Products and its indemnification obligations hereunder, in such amounts, subject to such deductibles and on such terms as are customary for such Party for the activities to be conducted by it under this Agreement.

ARTICLE 9. PATENT PROVISIONS.

9.1 Filing, Prosecution and Maintenance of Patents.

9.1.1 **Program Collaboration IP.** Merck shall have the first right to file patent applications on Program Collaboration Know-How. Sutro shall reasonably promptly disclose to Merck in writing the conception, creation and/or discovery of any Program Collaboration Know-How to which one or more patent applications may be filed. Merck shall give Sutro an opportunity to review and comment on the text of any patent application before filing, shall consult with Sutro with respect thereto, and shall supply Sutro with a copy of the application as filed, together with notice of its filing date and serial number.

9.1.2 **Pre-Existing Sutro Patent Rights.** Within [*] of the Effective Date, Sutro shall execute the assignments of the Pre-Existing Sutro Patent Rights to Merck. Merck has the first right to prosecute and maintain in the Territory, upon appropriate consultation with Sutro, the Pre-Existing Sutro Patent Rights. Merck shall keep Sutro advised of the status of such Pre-Existing Sutro Patent Rights and, upon Sutro's request, shall provide advance copies of any papers related to the prosecution and maintenance of the Pre-Existing Sutro Patent Rights. Merck shall promptly give notice to Sutro of the grant, lapse, revocation, surrender, invalidation or abandonment of any Pre-Existing Sutro Patent Rights licensed to Merck for which Merck is responsible for the prosecution and maintenance. Merck shall give notice to Sutro of any desire to cease prosecution and/or maintenance of Pre-Existing Sutro Patent Rights on a country-by-country basis in the Territory and, in such case, subject to Section 9.1.6 shall permit Sutro, in its sole discretion, to continue prosecution or maintenance of such Pre-Existing Sutro Patent Rights at its own expense. If Sutro elects to continue prosecution or maintenance of such Pre-Existing Sutro Patent Rights, Merck shall execute documents in a timely manner as may be reasonably necessary to allow Sutro to continue such prosecution or maintenance.

9.1.3 **Background Information and Inventions.**

9.1.3.1 **Sutro Background Collaboration IP.** Sutro shall have the sole right to file patent applications on Sutro Background Collaboration IP. Merck shall reasonably promptly disclose to Sutro in writing the conception, creation and/or discovery of any Sutro Background Collaboration IP to which one or more patent applications may be filed. Sutro shall give Merck an opportunity to review and comment on the text of any patent application [*] before filing, shall consult with Merck with respect thereto,

and shall supply Merck with a copy of the application as filed, together with notice of its filing date and serial number. Sutro shall give notice to Merck of any desire to not file patent applications claiming Sutro Background Collaboration IP [*] or to cease prosecution and/or maintenance of Patent Rights reciting or claiming such Sutro Background Collaboration IP on a country-by-country basis in the Territory and, in such case, unless Sutro notifies Merck that Sutro will be maintaining (and Sutro maintains) the applicable Sutro Background Collaboration IP as a trade secret, Sutro shall permit Merck, in its sole discretion, to file such patent applications or to continue prosecution or maintenance of such Patent Rights at its own expense. If Merck elects to file or to continue prosecution or maintenance of such Patent Rights, Sutro shall execute documents and perform such acts at Sutro's expense in a timely manner as may be reasonably necessary to allow Merck to perform such filing or to continue such prosecution, maintenance, defense or enforcement, which shall then be at Merck's sole expense.

9.1.3.2 **Merck Background Collaboration IP.** Merck shall have the sole right to file patent applications on Merck Background Collaboration IP. Sutro shall reasonably promptly disclose to Merck in writing the conception, creation and/or discovery of any Merck Background Collaboration IP to which one or more patent applications may be filed.

9.1.4 **Other Collaboration IP.** The filing, prosecution and maintenance of Other Collaboration IP shall be addressed as follows:

9.1.4.1 Sutro shall have the sole right to file, prosecute, maintain and defend patent applications on Sutro Information and Inventions ("**Sutro Other Information and Inventions**");

9.1.4.2 Merck shall have the sole right to file, prosecute, maintain and defend patent applications on Merck Information and Inventions ("**Merck Other Information and Inventions**"); and

9.1.4.3 The Patent Committee shall review proposed patent filings pertaining to Joint Information and Inventions within Other Collaboration IP ("**Joint Other Information and Inventions**"). A Party that believes that a patent application should be filed regarding any Joint Other Information and Inventions shall bring the matter to the attention of the Patent Committee and the Patent Committee shall discuss how to proceed. If Merck takes the lead in filing and prosecuting the application, then the Parties shall follow the general procedure described in Section 9.1.3.2. If Sutro takes the lead in filing and prosecuting the application, then the Parties shall follow the general procedure described in Section 9.1.3.1. If both Parties agree that a patent application regarding any Joint Other Information and Inventions should be filed, then the Parties shall split the costs evenly or as otherwise agreed. If only one Party believes that a patent application regarding any Joint Other Information and Inventions should be filed, then that Party shall bear all costs unless the Parties agree otherwise.

9.1.5 **Patent Term Extension.** The Parties shall cooperate fully with each other to provide necessary information and assistance, as the other Party may reasonably request, in obtaining patent term extension or supplemental protection certificates or their equivalents in any country in the Territory where applicable to Program Collaboration Patent Rights. In the event that elections with respect to obtaining such patent term extension are to be made, Merck shall have the right to make the election and Sutro agrees to abide by such election.

9.1.6 **Other Cooperation.** The Parties agree to cooperate fully and provide any information and assistance that either may reasonably request in connection with the filing, prosecution, maintenance and, if in alignment with the patent strategy for a Compound or Product, the abandonment of Program Collaboration Patent Rights and/or Joint Patent Rights which relate to or cover molecules that Bind a Target including Compounds and Products, and/or compositions containing such molecules, or methods of use or processes of Manufacture of such molecules or compositions. Such information and assistance shall include the preparation and filing of any terminal disclaimers and other documents required, to procure and preserve the protections under Applicable Laws for Patent Rights, including Pre-Existing Sutro Patent Rights or Merck Patent Rights which recite or claim a molecule that Binds to a Target including a Compound or Product to be Researched, Developed, Manufactured or Commercialized under this Agreement, a composition containing such molecule, or a method of use or process of Manufacture of such molecule or composition. The Parties further agree to take reasonable actions to maximize the protections available under the safe harbor provisions of 35 U.S.C. 102(c) for U.S. patents and patent applications. [*] Following payment of the [*] for Initiation of the first IND Enabling Toxicology Study and any time after a change in the Manufacture or composition of Cell-Free Extract, Sutro shall, at Merck's expense, [*] for Compound or Product, including with respect to the manufacture of Cell-Free Extract, provided that [*] a confidentiality agreement with Sutro that shall provide for the continued confidentiality of the Sutro Know-How regarding Cell-Free Extract, and that [*]; provided that Merck shall take reasonable and customary measures to avoid disclosure of such Sutro Know-How to Merck's employees, agents, contractors, officers, and directors without an actual need for such SutroKnow-How for purpose of [*], and Merck shall not use such Sutro Know-How for any purpose other than [*].

9.1.7 **Filing, Prosecution and Maintenance Expenses.** Unless stated otherwise herein, with respect to all filing, prosecution and maintenance activities under this Section 9.1, the filing and/or prosecuting Party shall be responsible for payment of all costs and expenses related to such activities.

9.1.8 **Inventor Remuneration.** Each Party shall comply with all applicable country-specific inventor remuneration laws and regulations, including Article 6 of the Third Amendment of Chinese Patent Law associated with such Party's Patent Rights and Joint Patent Rights when inventor remuneration obligations are triggered by an employee of such Party and/or its Affiliates, or a Third Party acting on behalf of such Party and/or its Affiliates.

9.2 Interference, Derivation, Opposition, Reexamination, Reissue, Supplemental Examination, *Inter Partes* Review and Post-Grant Review Proceedings.

9.2.1 Third Party Initiated Proceedings. Each Party shall, within [*] after learning of such event, inform the other Party of any request for, or filing or declaration of, any interference, derivation proceeding, opposition, reexamination requested by a Third Party, *inter partes* review, post-grant review or similar contested administrative proceeding involving a Third Party relating to Program Collaboration Patent Rights. Merck and Sutro shall thereafter consult and cooperate fully to determine a course of action with respect to any such proceeding. Merck shall have the first right to control such proceedings with respect to Program Collaboration Patent Rights, and Sutro shall have the right to review and approve any submission to be made in connection with such proceeding, which approval will not be unreasonably withheld or delayed.

9.2.2 Party Initiated Proceedings. Merck shall have the first right to initiate a reexamination, supplemental examination, reissue or similar administrative proceeding relating to Program Collaboration Patent Rights. Notwithstanding the foregoing, Merck shall not initiate any such proceeding without the prior written consent of Sutro, which consent shall not be unreasonably withheld or delayed. Sutro shall have the right to review and approve any submission to be made in connection with such proceeding, which approval will not be unreasonably withheld or delayed. If there is disagreement regarding whether a reexamination, supplemental examination, reissue or similar administrative proceeding relating to Program Collaboration Patent Rights should be initiated, such disagreement shall be referred to the senior intellectual property officers of the Parties. In the event that these two executives do not, after reasonable good faith efforts, reach agreement, the resolution and/or course of conduct shall be determined by Merck. In the event that Merck chooses not to initiate a proceeding under this Section 9.2.2, and upon Merck's written consent, Sutro shall have the right to initiate such proceedings. The initiating Party shall have the first right to control such proceedings.

9.2.3 Cooperation. In connection with any administrative proceeding under Section 9.2.1 or Section 9.2.2, Merck and Sutro shall cooperate fully and provide each other with any information or assistance that either may reasonably request. The Parties shall keep each other informed of developments in any such action or proceeding, including the status of any settlement negotiations and the terms of any offer related thereto. For any proceeding not controlled by Merck, Sutro shall obtain prior approval from Merck of any settlement offer or settlement agreement.

9.2.4 Expenses. The Party controlling any administrative proceeding pursuant to Section 9.2.1 and Section 9.2.2 shall bear all expenses related thereto.

9.3 Enforcement and Defense.

9.3.1 The Parties shall give notice to each other of either: (i) any infringement by a Third Party of Program Collaboration Patent Rights; or (ii) any misappropriation or misuse of Program Collaboration IP, that may come to its attention. Merck and Sutro shall thereafter consult and cooperate fully to determine a course of action, including the commencement of legal action by either or both Merck and Sutro, to terminate any such infringement of Program Collaboration Patent Rights or any such misappropriation or misuse of Program Collaboration IP. Merck, upon notice to Sutro,

shall have the first right to initiate and prosecute such legal action at its own expense and in the name of Merck and/or Sutro, or to control the defense of any declaratory judgment action relating to such Program Collaboration Patent Rights or Program Collaboration IP. Each Party shall have the right to be represented by counsel of its own choice.

9.3.2 Merck shall promptly (and in sufficient time for Sutro to bring an action to avoid any statutory deadline) inform Sutro if it elects not to exercise its first right under Section 9.3.1 to initiate and prosecute legal action, and Sutro shall thereafter have the right to either initiate and prosecute such action or to control the defense of such declaratory judgment action in its name and, if necessary, Merck's name. If Sutro elects to do so, the costs of any agreed-upon course of action to terminate infringement of Program Collaboration Patent Rights or misappropriation or misuse of Program Collaboration IP, including the costs of any legal action commenced or the defense of any declaratory judgment, shall be paid by Sutro. Each Party shall have the right to be represented by counsel of its own choice.

9.3.3 For any action to terminate any infringement of Program Collaboration Patent Rights or any misappropriation or misuse of Program Collaboration IP, in the event that a Party is unable to initiate or prosecute such action solely in its own name, the other Party shall join such action voluntarily and shall execute and cause its Affiliates to execute all documents necessary for the Party to initiate litigation to prosecute and maintain such action under this Section 9.3. In connection with any action or potential action, Merck and Sutro shall cooperate fully and shall provide each other with any information or assistance that either may reasonably request, including cooperating with regard to any pre-litigation review of the Program Collaboration Patent Rights. Each Party shall keep the other informed of developments in any action or proceeding. For any proceeding not controlled by Merck, Sutro shall obtain prior approval from Merck of any settlement offer or settlement agreement that could potentially cause Merck to accept any liability or make any payment.

9.3.4 Any recovery obtained by either or both Merck and Sutro in connection with or as a result of any action contemplated by this Section 9.3, whether by settlement or otherwise, shall be shared in order as follows:

9.3.4.1 the Party which initiated and prosecuted the action shall recoup all of its costs and expenses incurred in connection with the action;

9.3.4.2 the other Party shall then, to the extent possible, recover its costs and expenses incurred in connection with the action; and

9.3.4.3 the amount of any recovery remaining shall then be allocated between the Parties on a pro rata basis taking into consideration the relative economic losses suffered by each Party.

9.3.5 Each Party shall inform the other Party of any certification regarding any Program Collaboration Patent Rights it has received pursuant to either 21 U.S.C. §§355(b)(2)(A)(iv) or (j)(2)(A)(vii)(IV), or its successor provisions or any similar provisions in a country in the Territory other than the United States, and shall provide a copy of such certification within [*] after receipt. Merck has the first right to initiate and prosecute any legal action as a result of such certification; provided, however, that

Merck shall inform Sutro of a decision not to exercise such first right to initiate such action within [*] after receipt of the certification, after which time Sutro shall have the right to initiate and prosecute such action. Regardless of which Party has the right to initiate and prosecute such action, both Parties shall, as soon as practicable after receiving notice of such certification, convene and consult with each other regarding the appropriate course of conduct for such action. The non-initiating Party shall have the right to be kept fully informed and participate in decisions regarding the appropriate course of conduct for such action, and the right to join and participate in such action. Sutro's and Merck's rights and obligations with respect to the prosecution of any legal action as a result of such certification and any recovery obtained as a result of such legal action shall be as defined in Sections 9.3.3 and 9.3.4.

9.3.6 Sutro shall inform Merck of any matter of which it becomes aware concerning the submission of an application to the U.S. Food & Drug Administration under Section 351(k) of the U.S. Public Health Services Act (42 USC 262(k)), or to a similar agency under any similar provisions in a country in the Territory, seeking approval of a biosimilar or interchangeable biological product with regard to which Merck is a reference product sponsor involving Program Collaboration Patent Rights ("**Biosimilar Application**"). Sutro shall provide Merck with the Biosimilar Application within [*] after receipt. Sutro shall not substantively review the Biosimilar Application and shall only administratively review the Biosimilar Application as necessary to determine whose attention it needs to be directed. Sutro shall not open any sealed contents within the envelope containing the Biosimilar Application. Merck shall choose the recipients of information under 42 USC 262 (l)(1)(B)(ii). Notwithstanding the foregoing provisions of ARTICLE 9, Merck shall have the sole right, in its discretion, to initiate, prosecute and control any legal action and take any action, on Merck's behalf or on behalf of Sutro (including in Sutro's name, if required), and at Merck's expense, to initiate and resolve a dispute with respect to any infringement of Program Collaboration Patent Rights with respect to any Biosimilar Application, including selection of any patents for listing under 42 U.S.C. §262(l). For any action with respect to any infringement of Program Collaboration Patent Rights with respect to any Biosimilar Application, in the event that Merck is unable to initiate or prosecute such action solely in its own name, Sutro shall join such action voluntarily and shall execute and cause its Affiliates to execute all documents necessary for Merck to initiate, prosecute and maintain such action [*]. In connection with any action, Sutro shall cooperate with Merck and provide Merck with information and assistance that Merck may reasonably request, including as defined in Section 9.3.3, [*].

ARTICLE 10. TERM AND TERMINATION

10.1 **Term and Expiration.** This Agreement shall be effective as of the Effective Date and unless terminated earlier pursuant toSection 10.2 or Section 10.3, this Agreement shall continue in full force and effect on a Research Program-by-Research Program and Target-by-Target basis until one or more Products resulting from a given Research Program has received Marketing Authorization and, thereafter, until expiration of all royalty obligations hereunder. The period from the Effective Date until the date of expiration or earlier termination of this Agreement in its entirety, or as the case may be until the date of the expiration or earlier termination of this Agreement in part with respect to a given Research Program or Target, shall be referred to herein as the "**Term**". Upon expiration of this Agreement for a given Research Program or Target, Merck's licenses pursuant to Section 5.1.1 and Section 5.2.1 with respect to such Research Program or Target shall become fully paid-up, perpetual licenses.

10.2 **Termination by Merck for Convenience.** Notwithstanding anything contained herein to the contrary during the Term of this Agreement, Merck shall have the right to terminate this Agreement in whole or in part at any time in its sole discretion: (i) in its entirety; or (ii) in part (a) on a Research Program-by-Research Program basis (during the Research Program Term for a given Research program), or (b) on a Target-by-Target basis (following the end of the applicable Research Program Term). Any termination under this Section 10.2 shall be accomplished by Merck giving [*] advance written notice to Sutro. For the avoidance of doubt, termination by Merck under this Section 10.2 can be effected only through a written notice specifically referring to this Section 10.2. Termination under this Section 10.2 shall have the consequences set out in Section 10.4. With respect to termination of a Research Program, or if Merck terminates this Agreement in its entirety and at the date of such notice there is an ongoing Research Program that is subject to such termination, then [*].

10.3 **Termination by either Party for Cause.** This Agreement may be terminated at any time during the term of this Agreement:

10.3.1 upon written notice by either Party if the other Party is in breach of its material obligations hereunder by causes and reasons within its control and has not cured such breach within [*] after notice requesting cure of the breach; provided, however, in the event of a good faith dispute with respect to the existence of a material breach, the [*] cure period shall be tolled until such time as the dispute is resolved pursuant to Section 11.7; or

10.3.2 by either Party upon the filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or upon an assignment of a substantial portion of the assets for the benefit of creditors by the other Party; provided, however, that in the case of any involuntary bankruptcy proceeding such right to terminate shall only become effective if the Party consents to the involuntary bankruptcy or such proceeding is not dismissed within [*] after the filing thereof.

10.4 **Effect of Termination by Merck for Convenience or Termination by Sutro for Cause.** This Section 10.4 shall apply in case of (i) termination of this Agreement (in whole or in part) by Merck for convenience under Section 10.2 or (ii) termination of this Agreement (in whole or in part) by Sutro for cause under Section 10.3. In case of such termination, the following provisions of this Section 10.4 shall apply; provided, however, that if this Agreement is terminated in part (*i.e.*, with respect to a given Research Program and/or a given Selected Target, as applicable), then the effects of termination as set forth in this Section 10.4 shall only apply with respect to the Research Program (including the Compounds resulting from the terminated Research Program) and/or Target, as applicable, which was terminated (*e.g.*, any assignment and/or license of any Sutro Know-How, Sutro Patent Rights and/or Program Collaboration IP, as set forth below (if applicable), shall only apply to [*]:

10.4.1 All licenses and options [*] with respect to the terminated Research Program or Target and associated Compounds shall terminate, and all obligations of Merck under any terminated Research Program or Target as applicable shall terminate (and Sutro shall reimburse Merck for any uncredited Research Funding under Section 2.3, including FTE fees paid by Merck and fees for services or materials not provided as of the date of expiration or termination); provided, however, that Merck shall have a fully paid-up non-exclusive license [*].

10.4.2 Subject to Section 10.4.3, each Party shall, within [*] after the effective date of such termination, (x) return or cause to be returned to the other Party all Information in tangible form received from such other Party during the Research Program (and all copies thereof), and (y) at the other Party's option, either return or destroy (in accordance with instructions by the other Party) all materials delivered or provided by such other Party in any medium during the Research Program (provided, however, that the receiving Party may retain any Information received from the other Party as is reasonably necessary for such Party's continued practice under any license(s) which survive such termination, or in the case of Sutro continued practice of the [*], and may keep one copy of Information received from the other Party in its confidential files for record purposes).

10.4.3 Upon termination of this Agreement by Sutro pursuant to Section 10.4, Merck and its Affiliates, sublicensees and distributors shall be entitled, during the [*] period immediately following the effective date of termination, to finish any work-in-progress and to sell any Product or Compound remaining in inventory, in accordance with the terms of this Agreement and subject to continuing payment of royalties owing on such sales.

10.4.4 On a Research Program by Research Program basis (if during the applicable Research Program Term) or Target-by-Target basis (if after the applicable Research Program Term), upon the written request of Sutro (which request must be made within [*] after delivery of the applicable termination notice), Merck shall promptly [*].

10.4.5 Further, on a Research Program by Research Program basis (if during the applicable Research Program Term) or Target-by-Target basis (if after the applicable Research Program Term), upon the written request of Sutro (which request must be made within [*] after delivery of the applicable termination notice) Merck shall [*].

10.4.6 On a Target-by-Target basis, the exclusivity obligations under Section 5.5 shall terminate and [*].

10.5 Effect of Termination by Merck for Cause.

10.5.1 If Merck terminates this Agreement (in whole or in part) under Section 10.3.1, then (i) Merck's licenses pursuant to pursuant to Section 5.1.1 and Section 5.2.1 shall become perpetual, irrevocable licenses (provided, however, that Merck shall continue to be obligated to pay the milestone and royalty amounts under ARTICLE 7 that would otherwise have been payable under the terms of this Agreement during its Term; provided further, however, that such amounts, for periods on or after such effective date of termination, shall be reduced to [*] of the amounts that would otherwise have been payable under the terms of this Agreement during its Term), (ii) except with respect to the reduced royalties and milestones as provided in the foregoing clause (i) (which, for the avoidance of doubt, requires the payment in full of all royalty and milestone payments owed with respect to periods prior to the effective date of such termination), no further payments or other fees, costs or payments of any kind shall be owed to Sutro on account of any Compounds or Products, or the applicable Research Program (and Sutro shall reimburse Merck for any uncredited fees paid by Merck including fees for services or materials not provided as of the date of expiration or termination) and (iii) Sutro shall, within [*] after the effective date of such termination (x) return or cause to be returned to Merck all Information in tangible form and all

copies thereof, and (y) at Merck's option, either return or destroy (in accordance with instructions by Merck) all materials delivered or provided by Merck in any medium (provided, however, that Sutro may keep one copy of Information received from Merck in its confidential files for record purposes). Notwithstanding the foregoing, if this Agreement is terminated in part (*i.e.*, with respect to a given Research Program or a given Target, as applicable), then the effects of termination as set forth in this Section 10.5.1 shall only apply with respect to the Research Program (including molecules that bind the Target, including Compounds and Products resulting from the terminated Research Program) and/or Target, as applicable, which was terminated.

10.5.2 Merck shall have all the rights under Section 365 of the United States Bankruptcy Code (the "**Code**"), and the Parties acknowledge and agree that all licenses and rights to licenses granted under or pursuant to this Agreement by Sutro to Merck are, and shall otherwise be deemed to be, for purposes of Section 365(n) of the Code, licenses of rights to "intellectual property" as defined under Section 101(35A) of the Code. The Parties agree that Merck, as a licensee of such rights under this Agreement, shall retain and may fully exercise all of its rights and elections under the Code, and that upon commencement of a bankruptcy proceeding by or against Sutro under the Code, Merck shall be entitled to a complete duplicate of or complete access to (as Merck deems appropriate), any such intellectual property and all embodiments of such intellectual property. Such intellectual property and all embodiments thereof shall be promptly delivered to Merck: (i) upon any such commencement of a bankruptcy proceeding upon written request therefore by Merck, unless Sutro elects to continue to perform all of its obligations under this Agreement; or (ii) if not delivered under (i) above, upon the rejection of this Agreement by or on behalf of Sutro upon written request therefore by Merck.

10.5.3 The foregoing provisions of Section 10.5 are without prejudice to any rights Merck or Sutro may have arising under Applicable Laws.

10.6 Other Consequences of Termination. Expiration or termination of this Agreement (in whole or in part) shall not relieve the Parties of any obligation accruing prior to such expiration or termination or any obligations under any applicable Supply Agreement or quality agreement. Each Party shall pay all amounts then due and owing as of the expiration or termination date (and Sutro shall reimburse Merck for any uncredited Research Funding under Section 2.3, including FTE fees paid by Merck and fees for services or materials not provided as of the date of expiration or termination). Any expiration or termination of this Agreement shall be without prejudice to the rights of either Party against the other accrued or accruing under this Agreement prior to expiration or termination, including the obligation to pay royalties for Product(s) or Compound sold prior to such expiration or termination. Termination of supply-related agreements shall be as set forth in the applicable agreements.

10.7 Survival. The provisions of ARTICLE 6 shall survive the expiration or termination of this Agreement and shall continue in effect for [*]. In addition, the provisions of ARTICLE 1 (to the extent any of the terms defined therein are used in any of the provisions surviving pursuant to this Section 10.7), ARTICLE 5 (to the extent the licenses survive expiration or termination pursuant to Section 10.4, Section 10.5 and/or Section 11.2), ARTICLE 8, ARTICLE 9, ARTICLE 10, and ARTICLE 11 and Sections 2.5, 2.7, 2.8, 2.10, 2.11, and 7.3 – 7.8 shall survive any expiration or termination of this Agreement.

ARTICLE 11. MISCELLANEOUS

11.1 Force Majeure. Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement to the extent such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, potentially including embargoes, war, acts of war (whether war be declared or not), acts of terrorism, insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, fire, floods, or other acts of God, or acts, omissions or delays in acting by any governmental authority or the other Party. The affected Party shall notify the other Party of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake all reasonable efforts necessary to cure such force majeure circumstances.

11.2 Assignment/Change of Control. Except as provided in this Section 11.2, this Agreement may not be assigned or otherwise transferred, nor may any right or obligation hereunder be assigned or transferred, by either Party without the consent of the other Party. Notwithstanding the foregoing, Merck may, without Sutro's consent, assign this Agreement and its rights and obligations hereunder in whole or in part to (x) a Merck Affiliate or (y) in connection with a Change of Control; provided Merck shall inform Sutro of the same in writing after any such assignment to a Third Party pursuant to this clause (y). Sutro may, without Merck's consent, assign this Agreement and its rights and obligations hereunder (except as specified below) in connection with a Change of Control of Sutro; provided, however, that Sutro must notify Merck promptly of [*] any such Change of Control. In the case of any Change of Control involving Sutro (or any of its Affiliates), Merck shall have the right, at any time after such Change of Control (or receipt of such notice of Change of Control, if earlier), to elect any one or more of the following options: (i) [*] any or all then-ongoing Research Programs (and Sutro shall reimburse Merck for any uncredited fees paid by Merck including fees for services or materials not provided as of the date of expiration or termination for the terminated Research Program) whereupon the [*] Research Programs shall, for the further purposes of this Agreement, be deemed to have been [*]; (ii) to require Sutro, including its acquiring party, to adopt reasonable procedures to be agreed upon in writing with Merck to prevent the disclosure of all Information of Merck and its Affiliates and other information with respect to the development and commercialization of molecules that Bind the Target of the Research Program, including Compounds or Products (the "**Sensitive Information**") beyond Sutro personnel having access to and knowledge of Sensitive Information prior to the Sutro Change of Control, and to control the dissemination of Sensitive Information disclosed after the Sutro Change of Control, which procedures shall include reasonable restrictions on the scope of any Sensitive Information to be provided by Merck; (iii) terminate Sutro's involvement on any joint committees; (iv) limit Merck's obligations to provide any reports hereunder to providing just those royalty reports pursuant to Section 7.5 with respect to Merck's total Territory-wide royalty obligations and/or (v) if the Change of Control involves a Person (or an Affiliate of such Person) that has [*] (a "**Competitive Change of Control**"), then Merck shall also have the right to: (A) terminate this Agreement upon written notice to Sutro pursuant to Section 10.3.1 (provided that Sutro shall not have any right to cure) and the effects of termination of this Agreement pursuant to [*] shall apply (provided however, that: (1) the [*] reduction in milestones and royalties as set forth in [*] shall not apply; and (2) Merck's obligations under [*] shall continue to apply); and (B) at any time after such Change of Control (or receipt of such notice of Change of Control, if earlier), to elect any one or more of options (ii), (iii) and (iv) as set forth above in this Section 11.2. For clarity, (x) other than as set forth in this Section 11.2, a Change of Control in Sutro [*]; and (y) neither this Section 11.2 or any Change of Control in Sutro shall affect or prejudice the right of Merck to terminate this Agreement under Section 10.2; provided, however, that

should Merck terminate under Section 10.2 after a Competitive Change of Control, Sections [*] shall not apply and both Parties shall immediately return or destroy the Confidential Information of the other. Any permitted assignee shall assume all obligations of its assignor under this Agreement. This Agreement is binding upon the permitted successors and assigns of the Parties. For purposes of this Section 11.2, a "**Change of Control**" of a Person shall be deemed to occur if such Person is involved in a merger, reorganization or consolidation, or if there is a sale of all or substantially all of such Person's assets or business relating to this Agreement or if a person or group other than the current controlling person or group shall, directly or indirectly, effectively acquire control of the management and policies of such Person. For purposes of this Section 11.2, a "**Change of Control Competing Product**" shall mean any molecule or product (including any modality such as, but not limited to, any small molecule, peptide, protein or other biologic product) which Binds to any Target. Notwithstanding anything to the contrary contained herein, in the event of any Change of Control of a Party after the Effective Date pursuant to which a Third Party acquires, whether directly or indirectly, a majority of the equity interests of such Party (a "**Third Party Acquiror**"), then any Patent Rights, know-how or other intellectual property rights which are owned or controlled by such Third Party Acquiror immediately prior to such Change of Control of such Party will not be deemed to be Controlled by such Party for purposes of this Agreement after such Change of Control, provided that such Third Party Acquiror does not engage in activities under this Agreement (and for clarity, in the event of a Change of Control of Sutro, all Sutro Patent Rights, Pre-Existing Sutro Patent Rights, Sutro Know-How, Pre-Existing Sutro Know-How or other intellectual property rights which were licensed to Merck hereunder prior to the time that such Change of Control of Sutro occurred shall continue to be Controlled by Sutro for purposes of this Agreement and licensed to Merck hereunder following such Change of Control). Any assignment not in accordance with this Section 11.2 shall be void *ab initio.*

11.2.1 Discontinuance of Activities under the Research Program. Notwithstanding the provisions of Section 2.1, Merck shall have the right, in its discretion pursuant to Section 11.2 to cause the Parties to discontinue further activities under a given Research Program at any time prior to expiration of the applicable Research Program Term (on a Research Program-by-Research Program basis) by providing written notice of such discontinuance to Sutro (which notice shall identify the Research Program under which further research activities are being discontinued). Upon delivery of such Research Program discontinuance notice by Merck, the Research Program Term for the applicable Research Program shall immediately end (provided, however, that for clarity, (i) this Agreement shall continue in full force and effect (unless otherwise terminated pursuant to ARTICLE 10), (ii) the Research Program Term for the other Research Program (if any) shall not be affected and (iii) all other rights of Merck hereunder shall not be affected).

11.2.2 Discontinuance of Research Program Activities. Upon discontinuance of the Research Program Term pursuant to Section 11.2.1, as applicable) for a given Research Program, all further Research Program activities under such Research Program shall cease (including all funding obligations of Merck with respect to such Research Program), and in such case, the following shall apply:

11.2.2.1 the other rights and obligations under this Agreement shall not otherwise be affected and shall remain in full force and effect (including (i) any rights and obligations under any other Research Program and (ii) the rights and obligations of Merck to further Research, Develop, Manufacture and Commercialize Compounds and Products in accordance with this Agreement);

11.2.2.2 Sutro shall as soon as practicable (and in any case within [*]) disclose to Merck any Collaboration IP not previously disclosed to Merck;

11.2.2.3 Sutro shall as soon as practicable (and in any case within [*]) return or cause to be returned to Merck all Information and materials delivered or provided by Merck in any medium under such Research Program; and

11.2.2.4 Sutro shall reimburse Merck for any uncredited fees paid by Merck including fees for services or materials not provided as of the date of expiration or termination under such Research Program.

11.3 Use of Affiliates. Merck shall have the right to exercise its rights and perform its obligations under this Agreement either itself or through any of its Affiliates.

11.4 Severability. If any one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, unless the absence of the invalidated provision(s) adversely affects the substantive rights of the Parties. The Parties shall in such an instance use reasonable efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s) which, insofar as practical, implement the purposes of this Agreement.

11.5 Notices. All notices which are required or permitted hereunder shall be in writing and sufficient if delivered personally, sent by facsimile or email (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

if to Sutro, to:	Sutro Biopharma, Inc. 310 Utah Ave, Suite 150 South San Francisco, CA 94080 Attention: Chief Executive Officer
if to Merck, to:	Merck Sharp & Dohme Corp. One Merck Drive Whitehouse Station, NJ 08889-0100 [*]
And	Merck Sharp & Dohme Corp. 2000 Galloping Hill Road [*] Kenilworth, NJ 07033-1310 [*]

or to such other address(es) as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice pursuant to this Section 11.5 shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile or email on a business day (or if delivered or sent on a non-business day, then on the

next business day); (b) on the business day after dispatch if sent by nationally-recognized overnight courier; or (c) on the fifth (5th) business day following the date of mailing, if sent by mail. The Parties hereby agree that, to the extent permitted by law, any notice provided in accordance with this Section 11.5 shall constitute due service of process with respect to any legal proceeding between the Parties arising hereunder and that compliance with the Hague Convention for the Service of Process, if otherwise applicable, shall not be required.

11.6 Applicable Laws. This Agreement shall be governed by and construed in accordance with the laws of the State of New York without reference to any rules of conflict of laws or renvoi.

11.7 Dispute Resolution.

11.7.1 The Parties shall negotiate in good faith and use reasonable efforts to settle any dispute, controversy or claim arising from or related to this Agreement or the breach thereof (a "**Dispute**"). Any Party shall give the other Party written notice of any Dispute not resolved in the normal course of business. Within [*] from the date of delivery of such notice, the receiving Party shall submit to the other Party a written response. The notice and response shall include (a) a statement of that Party's position and a summary of arguments supporting that position, and (b) the name and title of the executive who will represent that Party and of any other person who will accompany the executive. Within [*] from the date of delivery of the initial notice, the executives of both Parties shall meet at a mutually acceptable time and place, and thereafter as often as they reasonably deem necessary, to attempt to resolve the Dispute. These executives shall have the authority to settle the Dispute and shall be at a higher level of management than the persons with direct responsibility for administration of this Agreement. All negotiations pursuant to this paragraph are confidential and shall be treated as compromise and settlement negotiations for purposes of applicable rules of evidence.

11.7.2 If the Parties do not fully settle following the procedure in Section 11.7.1, and a Party wishes to pursue the matter, each dispute, controversy or claim arising from or related to this Agreement or the breach thereof that is not an **"Excluded Claim"** shall be brought in the federal court for the Southern District of New York, if federal jurisdiction is available, or, alternatively, in the state courts in New York City, New York. Each of the Parties hereby submits to the exclusive jurisdiction of such courts for the purpose of any such litigation; provided, that a final judgment in any such litigation shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law. **Each party irrevocably and unconditionally agrees not to assert (a) any objection which it may ever have to the laying of venue of any such litigation in such courts, (b) any claim that any such litigation brought in any such court has been brought in an inconvenient forum, and (c) any claim that such court does not have jurisdiction with respect to such litigation. EACH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT TO A TRIAL BY JURY AND AGREES THAT ANY OF THEM MAY FILE A COPY OF THIS PARAGRAPH WITH ANY COURT AS WRITTEN EVIDENCE OF THE KNOWING, VOLUNTARY AND BARGAINED-FOR AGREEMENT AMONG THE PARTIES IRREVOCABLY TO WAIVE ITS RIGHT TO TRIAL BY JURY IN ANY LITIGATION.**

11.7.3 As used in this Section 11.7, the term "**Excluded Claim**" shall mean a dispute, controversy or claim that concerns (a) a decision by the Joint Research Committee, the

Patent Committee, the Joint Chemistry, Manufacturing and Controls Committee or Merck within the proper scope of the Committee's authority pursuant to Section 2.4, Section 2.5, Section 2.7 or Section 2.8, or an issue concerning the integrity of data submitted to a regulatory agency, neither of which shall be arbitrable or justiciable in any forum; (b) the validity or infringement of a patent, trademark or copyright; or (c) any antitrust, anti-monopoly or competition law or regulation, whether or not statutory. Any action concerning Excluded Claims identified in clauses (b) and (c) of this Paragraph may be brought in any court having jurisdiction. [*]

11.8 Limitation of Liability. Notwithstanding anything to the contrary contained herein, no Party shall be liable to another Party under any theory for any special, incidental, indirect, consequential or other similar damages, or any punitive damages, whether arising directly or indirectly out of the transactions contemplated by this Agreement. To be clear, neither Party shall be entitled to recover for any lost profit or lost sale damages of any kind, whether those claimed damages are direct or indirect.

11.9 Entire Agreement; Amendments. This Agreement, together with the Schedules and Exhibits hereto, contains the entire understanding of the Parties with respect to the subject matter hereof. Any other express or implied agreements and understandings, negotiations, writings and commitments, either oral or written, with respect to the subject matter hereof are superseded by the terms of this Agreement. The Schedules and Exhibits to this Agreement are incorporated herein by reference and shall be deemed a part of this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly executed by authorized representative(s) of both Parties hereto.

Notwithstanding anything to the contrary in the foregoing, that certain confidentiality agreement between the Parties dated as of May 15, 2017, shall remain in full force and effect with respect to the subject matter thereof and information disclosed thereunder.

11.10 Headings. The captions to the several Articles, Sections and subsections hereof are not a part of this Agreement, but are merely for convenience to assist in locating and reading the several Articles and Sections hereof.

11.11 Independent Contractors. It is expressly agreed that Sutro and Merck shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither Sutro nor Merck shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party.

11.12 Waiver. The waiver by either Party hereto of any right hereunder, or of any failure of the other Party to perform, or of any breach by the other Party, shall not be deemed a waiver of any other right hereunder or of any other breach by or failure of such other Party whether of a similar nature or otherwise.

11.13 Waiver of Rule of Construction. Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.

11.14 Certain Conventions. Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit shall be deemed to be a reference to an Article, Section,

subsection, paragraph, clause, Schedule or Exhibit, of or to, as the case may be, this Agreement, unless otherwise indicated. Whenever this Agreement refers to a number of days, unless otherwise specified, such number refers to calendar days. Unless the context of this Agreement otherwise requires, (a) words of any gender include each other gender, (b) words such as "herein", "hereof", and "hereunder" refer to this Agreement as a whole and not merely to the particular provision in which such words appear, (c) words using the singular shall include the plural, and vice versa; and (d) references to the word "include" and "including" shall mean including and including without limitation.

11.15 Business Day Requirements. In the event that any notice or other action or omission is required to be taken by a Party under this Agreement on a day that is not a business day (excluding notices required under Section 3.5), then such notice or other action or omission shall be deemed to be required to be taken on the next occurring business day.

11.16 Counterparts. This Agreement may be signed in any number of counterparts (including by facsimile or electronic transmission), each of which shall be deemed an original, but all of which shall constitute one and the same instrument. After facsimile or electronic transmission, the Parties agree to execute and exchange documents with original signatures.

[Signature page follows.]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

MERCK SHARP & DOHME CORP.	**SUTRO BIOPHARMA, INC.**
BY: /s/ Benjamin Thorner	BY: /s/ William J. Newell
Benjamin Thorner	William J. Newell
TITLE: SVP & Head of BD&L	TITLE: CEO

SCHEDULES

SCHEDULE 1.96	**PATENT RIGHTS**
SCHEDULE 2.1	**RESEARCH PLAN**
SCHEDULE 4.1	**KEY SUPPLY TERMS**
SCHEDULE 5.1.1	**STANFORD IN-LICENSE SUBLICENSING REQUIREMENTS**
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SCHEDULE 8.2.5	**[*]**
SCHEDULE 8.3	**THIRD PARTY LICENSES**

***Confidential Treatment Requested.**

SCHEDULE 1.96

PATENT RIGHTS

PATENTS AND PATENT APPLICATIONS LICENSED FROM STANFORD

[*]

***Confidential Treatment Requested.**

SCHEDULE 2.1

RESEARCH PLAN FOR FIRST RESEARCH PROGRAM

[*]

***Confidential Treatment Requested.**

SCHEDULE 4.1

KEY SUPPLY TERMS

[*]

***Confidential Treatment Requested.**

SCHEDULE 5.1.1

Stanford In-License Sublicensing Requirements

Purusant to Section 5.1.1, Merck hereby agrees to [*] Stanford In-License [*] of the Stanford In-License.

Sec. 1. The following provisions of the Stanford In-License (Articles 9 and 10) are hereby included in the Agreement, and [*]

9 WARRANTIES AND NEGATION OF WARRANTIES

9.1. Warranties. Stanford warrants and represents that (a) it has the right and authority to enter into this Agreement and to grant licenses of the scope granted in this Agreement and (b) Stanford has not previously granted any rights in the Licensed Patents other than the rights and licenses granted in the Pre-Existing Licenses and will not grant any further rights in the Licensed Patents that are inconsistent with the rights and licenses granted to Sutro herein. For purposes of clarity, Sutro acknowledges that it has been made aware by Stanford of the scope of the field of use of the Pre-Existing Licenses.

9.2. Negation of Warranties. Except as expressly set forth in this Agreement, Stanford makes no representations and extends no warranties of any kind, either express or implied. Among other things, Stanford disclaims any express or implied warranty:

(A) of merchantability, of fitness for a particular purpose,

(B) of non-infringement or

(C) arising out of any course of dealing.

9.2. No Representation of Licensed Patent. Sutro also acknowledges that Stanford does not represent or warrant:

(A) the validity or scope of any Licensed Patent, or

(B) that the exploitation of Licensed Patent or Technology will be successful.

10 INDEMNITY

10.1. Indemnification. Sutro will indemnify, hold harmless, and defend all Stanford Indemnitees against any and all third party claims for death, illness, personal injury, property damage, and improper business practices arising out of the manufacture, use, sale, or other disposition of the Licensed Patents or Licensed Products by Sutro or any sublicensee, unless resulting from a claimed breach by Stanford of its warranties or the gross negligence or willful misconduct of any Stanford Indemnitee; provided that:

(A) Sutro receives prompt notice of any such claim,

(B) Sutro shall not be obligated to indemnify any Stanford Indemnitee in connection with any settlement for any claim unless Sutro consents in writing to such settlement (which consent shall not be unreasonably withheld), and

(C) Sutro shall have the first right to defend any such claim and, if Sutro elects to exercise such first right, the exclusive right to control the defense thereof.

Notwithstanding the foregoing, Sutro shall have no obligations for any third party claim or demand that may be the subject of this Section 10.1 if the Stanford Indemnitee seeking indemnification makes any admission regarding such claim without the prior written consent of Sutro, which consent shall not be unreasonably withheld.

10.2. No Indirect Liability. Neither party shall be liable for any special, consequential, lost profit, expectation, punitive or other indirect damages in connection with any claim arising out of or related to this Agreement, whether grounded in tort (including negligence), strict liability. contract, or otherwise arising out of or in connection with solely this Agreement under any theory of liability; provided, however, that the foregoing shall not apply to any right of action for infringement, contributory infringement or inducement of infringement Stanford may have under any applicable law. Except as provided in Section 9.1, Stanford shall not have any responsibilities or liabilities whatsoever with respect to Licensed Products.

10.3. Workers' Compensation. Sutro will comply with all statutory workers' compensation and employers' liability requirements for activities performed under this Agreement.

10.4. Insurance. During the term of this Agreement, Sutro will maintain Comprehensive General Liability Insurance, including Product Liability Insurance, with a reputable and financially secure insurance carrier to cover the activities of Sutro and its sublicensees. Upon introduction of Licensed Product into humans, such insurance will provide minimum limits of liability of [*] and will include all Stanford Indemnitees as additional insureds. Such insurance shall be written to cover claims incurred, discovered, manifested, or made during or after the expiration of this Agreement and must be placed with carriers with ratings of at least A- as rated by A.M. Best. Within 15 days of the introduction of Licensed Product into humans. Sutro will furnish a Certificate of Insurance evidencing primary coverage and additional insured requirements. Sutro will provide to Stanford 30 days prior written notice of cancellation or material change to this insurance coverage. Sutro will advise Stanford in writing that it maintains excess liability coverage (following form) over primary insurance for at least the minimum limits set forth above. All insurance of Sutro will be primary coverage; insurance of Stanford and Stanford Hospitals and Clinics will be excess and noncontributory. Notwithstanding the foregoing, if Sutro proposes alternative coverage under this Section 10.4, Stanford shall not unreasonably withhold its consent to such alternative coverage in lieu of the coverage detailed in this Section 10.4, so long as the proposed coverage is reasonable and customary for the industry and reasonably protects Stanford's interests."

[*]

***Confidential Treatment Requested.**

SCHEDULE 6.1

SUTRO PRESS RELEASE

Sutro Biopharma Collaborates with Merck to
Develop Therapeutics for Cancer and Autoimmune Disorders

- Sutro's Cell-free Protein Synthesis Technology is Paired With
Merck's Immunology & Cancer Expertise -

SOUTH SAN FRANCISCO, July 24th, 2018 –Sutro Biopharma, Inc., has signed a collaboration and licensing agreement with Merck, known as MSD outside the United States and Canada, to discover and develop novel immune-modulating therapies for cancer and autoimmune disorders.

The research and development activities will leverage Sutro's proprietary cell-free protein synthesis and site-specific conjugation platforms, which facilitate precision design and rapid empirical optimization of protein conjugates, to discover and develop best-in-class immune-modulating cytokine derivatives for both oncology and autoimmune indications.

Under the agreement, Sutro will be primarily responsible for preclinical research and Merck will gain exclusive worldwide rights to therapeutic candidates derived from the collaboration.

Sutro will receive an upfront payment of $60 million and is eligible for milestone payments totaling up to $1.6 billion associated with the development and sale of all therapeutic candidates and all possible indications identified under the collaboration, as well as tiered royalties on the sale of products.

"There's an urgent need for novel, targeted and well-tolerated therapies with improved therapeutic profiles for cancer and autoimmune disease," Sutro CEO Bill Newell said.

Dr. Joe Miletich, Senior Vice President, Discovery, Preclinical and Early Development, Merck Research Laboratories, said: “Sutro has an impressive suite of technologies that make possible the discovery, characterization and manufacture of novel therapeutic proteins in a timely manner. We look forward to collaborating with Sutro to further expand our pipeline of promising candidates targeting oncology and autoimmune diseases.”

About Sutro Biopharma

Sutro Biopharma, located in South San Francisco, is a clinical-stage drug discovery, development and manufacturing company creating a broad variety of next-generation protein therapeutics for oncology based on its proprietary, cell-free protein synthesis platform, XpressCF.

Sutro is dedicated to transforming the lives of cancer patients by creating medicines with improved therapeutic profiles for areas of unmet need.

Sutro designs cytokine-based immuno-oncology therapies, antibody-drug conjugates, and bispecific antibodies primarily directed at clinically-validated targets for which the current standard of care is suboptimal.

Sutro’s platform allows it to accelerate discovery and development of first-in-class and best-in-class molecules through rapid and systematic evaluation of protein structure-activity relationships to create optimized homogeneous product candidates.

In addition to developing its own oncology pipeline, Sutro is collaborating with select pharmaceutical and biotech companies to discover and develop novel, next generation therapeutics. As the pace of clinical development accelerates, Sutro and its partners are demonstrating a more efficient approach to killing tumors without harming healthy cells.

Follow Sutro on Twitter, @Sutrobio, and at www.sutrobio.com to learn more about our passion for changing the future of oncology.

# # #

Media Contacts

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SCHEDULE 7.1

WIRE TRANSFER DETAILS

(NEXT PAGE)

The following information is provided to assist clients in routing wire transfers **TO** [*] in the most expeditious manner.

For all incoming foreign currency wires, please contact out Foreign Exchange Trading Deck [*] for settlement instructions.

DOMESTIC WIRE TRANSFER

[*]

TO:	[*]
ROUTING & TRANSIT #:	[*]
FOR CREDIT OF {Account Name}:	Sutro Biopharma Inc
ADDRESS {your Address}:	310 Utah Avenue Suite 150
ADDRESS {line 2}:	South San Francisco, CA 94080
CREDIT ACCOUNT #:	[*]
BY ORDER OF:	[NAME OF SENDER]

INTERNATIONAL WIRE TRANSFER

Instruct the paying financial institution to advise their U.S. correspondent to pay as follows:

PAY TO:	[*]
ROUTING & TRANSIT #:	[*]
SWIFT CODE:	[*]
FOR CREDIT OF {Account Name}:	Sutro Biopharma Inc
ADDRESS {your Address}:	310 Utah Avenue Suite 150
ADDRESS {line 2}:	South San Francisco, CA 94080
FINAL CREDIT ACCOUNT #:	[*]
BY ORDER OF:	[NAME OF SENDER]

IMPORTANT!!!!

Wire instructions MUST designate your **FULL TEN DIGIT ACCOUNT NUMBER**. Wires received by [*] with INCOMPLETE or INVALID ACCOUNT NUMBERS may be delayed and could possibly require return to the sending bank due to new regulations.

***Confidential Treatment Requested.**

SCHEDULE 8.2

EXCEPTIONS TO REPS & WARRANTIES

[*]

***Confidential Treatment Requested.**

SCHEDULE 8.2.5

[*]

***Confidential Treatment Requested.**

SCHEDULE 8.3

THIRD PARTY LICENSES

(NEXT PAGE)

AMENDED AND RESTATED EXCLUSIVE AGREEMENT

This Agreement between THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY ("Stanford"), an institution of higher education having powers under the laws of the State of California, and Fundamental Applied Biology, Inc. ("FAB"), a corporation having a principal place of business at 1455 Adams Drive, Bldg. 15, Suite 1015, Menlo Park, CA 94025, is effective on the 3 day of October, 2007 ("Effective Date").

1 BACKGROUND

1.1 Stanford has an assignment of certain inventions invented in the laboratory of Dr. James Swartz, entitled as follows:

- "Mimicking the cellular environment with in vitro synthesis" described in Stanford Docket S02-181,
- "Cell-free synthesis of active mammalian proteins containing multiple disulfide bonds" described in S00-156,
- "Enhanced In Vitro Synthesis", described in S99-130,
- "Efficient Scale-up of Protein Synthesis using Unrestricted Drops", described in S03-168,
- "In vitro Protein Synthesis using ATP Regeneration System", described in S98-199,
- "An Economical Cell-free Protein Synthesis Method Using Nucleoside Monophosphates and Glucose", described in S03-316,
- "Antifoams for Enhanced and Efficient Scale-Up of Protein Synthesis in Cell-Free Expression Systems", described in S04-041,
- "High-yield Expression of Membrane Proteins Using Cell-free Protein Synthesis", described in S05-339,
- "Total Amino Acid Stabilization during Cell Free Protein Synthesis", described in S05-044,
- "An Improved Method for the Use of Glucose in Cell-free Synthesis of Proteins Containing Disulfide Bonds", described in S06-146,
- Cell-free Synthesis of Unnatural Amino Acid Incorporated Virus-like Particles for Site-specific Post-translational Modification, described in S06-257, and
- "High-yield Expression of Complex Proteins Containing Unnatural Amino Acids Using Cell-free Protein Synthesis", described in S06-254,

The inventions were made in the course of research supported by the NIH. Stanford wants to have the inventions perfected and marketed as soon as possible so that resulting products may be available for public use and benefit.

1.2 The Parties entered into a license agreement dated July 1, 2004 (the "Original License Agreement") pursuant to which Stanford granted FAB a license to certain inventions described in Stanford Dockets S02-181, S00-156, S99-130, S03-168 and S98-199, all as further set forth in the Original License Agreement.

1.3 The Parties entered into an Option agreement dated July 2005 (the "Option Agreement") pursuant to which Stanford granted an option to FAB to obtain an exclusive license to certain inventions described in Stanford dockets S03-316, S04-041, S05-044 and S03-208 (S03-208 having since been abandoned).

1.4 Stanford dockets S99-130, S98-199, and S00-156 are non exclusively licensed to Roche. FAB acknowledges that it has been made aware by Stanford of the scope of the field of use of the Roche License. Additionally, Stanford dockets S03-316, and S05-044 are non exclusively licensed to Genencor, and Stanford dockets S98-199, S99-130, and S00-156 are non exclusively licensed to Invitrogen. FAB acknowledges that it has been made aware by Stanford of the scope of the field of use of these licenses.

1.5 The Parties now desire to amend certain terms of the Original License Agreement, to include certain additional inventions described in Stanford Dockets S03-316, S04-041, S05-339, S05-044, S06-146, S06-257 and S06-254 within the licenses granted therein, and to restate the Original License Agreement as amended in its entirety in this amended and restated license agreement ("Agreement").

2 DEFINITIONS

2.1 "Control" means with respect to a given Licensed Product, the possession by FAB (whether by ownership or license) of the right to grant a license to make, use, sell, offer for sale and import such Licensed Product without giving rise to a violation of the terms of any agreement or other arrangement between FAB and any third party.

2.2 "Change of Control" means the occurrence of any of the following: (a) any consolidation or merger of FAB with or into any third party, or any other corporate reorganization involving a third party, in which those persons or entities that are stockholders of FAB immediately prior to such consolidation, merger or reorganization own less than fifty percent (50%) of the surviving entity's voting power immediately after such consolidation, merger or reorganization; (b) a change in the legal or beneficial ownership of fifty percent (50%) or more of the voting securities of FAB (whether in a single transaction or series of related transactions) where, immediately after giving effect to such change, the legal or beneficial owners of more than fifty percent (50%) of the voting securities of FAB are third parties that are not an affiliate of License; or (c) the sale or other disposition for value of all or substantially all of FAB's assets in one or a series of related transactions to a third party that is not an affiliate of FAB.

2.3 "Exclusive" means that, (i) except for those licenses granted under the Pre-Existing Licenses, Stanford has not previously granted any rights or licenses to any third party under the Licensed Patents in the Licensed Field of Use, and (ii) subject to Section 3.4 and Article 5, Stanford will not grant further licenses under the Licensed Patents in the Exclusive Licensed Field of Use in the Licensed Territory.

2.4 "Exclusive Licensed Field of Use" means all fields of use other than the "Non-Exclusive Licensed Field of Use"

2.5 "FAB Licensed Product" means a Licensed Product which is Controlled by FAB and is being actively developed by FAB for its own account (or in the case of a Licensed Product which FAB has sublicensed to a sublicensee, was being actively developed by FAB for its own account prior to being sublicensed). Notwithstanding the foregoing, it is understood and agreed that should this Agreement be assigned to a sublicensee pursuant to a Change of Control, any non-FAB Licensed Products that are being developed by such sublicensee pursuant to such sublicense prior to such Change of Control shall continue to be considered non-FAB Licensed Products for purposes of this Agreement.

2.6 "Licensed Field of Use'' means the Exclusive Licensed Field of Use and the Non-Exclusive Licensed Field of Use, collectively.

2.7 "Licensed Patent" means (i) the patents and patent applications listed in Appendix D, (ii) any foreign patent application corresponding thereto, (iii) any divisional, continuation, CIP or reexamination application of any of the preceding, and (iv) each patent that issues or reissues from any of these patent applications. Any claim of an unexpired Licensed Patent is presumed to be valid unless it has been held to be invalid by a final judgment of a court of competent jurisdiction from which no appeal can be or is taken. Notwithstanding the foregoing, if a claim of a pending patent application within the Licensed Patent has not issued as a claim of an issued patent within the Licensed Patent within eight (8) years after the filing date from which such claim takes priority, such pending claim shall cease to be a valid claim for purposes of this Agreement until such time as the claim actually issues. As used herein, "CIPs" means those claims in any continuation-in-part of the patent applications in (i) or (ii) above that are entitled to the priority date of the parent application, and filed within two years of the Effective Date, share the same inventor or same set of inventors as the parent application, and are not encumbered by prior obligations to third parties.

2.8 "Licensed Product" means a product or part of a product in the Licensed Field of Use, the making, using, importing or selling of which, absent this license, infringes, induces infringement, or contributes to infringement of a valid claim of a Licensed Patent.

2.9 "Licensed Service" means commercial services provided on a fee-for-service basis under a contract with a third party, where such services are based on the use of an invention claimed in a Licensed Patent for its intended commercial purpose. Notwithstanding the foregoing, it is understood that Licensed Service shall not include any service involving or performed in connection with the research or development of a Licensed Product by or for FAB or any sublicensee.

2.10 "Licensed Territory'' means worldwide.

2.11 "Net Sales" means all gross revenue received by FAB from sales of Licensed Product, as well as all gross revenue received by sublicensees on sales of FAB Licensed Product. Net Sales excludes the following items (but only as they pertain to the making, using, importing or selling of Licensed Products, are included in gross revenue, and are separately accounted for):

(A) import, export, excise and sales taxes, and custom duties;

(B) costs of insurance, packing, and transportation from the place of manufacture to the customer's premises or point of installation;

(C) costs of installation at the place of use;

(D) refunds, credit for returns, allowances, or trades; and

(E) customary rebates, cash and trade discounts, actually taken.

2.12 "Net Service Revenue" means revenue received by FAB as consideration for FAB's providing a third party with Licensed Services. For purposes of clarity, it is understood that Net Service Revenue shall not include funding received for the research and/or development of Licensed Products themselves.

2.13 "Net Sublicensing Fees" means upfront and milestone payments received by FAB from a sublicensee in consideration of the grant of a sublicense under the Licensed Patents. For purposes of clarity, it is understood that Net Sublicensing Fees shall not include amounts received as (i) loans; (ii) equity investments in FAB (including conditional equity, such as warrants, convertible debt and the like); (iii) reimbursements of patent prosecution costs and patent maintenance expenses, (iv) reimbursements for research and development work to be performed by FAB (including fully burdened FTE costs), and (v) advances on earned royalties payable under Section 7.5, payments for the supply of products or materials, and any taxes withheld at the source (unless and until FAB recoups such taxes).

2.14 "Non-Exclusive Licensed Field of Use" means the sale of research tools for use as research reagents.

2.15 "Pre-Existing Licenses" mean, collectively, (i) that certain license agreement between Roche Diagnostics GmbH and Stanford with an effective date of March 20, 2001 ("Roche License"), (ii) that certain nonexclusive patent and technology license agreement between Genencor International, Inc., and Stanford with an effective date of October 11, 2004, and (iii) that certain nonexclusive agreement between Invitrogen Corporation and Stanford with an effective date of November 3 2004.

2.16 "Stanford Indemnitees" means Stanford and Stanford Hospitals and Clinics, and their respective trustees, officers, employees, students, and agents.

3 GRANT

3.1 **Grant.** Subject to the terms and conditions of this Agreement, Stanford grants FAB a license under the Licensed Patents in the Licensed Field of Use to make, have made, use, import, offer to sell and sell Licensed Product, to practice any method, process, or procedure within the Licensed Patents, and to otherwise exploit the Licensed Patents in the Licensed Territory.

3.2 **Exclusivity.** The license granted under Section 3.1 is Exclusive, including the right to sublicense under Article 4, in the Exclusive Licensed Field of Use beginning on the Effective Date and ending on the expiration of the last to expire Licensed Patent ("Exclusive Term").

3.3 **Nonexclusivity.** The license granted under Section 3.1 shall be non-exclusive in the Non-Exclusive Licensed field of Use until the last Licensed Patent expires.

3.4 **Retained Rights.** Stanford retains the right, on behalf of itself and all other non-profit academic research institutions, to practice the Licensed Patent for any non-profit purpose, including sponsored research and collaborations. FAB agrees that, notwithstanding any other provision of this Agreement, it has no right to enforce the Licensed Patent against any such institution. Stanford and any such other institution have the right to publish any information included in a Licensed Patent.

3.5 **Specific Exclusion.** Stanford does not:

(A) grant to FAB any other licenses, implied or otherwise, to any patents or other rights of Stanford other than those rights granted under Licensed Patent, regardless of whether the patents or other rights are dominant or subordinate to any Licensed Patent, or are required to exploit any Licensed Patent;

(B) commit to FAB to bring suit against third parties for infringement, except as described in Article 14; and

(C) agree to furnish to FAB any technology or technological information or to provide FAB with any assistance.

4 SUBLICENSING

4.1 **Permitted Sublicensing.**

(A) Subject to the requirements of Section 4.3 below, FAB shall be free to grant and authorize sublicenses in the Exclusive Licensed Field of Use during the Exclusive Term.

(B) Subject to the requirements of Section 4.3 below, FAB may grant and authorize sublicense(s) within the Non-Exclusive Licensed Field of Use, but only for Licensed Products discovered, developed or Controlled, in whole or in part, by FAB, or in combination with a license or sublicense of other patents or technology controlled by FAB.

4.2 **Required Sublicensing.**

(A) If at any time after the [*] of the Effective Date, Stanford receives from a third party with adequate resources, a bona fide proposal to develop a Licensed Product for a non-pharmaceutical use within the Exclusive Licensed Field of Use which FAB is currently not addressing, Stanford will notify FAB. Prior to notifying FAB of such proposal, Stanford will require that such third party provide Stanford with a written plan for the development of such product, such plan to be in sufficient detail to enable Stanford to assess the third party's capability to develop such product.

(B) If FAB (itself or through an affiliate or sub licensee) has not been developing, producing, using, or selling a Licensed Product that is substantially similar to, or intended for a similar purpose or application as, the proposed product referred to in subsection (A) above, and the development or sublicensing of such a Licensed Product is not reasonably within FAB's business plans, then FAB shall elect one of the following three options and shall notify Stanford in writing within thirty (30) days of Stanford's written notice to FAB whether it will:

(1) undertake reasonable efforts to develop, produce, sell, use, or sublicense a Licensed Product that is substantially similar to or intended for a similar purpose or application as the product in such proposal;

(2) allow Stanford the right to grant a license to such third party under the Licensed Patents to make, use, sell, offer for sale and import such product; or

(3) enter into negotiations directly with such third party to sublicense such third party under one or more of the Licensed Patents.

The provisions of Section 4.2 shall not preclude FAB and Stanford from discussing whether the development of such a Licensed Product is in the parties overall best interests, and if FAB and Stanford agree it is not, then the decision not to proceed will be communicated to such third party.

4.3 **Sublicense Requirements.** Any sublicense granted by FAB under this Agreement:

(A) is subject to the terms and conditions of this Agreement, except that the financial terms may differ;

(B) FAB's sublicensees shall have the right to grant further sublicenses under the Licensed Patents, provided that all sublicenses granted by FAB will reflect that any sublicense(s) granted by such sublicensee will not include the right to further sublicense.

(C) will expressly include the provisions of Articles 9 and 10 for the benefit of Stanford, and shall expressly include provisions under which FAB has rights similar to Stanford's rights in Section 8.4 and 8.5 (which FAB will exercise for Stanford at Stanford's request and expense, provided that if the audit reveals an underreporting of earned royalties due Stanford of [*]% or more for the period being audited, FAB or the sublicensee shall bear such audit costs); and

(D) will require the transfer of all applicable obligations with respect to the sublicense, including the payment of royalties specified in the sublicense (up to the earned royalty rates set forth in Article 7), to Stanford or its designee, if this Agreement is terminated. For purposes of clarity, it is agreed that in the event this Agreement is terminated, Stanford shall have audit rights substantially similar to those set forth in Section 8.5 with respect to any surviving sublicenses.

(E) will extend to Stanford the benefit of any provisions included in such sublicense that are analogous to the provisions contained in Section 7.6 of this Agreement.

4.4 **Copy of Sublicenses.** FAB will submit to Stanford a redacted copy of each sublicense granted pursuant to this Article 4, which copy shall provide Stanford with sufficient information to enable Stanford to ascertain that any such sublicense is in conformance with this Agreement and shall include but not be limited to the following information relating to this Agreement: royalty reporting, warranty and indemnification obligations. Such redacted sublicense shall be considered FAB's confidential information under Section 19.5.

4.5 **Sharing of Sublicensing Income**. FAB will pay to Stanford:

(A) [*] of all Net Sublicensing Fees received in [*] and [*];

(B) [*] of all Net Sublicensing Fees received in [*] and [*];

(C) [*] of all Net Sublicensing fees received in [*] or thereafter.

4.6 **Royalty-Free Sublicenses**. As long as FAB agrees to be responsible for paying all royalties due Stanford on a sublicensee's sale of Licensed Product, FAB may grant that sublicensee a fully paid-up and royalty-free:

(A) sublicense or

(B) cross-license.

5 GOVERNMENT RIGHTS

This Agreement is subject to Title 35 Sections 200-204 of the United States Code. Among other things, these provisions provide the United States Government with nonexclusive rights in the Licensed Patent. To the extent required under Title 35 Section 204 of the United States Code, FAB will impose the obligation that Licensed Product sold or produced in the United States be "manufactured substantially in the United States" unless a waiver is obtained from the United States Government. FAB will ensure all obligations of these provisions are met.

6 DILIGENCE

6.1 **Milestones**.

(A) Because the invention is not yet commercially viable as of the Effective Date, FAB will use commercially reasonable efforts to develop, manufacture, and sell Licensed Product and will develop markets for Licensed Product.

(B) In addition to its general diligence obligation under Section 6.1(A) above, FAB will use commercially reasonable efforts to meet the milestones shown in Appendix A, and will notify Stanford in writing as each milestone is met.

(C) If FAB fails to fulfill its diligence obligations under Sections (A) or (B) above, Stanford may, upon written notice, terminate this agreement pursuant to Section 15.2.

6.2 **Progress Report**.

(A) By March 1 of each year until FAB markets a Licensed Product, FAB will submit a written annual report to Stanford covering the preceding calendar year. The report will include information sufficient to enable Stanford to satisfy reporting requirements of the U.S. Government and for Stanford to ascertain progress by FAB toward meeting this Agreement's diligence requirements. Each report will describe, where relevant: FAB' s progress toward commercialization of Licensed Product, including a summary of work completed, key scientific discoveries, summary of work-in-progress, current schedule of anticipated events or milestones, market plans for introduction of Licensed Product, and significant corporate transactions involving Licensed Product.

(B) All reports provided to Stanford under this Section 6.2 shall be deemed FAB's Confidential Information and shall be protected as such pursuant to Section 19.5.

6.3 **Clinical Trial Notice**. FAB will notify Stanford prior to commencing any clinical trials at Stanford.

7 ROYALTIES

7.1 **Issue Royalty**.

(A) FAB will pay to Stanford a nonrefundable license issue royalty of [*] upon signing this Agreement, [*] of which shall be creditable against past patent costs due Stanford under Section 7.1B below.

(B) FAB will pay an additional issue fee to Stanford of $184,473.83 as reimbursement for all previously unreimbursedout-of-pocket costs incurred by Stanford in filing, prosecuting and maintaining the Licensed Patents before the Effective Date.

(C) The parties acknowledge that a license maintenance fee of [*] was due on September 1, 2007 under the Original License Agreement for the 12 month period commencing September 1, 2007 and ending August 31, 2008. As satisfaction in full of its payment obligations under the Original License Agreement with respect to the above referenced license maintenance fee, FAB will pay to Stanford an additional issue fee of [*] which represents the *pro rata* portion of the above referenced license maintenance fee due for the months of September and October 2007.

7.2 **Equity Interest**. As further consideration for the licenses granted hereunder, FAB will, subject to Stanford's execution and delivery to FAB of FAB's standard stock purchase agreement, grant to Stanford [*] shares of common stock in FAB. When issued, these shares, together with the [*] shares previously issued to Stanford will represent [*] of the capital stock of FAB. The shares shall be issued directly as follows:

- [*]% issued to The Board of Trustees of the Leland Stanford Junior University
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]
- [*]% issued to [*]

7.3 **License Maintenance Fee**. FAB will pay Stanford a yearly license maintenance fee in the following manner:

$[*] on the 1st anniversary of the Effective Date;

$[*] on the 2nd anniversary of the Effective Date;

$[*] on the 3rd anniversary of the Effective Date;

$[*] on the 4th anniversary of the Effective Date

$75,000 on the 5th anniversary of the Effective Date and on each anniversary the Effective Date thereafter until expiration or earlier termination of this Amended and Restated Agreement.

Yearly maintenance payments are nonrefundable, but they are creditable each year as described in Section 7.7.

7.4 **Milestone Payments**.

(A) FAB will pay Stanford the following milestone payments:

- $[*] upon the first to occur of:
  - initiation of the first pre-clinical animal study for the first FAB Licensed Product in the Territory, or
  - first successful [*] liter scale production of the first Licensed Product; or
  - the [*] year anniversary of the Effective Date.
- $[*] upon the first to occur of:
  - enrollment of first patient for the first Phase I clinical trial for the first FAB Licensed Product in the Territory;
  - the [*] anniversary of the Effective Date.

- $[*] upon the first to occur or:
  - enrollment of first patient for first Phase II clinical trial for the first FAB Licensed Product in the Territory, or
  - first successful [*] liter scale production of the first Licensed Product; or
  - the [*] anniversary of the Effective Date.
- $[*] upon first to occur of:
  - enrollment of first patient in the first Phase III trial for the first FAB Licensed Product in the Territory; or
  - the [*] anniversary of the Effective Date.
- $750,000 upon first to occur of;
  - first commercial sale for the first FAB Licensed Product in the Territory; or
  - the fourteenth anniversary of the Effective Date.

(B) For the avoidance of doubt, it is understood and acknowledged that each of the milestone payments set forth in Section 7.4(A) shall be payable once and only once and that the total amount payable to Stanford under this Section 7.4 shall in no event exceed $930,000.

(C) It is further agreed that in the event that FAB receives a milestone payment from a sublicensee and the milestone event giving rise to such milestone payment also triggers a payment obligation on the part of FAB under this Section 7.4, FAB shall be obligated to pay to Stanford only a single payment, such payment to be the higher of the applicable milestone payment set forth in Section 7.4A above and the payment owing to Stanford under Section 4.5 above with respect to such milestone payment from such sublicensee.

7.5 **Earned Royalty**.

(A) FAB will pay Stanford an earned royally on sales of Licensed Products by FAB and its sublicensees as follows:

(1) [*]% of Net Sales of FAB Licensed Products sold by FAB sublicensees;

(2) [*]% of Net Sales of non-FAB Licensed Products (i.e., Licensed Products other than FAB Licensed Products) sold by FAB; and

(3) [*]% of the royalties received from sublicensees on sales of non-FAB Licensed Products (i.e., Licensed Products other than FAB Licensed Products) sold by the sublicensees.

(B) FAB will pay Stanford an earned royalty of [*]% of Net Services Revenue on sales of Licensed Services in countries where the sale or use of such Licensed Services would infringe a valid claim of the Licensed Patents.

7.6 **Earned Royalty if FAB Challenges the Patent**. Notwithstanding the above, should FAB initiate an action seeking to invalidate any Licensed Patent, FAB will pay royalties to Stanford at the rate of [*] percent ([*]%) of the Net Sales of all Licensed Products sold during the pendency of such action that would infringe such Licensed Patent but for the licenses granted herein. Moreover, should the outcome of such action determine that any claim of a patent challenged by FAB is both valid and infringed by a Licensed Product, FAB will pay royalties at the rate of [*] percent ([*]%) of the Net Sales of all Licensed Products sold that would infringe such Licensed Patent but for the licenses granted herein. For purposes of clarity, in the event that FAB files a counterclaim asserting invalidity of one or more Licensed Patents in response to an actual suit by Stanford, FAB shall not be deemed to have initiated an action to invalidate a Licensed Patent and this Section 7.6 shall not apply with respect to such action. Additionally, it is further agreed that in the event that Stanford threatens to bring an action against FAB with respect to the Licensed Patents, then FAB shall have the right to request from Stanford written assurances that Stanford will not bring such suit or action. In the event that Stanford does not provide such written assurances to FAB within thirty (30) days of FAB's request for such assurances, then this Section 7.6 shall not apply with respect to any action for declaratory judgment which FAB may subsequently file in response to such threatened suit or action.

7.7 **Creditable Payments**. The license maintenance fee for a year may be offset against earned royalty payments due on Net Sales occurring in that year.

For example:

(A) if FAB pays Stanford a $10 maintenance payment for year Y, and according to Section 7.5 $15 in earned royalties are due Stanford for Net Sales in year Y, FAB will only need to pay Stanford an additional $5 for that year's earned royalties.

(B) If FAB pays Stanford a $10 maintenance payment for year Y, and according to Section 7.5 $3 in earned royalties are due Stanford for Net Sales in year Y, FAB will not need to pay Stanford any earned royalty payment for that year. FAB will not be able to offset the remaining $7 against a future year's earned royalties.

7.8 **Sales in Non-Patent Countries**. The earned royalties set forth in Section 7.5 above shall be reduced by [*] ([*]%) with respect Licensed Products and Licensed Services sold in countries where the sale of such Licensed Products or Licensed Services would not infringe a valid claim of the Licensed Patents.

7.9 **Buy-out Option**. In the event of a Change of Control, FAB may, upon payment to Stanford of a one-time buy-out fee, terminate its royalty obligations under Sections 7.5(A)(2), 7.5(A)(3) and 7.5(B) as well as its obligation to pay yearly license maintenance fees under Section 7.3. The one-time buy-out fee shall be determined as set forth below:

- $[*] in the event that the aggregate consideration payable to FAB in such Change of Control (less any amounts necessary to satisfy outstanding debt obligations of FAB) does not exceed, on a per share basis, [*] the original issue price of FAB's then-most senior series of preferred stock (or other equivalent senior security); or

- In the event that the aggregate consideration payable to FAB in such Change of Control (less any amounts necessary to satisfy outstanding debt obligations of FAB) exceeds, on a per share basis, [*] the original issue price of FAB's then-most senior series of preferred stock (or other equivalent senior security), then the one-time buy-out fee shall be:
  - $[*] if the proceeds from such Change of Control are less than $[*], or
  - $[*] in the event the proceeds from such Change of Control equal or exceed $[*].

Notwithstanding the foregoing, in the event of a Change of Control in which FAB is acquired by a contract manufacturing organization or similar entity that is not engaged in the business of developing its own proprietary pharmaceuticals, biologics, or other therapeutic agents, then the buy-out option described in this Section 7.9 shall not be exercisable unless and until such acquirer files an Investigational New Drug Application (as defined in the U.S. Food, Drug and Cosmetic Act, as amended and the regulations promulgated thereunder) for a FAB Licensed Product.

7.10 **Obligation to Pay Royalties**. If this Agreement is not terminated in accordance with other provisions hereof, FAB's royalty obligations hereunder with respect to Licensed Products shall continue for so long as FAB, by its activities with respect to such Licensed Products, would, but for the license granted herein, infringe a valid claim of the Licensed Patents covering said activity. Nonetheless, if certain Licensed Products are made, imported, or offered for sale before the date this Agreement terminates, and those Licensed Products are sold after the termination date, FAB will continue to be obligated to pay Stanford an earned royalty on the sale of those Licensed Products; provided FAB's obligation to pay royalties will end one year after the expiration of the last to expire of the Licensed Patents.

7.11 **Currency**. FAB will calculate the royalty on sales in currencies other than U.S. Dollars using the appropriate foreign exchange rate for the currency quoted by the Bank of America (San Francisco) foreign exchange desk, on the close of business on the last banking day of each calendar quarter. FAB will make royalty payments to Stanford in U.S. Dollars.

7.12 **Non-U.S. Taxes**. FAB will pay all non-U.S. taxes related to royalty payments. These payments are not deductible from any payments due to Stanford.

7.13 **Interest**. Any undisputed payments not made when due will bear interest at the lower of (a) the Prime Rate published in the Wall Street Journal or (b) the maximum rate permitted by law.

8 ROYALTY REPORTS, PAYMENTS, AND ACCOUNTING

8.1 **Quarterly Earned Royalty Payment and Report**. Beginning with the first sale of a Licensed Product, FAB will submit to Stanford a written report (even if there are no sales) and an earned royalty payment (if any is due) within 60 days after the end of each calendar quarter. This report will be in the form of Appendix B

and will state the number, description, and aggregate Net Sales of Licensed Product during the completed calendar quarter. With each report FAB will include any earned royalty payment due Stanford for the completed calendar quarter (as calculated under Section 7.5).

8.2 **No Refund**. In the event that a validity or non-infringement challenge of a Licensed Patent initiated by FAB and subject to Section 7.6 is successful, FAB will have no right to recoup any royalties paid before or during the period challenge.

8.3 **Termination Report**. FAB will pay to Stanford all applicable royalties and submit to Stanford a written report within 90 days after the license terminates. FAB will, for the period set forth in Section 7.10 above, continue to submit earned royalty payments and reports to Stanford after the license terminates concerning royalties payable in accordance with Article 7 in connection with the sale of Licensed Products made or imported under the license.

8.4 **Accounting**. FAB will maintain records showing manufacture, importation, sale, and use of a Licensed Product for 3 years from the date of sale of that Licensed Product. Records will include general-ledger records showing cash receipts and expenses, and records that include: production records, customers, invoices, serial numbers, and related information in sufficient detail to enable Stanford to determine the royalties payable under this Agreement.

8.5 **Audit by Stanford**. FAB will allow its records to be examined once per calendar year during normal business hours and upon reasonable advanced notice by an independent certified public accountant selected by Stanford and acceptable to FAB, for the sole purpose of verifying payments made by FAB under this Agreement.

8.6 **Paying for Audit**. Stanford will pay for any audit done under Section 8.5. But if the audit reveals an underreporting of earned royalties due Stanford of [*]% or more for the period being audited, FAB will pay the audit costs.

8.7 **Self-audit**. FAB will conduct an independent audit of sales and royalties at least every 2 years if annual sales of Licensed Product are over $[*]. The audit will address, at a minimum, the amount of gross sales by or on behalf of FAB during the audit period, the amount of funds owed to Stanford under this Agreement, and whether the amount owed has been paid to Stanford and is reflected in the records of FAB. FAB will submit the auditor's report promptly to Stanford upon completion. FAB will pay for the entire cost of the audit.

8.8 All reports provided to Stanford under this Article 8, as well as all information concerning FAB provided to Stanford by its auditors in connection with Stanford's exercise of its audit rights under Section 8.5 above, shall be deemed the Confidential Information of FAB pursuant to Section 19.5.

9 WARRANTIES AND NEGATION OF WARRANTIES

9.1 **Warranties**. Stanford warrants and represents that (a) it has the right and authority to enter into this Agreement and to grant licenses of the scope granted in this Agreement and (b) Stanford has not previously granted any rights in the Licensed Patents other than the rights and licenses granted in the Pre-Existing Licenses and will not grant any further rights to the Licensed Patents that are inconsistent with the rights and licenses granted to FAB herein. For purposes of clarity, FAB acknowledges that it has been made aware by Stanford of the scope of the field of use of the Pre-Existing Licenses.

9.2 **Negation of Warranties**. Except as expressly set forth in this Agreement, Stanford makes no representations and extends no warranties of any kind, either express or implied. Among other things, Stanford disclaims any express or implied warranty:

(A) of merchantability, of fitness for a particular purpose,

(B) of non-infringement or

(C) arising out of any course of dealing.

9.3 **No Representation of Licensed Patent**. FAB also acknowledges that Stanford does not represent or warrant:

(A) the validity or scope of any Licensed Patent, or

(B) that the exploitation of Licensed Patent or Technology will be successful.

10 INDEMNITY

10.1 **Indemnification**. FAB will indemnify, hold harmless, and defend all Stanford Indemnitees against any and all third party claims for death, illness, personal injury, property damage, and improper business practices arising out of the manufacture, use, sale, or other disposition the Licensed Patents or Licensed Products by FAB or any sublicensee, unless resulting from a claimed breach by Stanford of its warranties or the gross negligence or willful misconduct of any Stanford Indemnitee; provided that:

(A) FAB receives prompt notice of any such claim,

(B) FAB shall not be obligated to indemnify any Stanford Indemnitee in connection with any settlement for any claim unless FAB consents writing to such settlement (which consent shall not be unreasonably withheld), and

(C) FAB shall have the first right to defend any such claim and, if FAB elects to exercise such first right the exclusive right to control the defense thereof.

Notwithstanding the foregoing, FAB shall have no obligations for any third party claim or demand that may be the subject of this Section 10.1 if the Stanford Indemnitee seeking indemnification makes any admission regarding such claim without the prior written consent of FAB, which consent shall not be unreasonably withheld.

10.2 **No Indirect Liability**. Neither party shall be liable for any special, consequential, lost profit, expectation, punitive or other indirect damages in connection with any claim arising out of or related to this Agreement, whether grounded in tort (including negligence), strict liability, contract, or otherwise arising out of or in connection with solely this Agreement under any theory of liability; provided, however, that the foregoing shall not apply to any right of

action for infringement, contributory infringement or inducement of infringement Stanford may have under any applicable law. Except as provided in Section 9.1, Stanford shall not have any responsibilities or liabilities whatsoever with respect to Licensed Products.

10.3 **Workers' Compensation**. FAB will comply with all statutory workers' compensation and employers' liability requirements for activities performed under this Agreement.

10.4 **Insurance**. During the term of this Agreement, FAB will maintain Comprehensive General Liability Insurance, including Product Liability Insurance, with a reputable and financially secure insurance carrier to cover the activities of FAB and its sublicensees. Upon introduction of Licensed Product into humans, such insurance will provide minimum limits of liability of $[*] and will include all Stanford Indemnitees as additional insureds. Such insurance shall be written to cover claims incurred, discovered, manifested, or made during or after the expiration of this Agreement and must be placed with carriers with ratings of at least A- as rated by A.M. Best. Within 15 days of the introduction of Licensed Product into humans, FAB will furnish a Certificate of Insurance evidencing primary coverage and additional insured requirements. FAB will provide to Stanford 30 days prior written notice of cancellation or material change to this insurance coverage. FAB will advise Stanford in writing that it maintains excess liability coverage (following form) over primary insurance for at least the minimum limits set forth above. All insurance of FAB will be primary coverage; insurance of Stanford and Stanford Hospitals and Clinics will be excess and noncontributory. Notwithstanding the foregoing, if FAB proposes alternative coverage under this Section 10.4, Stanford shall not unreasonably withhold its consent to such alternative coverage in lieu of the coverage detailed in this Section 10.4, so long as the proposed coverage is reasonable and customary for the industry and reasonably protects Stanford's interests.

11 EXPORT

FAB warrants that FAB will not export or reexport the following, directly or indirectly, to any country, individual or entity except when such export or reexport is authorized in full compliance with the laws and regulations of the United States of America, as applicable:

(A) the licensed technology or software, or any portion thereof, or

(B) any foreign produced direct product (including equipment, processes or services) of the licensed technology or software; or

(C) any foreign produced direct product of a plant or major component of a plant if the direct product of the licensed technology is the plant itself or a major component of the plant.

Applicable laws and regulations may include, but are not limited to, the Export Administration Regulations, the International Traffic in Arms Regulations and the various economic sanctions regulations administered by the U.S Department of the Treasury.

12 MARKING

Before any Licensed Patent issues, FAB will mark Licensed Product with the words "Patent Pending." Otherwise, FAB will mark Licensed Product with the number of any issued Licensed Patent.

13 STANFORD NAMES AND MARKS

FAB will not identify Stanford in any promotional advertising or other promotional materials to be disseminated to the public, or otherwise use the name of any Stanford faculty member, employee, or student, or any trademark, service mark, trade name, or symbol of Stanford or Stanford Hospitals and Clinics, including the Stanford name, unless FAB has received Stanford's, or the individual's, prior written consent. Permission may be withheld at Stanford's sole discretion. However, FAB may reasonably utilize Stanford's name or names of Stanford employees in statements of fact (provided such statements do not imply endorsement of FAB's products or services), in legal proceedings, patent filings, regulatory filings or with the written prior consent of Stanford.

14 PROSECUTION AND PROTECTION OF PATENTS

14.1 **Patent Prosecution.** Following the Effective Date and subject to Stanford's approval, FAB will be responsible for preparing, filing, and prosecuting the Licensed Patents (including any interference or reexamination actions) for Stanford's benefit in major markets in the Licensed Territory and for maintaining all Licensed Patents. FAB will (i) keep Stanford reasonably informed as to the filing, prosecution and maintenance of such patents and patent applications, (ii) furnish to Stanford copies of documents relevant to any such filing, prosecution and maintenance and (iii) allow Stanford reasonable opportunity to comment on documents filed with any patent office which would affect the Licensed Patents. To aid FAB in this process, Stanford will provide information, execute and deliver documents and do other acts as FAB shall reasonably request from time to time. FAB will reimburse Stanford for Stanford's reasonable out-of-pocket costs incurred in complying with such requests. Stanford and FAB agree to the terms detailed in Appendix C and agree to have Appendix C fully executed by the appropriate parties upon execution of this Agreement.

14.2 **Patent Costs.** Within 30 days after receiving a statement from Stanford, FAB will reimburse Stanford for all reasonableout-of-pocket costs incurred by Stanford in filing, prosecuting and maintaining the Licensed Patents, including any interference or reexamination matters, incurred by Stanford after the Effective Date.

14.3 **Infringement Procedure.** FAB and Stanford will each promptly notify the other of any suspected infringement of any Licensed Patent by a third party or the filing by a third party of a declaratory judgment action relating to the Licensed Patents. During the Exclusive term of this Agreement only, FAB may have the right to institute a suit against this third party as provided in Sections 14.4 – 14.8.

14.4 **FAB Suit.** FAB, itself or through a designee, has the first right to institute suit or defend any action for declaratory judgment relating to the Licensed Patents, and

may name Stanford as a party for standing purposes. If FAB decides to institute suit, it will notify Stanford in writing. We need the following section that's been deleted; FAB will bear the entire cost of the litigation. Stanford may be named as a party only if:

(A) FAB's and Stanford's respective counsel recommend that such action is necessary in its reasonable opinion to achieve standing or a court has required or will require such joinder to pursue the action;

(B) Stanford is not the first named party in the action; and

(C) the pleadings and any public statements about the action state that FAB is pursuing the action and that FAB has the right to join Stanford as a party

14.5 **Joint Suit.** If Stanford and FAB (itself or through a designee) so agree, they may institute suit jointly. If so, they will:

(A) prosecute the suit in both their names;

(B) bear the out-of-pocket costs equally; and

(C) agree how they will exercise control over the action.

14.6 **Stanford Suit.** If FAB does not initiate an enforcement action within 120 days of a request by Stanford to do so or does not elect to control a declaratory judgment action within 90 days of receiving notice that such action has been filed, Stanford may institute and prosecute a suit so long as it conforms with the requirements of this Section. Stanford will diligently pursue the suit and Stanford will bear the entire cost of the litigation, including expenses and counsel fees incurred by FAB. Stanford will keep FAB reasonably apprised of all developments in the suit, and will seek FAB's input and approval on any substantive submissions or positions taken in the litigation regarding the scope, validity and enforceability of the Licensed Patents. Stanford will not prosecute, settle or otherwise compromise any such suit in a manner that adversely affects FAB's interests without FAB's prior written consent.

14.7 **Recovery.**

(A) If FAB sues under Section 14.4, then any recovery in excess of litigation costs and fees will be shared with Stanford as follows:

(1) any payment for past or future sales will be deemed Net Sales, and FAB will pay Stanford royalties at the rates specified in Section7.5;

(2) FAB and Stanford will negotiate in good faith appropriate compensation to Stanford for anynon-cash settlement or non-cash cross-license, provided that Stanford will not share in the portion of the recovery, if any, which is payment for "willful infringement".

(B) If the parties jointly initiate and control the enforcement or declaratory action, Stanford and FAB will determine prior to initiation of such suit how any recovery in excess of litigation costs and fees will be apportioned.

(C) If Stanford alone initiates and controls the enforcement or declaratory action, Stanford and FAB will determine prior to initiation of such suit how any recovery in excess of litigation costs and fees will be apportioned.

14.8 **Abandonment of Suit.** If either Stanford or FAB (or its designee) commences a suit under the provisions of Article 14 and then wants to abandon the suit, it will give timely notice to the other party. The other party may, if it so desires, continue prosecution of the suit at its own expense, in which case Stanford and FAB shall agree on the sharing of any recovery in the suit in excess of litigation costs.

14.9 **Cooperation.** The non-controlling party shall, at the reasonable request and expense of the party controlling any enforcement action under this Article 14, fully cooperate with such controlling party, including without limitation, using best efforts to cause its employees to testify at such an action, and to make available relevant records, papers, information, samples, specimens, and the like. The party controlling the enforcement action shall keep the non-controlling party reasonably informed of the progress of such action, and the non-controlling party shall have the right to participate in such enforcement action with counsel of its own choice at its own expense.

14.10 **Inventor Assignments.** Stanford shall promptly obtain written assignments from each inventor of the Licensed Patents assigning to Stanford all of such inventor's right, title and interest in the Licensed Patents.

15 TERMINATION

15.1 **Termination by FAB.**

(A) FAB may terminate this Agreement in its entirety by giving Stanford written notice at least 30 days in advance of the effective date of termination selected by FAB.

(B) FAB may terminate this Agreement as to any particular patent application or patent within the Licensed Patents by giving Stanford written notice at least 75 days in advance of the effective date of termination selected by FAB. From and after the effective date of termination under this subsection 15.1(B) with respect to a particular patent application or patent, such patent application or patent in the particular country shall cease to be within the Licensed Patents for purposes of this Agreement

15.2 **Termination by Stanford.**

(A) Stanford may also terminate this Agreement on 30 days written notice if FAB:

(1) is in material default in payment of royalties or providing of reports;

(2) is subject to termination under the terms of Article 6;

(3) is in material breach of any provision of this Agreement; or

(4) provides any materially false report.

(B) Such notice will specify the nature of the default or breach and will take effect 30 days after receipt by FAB unless FAB remedies the problem in that 30-day period. Notwithstanding the foregoing if FAB disputes any default or material breach under 15.2(A) above in writing within such 30-day period, Stanford shall not have the right to terminate this Agreement unless and until a final determination, in an arbitration under Section 17 below, that such default or material breach was committed, and FAB fails to cure such default or material breach within thirty (30) days after such determination. The parties agree to use diligent efforts to conclude any arbitration initiated under this Section 15.2B within 120 days of FAB's written notice to Stanford disputing the applicable alleged material breach or default. For the purpose of clarity, this Section does not suspend any obligation of FAB to compensate Stanford for any undisputed amount, as provided for under any term of this Agreement, during the pendency of any determination of such default or material breach).

15.3 **Surviving Provisions.** Surviving any termination or expiration are:

(A) FAB's obligation to pay royalties accrued or accruable;

(B) any claim of FAB or Stanford, accrued or to accrue, because of any breach or default by the other party;

(C) the provisions of Sections 8.2, 8.3, 15.3 and Articles 2, 9, 10, 17 and 19.

(D) any sublicense granted hereunder, provided that the sublicensee agrees in writing to be bound by the applicable terms of this Agreement.

16 ASSIGNMENT

16.1 **Permitted Assignment by FAB.** Subject to Section 16.3, FAB may assign this Agreement as part of a sale, regardless of whether such a sale occurs through an asset sale, stock sale, merger or other combination, or any other transfer of:

(A) all or substantially all of FAB's business; or

(B) that part of FAB's business to which the license granted under this Agreement relates.

16.2 **Any Other Assignment by FAB.** Any other attempt to assign this Agreement by FAB without the prior written consent of Stanford shall be null and void.

16.3 **Conditions of Assignment.** Any assignment of this Agreement shall not be deemed approved until the following conditions have been met:

(A) FAB must provide Stanford with written notice of the assignment and with the new assignee's contact information within 30 days following such assignment; and

(B) the new assignee must agree in writing to Stanford to be bound by this Agreement; and

(C) Stanford must have received a $[*] assignment fee.

16.4 Notwithstanding Section 16.3(C) above, no assignment fee shall be due by FAB for any assignment or transfer of this Agreement in case of reincorporation or any other reorganization that does not involve a Change of Control.

16.5 **After the Assignment.** Upon a permitted assignment of this Agreement pursuant to Article 16, FAB will be released of liability under this Agreement and the term "FAB" in this Agreement will mean the assignee.

17 DISPUTE RESOLUTION

17.1 **Dispute Resolution by Arbitration.** Any dispute between the parties arising under or related to this Agreement, excluding any dispute relating to patent validity or infringement, will be settled by arbitration in accordance with the JAMS Arbitration Rules and Procedures.

17.2 **Request for Arbitration.** Upon request by either party, such arbitration will be by a third party arbitrator selected according to the JAMS rules or mutually agreed upon in writing by Stanford and FAB within 30 days of the arbitration request. The arbitrator's decision will be final and nonappealable and may be entered in any court having jurisdiction.

17.3 **Discovery.** The parties will be entitled to discovery as if the arbitration were a civil suit in the California Superior Court. The arbitrator may limit the scope, time, and issues involved in discovery in accordance with the JAMS Arbitration Rules and Procedures then in effect.

17.4 **Place of Arbitration.** The arbitration will be held in Santa Clara County, California unless the parties mutually agree in writing to another place.

17.5 **Patent Validity.** Any dispute regarding the validity of any Licensed Patent shall be litigated in the federal district courts located in the Northern District California, and the parties agree not to challenge personal jurisdiction in that forum.

18 NOTICES

18.1 **All Notices.** All notices under this Agreement are deemed fully given when written, addressed, and sent as follows:

All notices to FAB are mailed to:

Fundamental Applied Biology, Inc.
145 Adams Drive, Suite 1015,
Menlo Park, CA 94025
Attention: [*]

All general notices to Stanford are e-mailed or mailed to:

Office of Technology Licensing
1705 El Camino Real
Palo Alto, CA 94306-1106
info@otlmail.stanford.edu

All payments to Stanford are mailed to:

Stanford University
Office of Technology Licensing
Department #44439
P.O. Box 44000
San Francisco, CA 94144-4439

All progress reports to Stanford are e-mailed or mailed to:

Office of Technology Licensing
1705 El Camino Real
Palo Alto, CA 94306-1106
info@otlmail.stanford.edu

Either party may change its address with written notice to the other party. Notice shall be deemed effective as of the date actually received by the addressee at the address provide for by the addressee.

19 MISCELLANEOUS

19.1 **Waiver**. No term of this Agreement can be waived except by the written consent of the party waiving compliance.

19.2 **Choice of Law**. This Agreement shall be governed by the laws of the State of California, United States of America, applicable to agreements negotiated, executed, and performed within California.

19.3 **Exclusive Forum.** The state and federal courts having jurisdiction over Stanford, California, United States of America, provide the exclusive forum for any court action between the parties relating to this Agreement. FAB submits to the jurisdiction of such courts, and waives any claim that such a court lacks jurisdiction over FAB or constitutes an inconvenient or improper forum.

19.4 **Headings**. No headings in this Agreement affect its interpretation.

19.5 **Confidentiality**. Stanford will maintain the terms Articles 2, 4, 7 and 10 and Sections 4.5 and 6.1 of this Agreement, as well as the reports, audit results and any information provided by FAB to Stanford pursuant to Sections 4.4, 6.2, 8.1, 8.3, 8.5 and 8.7 in confidence and will not disclose this information to any third party, except as required by law. Stanford's obligation to confidentiality will be fulfilled by using at least the same degree of care with FAB's confidential information as it uses to protect its own confidential information.

19.6 **Severability**. In the event that any provisions of this Agreement are determined to be invalid or unenforceable by a court of competent jurisdiction, the remainder of the Agreement shall remain in full force and effect without said provision. The parties shall in good faith negotiate a substitute clause for any provision declared invalid or unenforceable, which shall most nearly approximate the intent of the parties in entering this Agreement.

19.7 **Entire Agreement**. This Agreement constitutes the entire agreement between FAB and Stanford and supersedes all prior communications, understandings and agreements with respect to the subject matter of this Agreement, including without limitation the Original License Agreement. This Agreement may not be amended except with a written agreement signed by FAB and Stanford.

19.8 **Counterparts**. This Agreement may be executed in counterparts, each of which shall be deemed an original, but both of which together shall constitute one and the same instrument.

19.9 **Electronic Copy**. The parties to this document agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes for which the original signature may have been used. The parties further waive any right to challenge the admissibility or authenticity of this document in a court of law based solely on the absence of an original signature.

The parties execute this Agreement in duplicate originals by their duly authorized officers or representatives.

THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY

Signature	/s/ Katharine Ku
Name	Katharine Ku
Title	Director, Technology Licensing
Date	Oct 3, 2007

FUNDAMENTAL APPLIED BIOLOGY, INC.

Signature	/s/ Daniel Gold
Name	Daniel Gold, Ph.D.
Title	Chief Executive Officer
Date	October 3, 2007

APPENDIX A

1. FAB has already provided Stanford a preliminary business strategy in the form of power point slide set ("Business Plan"). Stanford will treat this Business Plan as confidential information and to protect it as Stanford would its own confidential information.
2. Within one hundred eighty (180) days of the Effective Date, FAB will have closed its series B financing pursuant to which it will have raised $[*] to proceed with the exploration and development of Licensed Product.
3. Within one hundred eighty (180) days of the Effective Date, FAB will provide to Stanford a listing of the management team or a schedule for the recruitment of key management positions.
4. Within twelve (12) months of the Effective Date, FAB will have completed a preliminary commercial strategy to identify potential FAB Licensed Products.
5. Within twenty (24) months of the Effective Date, FAB will have developed a collaboration strategy for the Company.
6. Within twenty four (24) months of the Effective Date. FAB will have identified at least one suitable protein drug candidate for development and commercialization as a FAB Licensed Product.
7. By [*], FAB will have the capability to conductnon-cGMP fermentations in a [*] (or greater) fermentor for the purpose of producing cells for *in vitro* extract production
8. Within [*], Licensee will have identified and initiated collaboration discussions with at least one (1) potential partner.

Additionally, following the fifth and tenth anniversaries of the Effective Date, the parties agree to meet and discuss in good faith whether additional milestones may be necessary, and if they mutually agree that they are, what such milestones should be.

APPENDIX B

SAMPLE REPORTING FORM

Stanford Docket No. S

This report is provided pursuant to the license agreement between Stanford University and FAB License Agreement Effective Date:

Report Covering Period	
Yearly Maintenance Fee	$
Number of Sublicenses Executed	
Net Sales	$
Royalty Calculation	
Royalty Subtotal	$
Credit	$
Royalty Due	$

Comments:

APPENDIX C

CLIENT AND BILLING AGREEMENT

The Board of Trustees of the Stanford Leland Junior University ("STANFORD"); and _____, a Corporation of the State of _____, with a principal place of business at _____, ("COMPANY"); have agreed to use the law firm of _____ ("FIRM") to prepare, file and prosecute the pending patent applications listed in Exhibit A attached hereto and maintain the patents that issue thereon ("Patents").

WHEREAS, FIRM desires to perform the legal services related to obtaining and maintaining the Patents; and

WHEREAS, STANFORD remains the client of the FIRM; and

WHEREAS, COMPANY is the licensee of STANFORD's interest in the Patents;

NOW THEREFORE, in consideration of the premises and the faithful performance of the convenants herein contained, IT IS AGREED:

1. FIRM can interact directly with COMPANY on all patent prosecution matters related to the Patents and will copy STANFORD on all correspondence. STANFORD will be notified by FIRM prior to any substantive actions and Stanford will have final approval and FIRM will provide STANFORD reasonable opportunity to comment on documents filed with any patent office which would affect the Patents. FIRM will keep Stanford reasonably apprised and copied on all material documents and proceedings.

2. COMPANY is responsible for the payment of all charges and fees by FIRM related to the prosecution and maintenance of the Patents. FIRM will invoice COMPANY and must copy STANFORD on all invoices. COMPANY must pay FIRM directly for all charges and must copy STANFORD on each payment.

3. Notices and copies of all correspondence should be sent to the following:

To COMPANY:
Name, Title
Company Name
Address

To STANFORD:
Name
Office of Technology Licensing
Stanford University
1705 El Camino Real
Palo Alto, CA 94306-1106

To FIRM:
Attorney Name
Law Firm Address

4. The parties to this document agree that a copy of the original signature (including an electronic copy) may be used for any and all purposes for which the original signature may have been used. The parties further waive any right to challenge the admissibility or authenticity of this document in a court of law based solely on the absence of an original signature.

ACCEPTED AND AGREED TO:

STANFORD
By:
Name: Katharine Ku
Title: Director
Date: _____
Company Name
By:
Name:
Title:
Date: _____

Law Firm Name
By:
Name:
Title:
Date: _____

APPENDIX D

LICENSED PATENTS

S98-199

IMATTERNO	COUNTRY ID	SERIALNO	PATENTNO	PUBLNO	TITLE	STATUS
STAN-117CA	CANADA	2365668			IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	PENDING
STAN-117EP	EUROPEAN PATENT CONVENT	00923078.0			IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	PUBLISHED
STAN-117JP	JAPAN	2000-605770		2002-538832	IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	PUBLISHED
STAN-117	UNITED STATES	09/270,814	6,168,931		ENHANCED IN VITRO SYNTHESIS OF BIOLOGICAL MACROMOLECULES USING A NOVEL ATP REGENERATION SYSTEM	ISSUED
STAN-117CON	UNITED STATES	09/948,815	6,994,986	US-2002-0081660-A1	IN VITRO SYNTHESIS OF POLYPEPTIDES BY OPTIMIZING AMINO ACID METABOLISM	ISSUED
STAN-124PRV	UNITED STATES	60/125,463			ENHANCED IN VITRO PROTEIN SYNTHESIS USING CONDITIONS ENHANCED FOR AMINO ACID METABOLISM	EXPIRED
STAN-117WO	WIPO	US00/07095		WO00/5353	IN VITRO MACROMOLECULE BIOSYNTHESIS METHODS USING EXOGENOUS AMINO ACIDS AND A NOVEL ATP REGENERATION SYSTEM	NAT PHASE

S99-130

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-152CA		2428693			IN VITRO PROTEIN SYNTHESIS USING GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	ABANDONED
STAN-152PRV		60/145,438			IN VITRO SYNTHESIS USING GLUCLOSE GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	EXPIRED
STAN-152		09/621,339	6,337,191		IN VITRO PROTEIN SYNTHESIS USING GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	ISSUED
STAN-152WO		US00/31449			IN VITRO SYNTHESIS USING GLYCOLYTIC INTERMEDIATES AS AN ENERGY SOURCE	NAT PHASE

S00-156

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-205AU	AU	2001288931	2001288931		ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	ISSUED
STAN-205CA	CA	2419996			ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PENDING
STAN-205EP	EP	01968701.1		1315826	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PUBLISHED
STAN-205JP	JP	2002-525824		2004-508050	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PUBLISHED
STAN-205PRV	US	60/230,381			ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	EXPIRED
STAN-205	US	09/948,052	6,548,276	US-2002-0058303-A1	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	ISSUED
STAN-205CIP	US	10/404,599	7,041,479	US-2004-0038332-A1	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	ISSUED
STAN-205WO	WO	US01/28159		WO 02/20818	ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	NAT PHASE

S02-181

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-273AU	AU	2003259912			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-273CA	CA	2496437			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-273EP	EP	03788625.6		1539948	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-273JP	JP	2004-529558		2005-536206	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-273PRV	US	60/404,591			METHODS OF IN VITRO PROTEIN SYNTHESIS	EXPIRED
STAN-273	US	10/643,683		US 2004-0209321 A1	METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-273WO	WO	US03/25888		WO 2004/016778	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	NAT PHASE

S03-168

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-309AU	AU	2004259433			METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PENDING
STAN-309EP	EP	04778237 0		1649025	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PUBLISHED
STAN-309JP	JP	2006-521119		2006-527997	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PUBLISHED
STAN-309PRV	US	60/488,282			METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	EXPIRED
STAN-309	US	10/888,145		US-2005-0054032-A1	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	PUBLISHED
STAN-309WO	WO	US2004/022632		WO 2004/022632	METHODS OF DECOUPLING REACTION SCALE AND PROTEIN SYNTHESIS YIELD IN BATCH MODE	NAT PHASE

S03-316

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-337AU	AU	2004293798			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337CN	CN	200480033981.4			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337EP	EP	04811533.1		1685240	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-337IN	IN	1741/CHENP / 2006			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337JP	JP	2006-541404		2007-521023	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-337KR	KR	2006-7010314			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337NZ	NZ	546961			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PENDING
STAN-337PRV	US	60/524.374			IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	EXPIRED
STAN-337	US	10/579,711		US 2007-0154983 A1	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	PUBLISHED
STAN-337WO	WO	US2004/038830		WO 2005/052117	IMPROVED METHODS OF IN VITRO PROTEIN SYNTHESIS	NAT PHASE

S04-041

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-353AU	AU	2005230916			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353CA	CA	n/a2560504			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353CN	CN	200580009464.8			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	ABANDONED
STAN-353EA	EA	200601748			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353EP	EP	05733219.9		1730313	PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PUBLISHED
STAN-353ID	ID	W00 2006 02538		047.0258A	PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PUBLISHED
STAN-353JP	JP	2007-505063			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353KR	KR	10-2006-7019493			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353MX	MX	PA/a/ 2006/01 0918			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353NO	NO	20064735			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353NZ	NZ	549523			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353SG	SG	200606158-4			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353PRV	US	60/556,736			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	EXPIRED
STAN-353	US	10/599,310			PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	PENDING
STAN-353WO	WO	US2005/009342		WO 2005/098048	PROTEIN EXPRESSION YIELD ENHANCEMENT IN CELL-FREE PROTEIN SYNTHESIS SYSTEMS BY ADDITION OF ANTIFOAM AGENTS	NAT PHASE

S05-044

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-405PRV	US	60/690,571			TOTAL AMINO ACID STABILIZATION DURING CELL-FREE PROTEIN SYNTHESIS	EXPIRED
STAN-405	US	11/447,367		US 2007-0004001 A1	TOTAL AMINO ACID STABILIZATION DURING CELL-FREE PROTEIN SYNTHESIS	PUBLISHED
STAN-405WO	WO	US2006/023032		WO 2006/138322	TOTAL AMINO ACID STABILIZATION DURING CELL-FREE PROTEIN SYNTHESIS	PUBLISHED

S05-339

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-459PRV	US	60/732,437			CELL-FREE SYNTHESIS OF MEMBRANE BOUND POLYPEPTIDES	EXPIRED
STAN-459WO	WO	US2006/042583		WO 2007/033655	CELL-FREE SYNTHESIS OF MEMBRANE BOUND POLYPEPTIDES	PUBLISHED

S06-146

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-534PRV	US	60/881,251			ENHANCED IN VITRO SYNTHESIS OF ACTIVE PROTEINS CONTAINING DISULFIDE BONDS	PENDING

S06-254

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-507PRV	US	60/817,915			CELL-FREE SYNTHESIS OF PROTEINS CONTAINING UNNATURAL AMINO ACIDS	EXPIRED
STAN-507WO	WO	US2007/015170			CELL-FREE SYNTHESIS OF PROTEINS CONTAINING UNNATURAL AMINO ACIDS	PENDING

S06-257

IMATTERNO	COUNTRY ID	SERIALNO.	PATENTNO	PUBLNO	TITLE	STATUS
STAN-506PRV	US	60/817,772			VIRUS-LIKE PARTICLES WITH SITE SPECIFIC AMINO ACIDS	EXPIRED

[*]

*Confidential Treatment Requested.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the reference to our firm under the caption “Experts” and to the use of our report dated June 1, 2018 (except for the third paragraph of Note 1 and for Note 14, as to which the date is September 17, 2018) in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-227103) and related Prospectus of Sutro Biopharma, Inc. dated September 17, 2018.

/s/ Ernst & Young LLP

Redwood City, California
September 17, 2018