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

POST-EFFECTIVE AMENDMENT NO. 3 TO

FORM S-3

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Sutro Biopharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 47-0926186 (I.R.S. Employer Identification No.)

111 Oyster Point Blvd. South San Francisco, California

94080

(650) 881-6500

(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. 111 Oyster Point Blvd. South San Francisco, California 94080

(650) 881-6500

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Robert A. Freedman, Esq. Amanda Rose, Esq. Effie Toshav, Esq. Ryan Mitteness, Esq. Fenwick & West LLP 555 California Street San Francisco, CA 94104 (415) 875-2300 Edward C. Albini Chief Financial Officer Sutro Biopharma, Inc. 111 Oyster Point Blvd. South San Francisco, California 94080 (650) 881-6500

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: 🗆

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, other than securities offered only in connection with dividend or interest reinvestment plans, 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, please 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 earliest effective registration statement for the same offering:

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I. D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer	Accelerated filer	
Non-accelerated filer	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 pursuant to Section 7(a)(2)(B) of the Securities Act. \Box

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 Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

The purpose of this Post-Effective Amendment No. 3 (this "*Post-Effective Amendment No. 3*") to the Registration Statement on Form S-3 (File No. 333-255014) filed with the Securities and Exchange Commission ("*SEC*") by the Registrant on April 2, 2021 and subsequently amended on February 28, 2022 and March 1, 2022 (the "*Registration Statement*") is solely to update the auditors' consent filed with the Registration Statement as Exhibit 23.1. Accordingly, this Post-Effective Amendment No. 3 consists only of the facing page, this explanatory note, Part II of the Registration Statement, and an updated Exhibit 23.1. The prospectus is unchanged and has been omitted.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth estimated expenses in connection with the issuance and distribution of the securities being registered:

SEC registration fee	\$ 32,445
FINRA filing fee	225,500
Printing and engraving*	*
Legal fees and expenses*	*
Accounting fees and expenses*	*
Transfer agent and registrar fees and expenses*	*
Miscellaneous expenses*	*
Total*	\$*

* These fees and expenses depend on the type of securities offered and the number of issuances and accordingly, cannot be estimated at this time.

Item 15. Indemnification of Officers and Directors

Section 145 of the Delaware General Corporation Law 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 Delaware General Corporation Law 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 Delaware General Corporation Law, the Registrant's restated certificate of incorporation 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 Delaware General Corporation Law (regarding unlawful dividends or stock purchases); or
- any transaction from which the director derived an improper personal benefit.

As permitted by the Delaware General Corporation Law, the Registrant's restated bylaws provide that:

- the Registrant is required to indemnify its directors and executive officers to the fullest extent permitted by the Delaware General Corporation Law, subject to limited exceptions;
- the Registrant may indemnify its other employees and agents as set forth in the Delaware General Corporation Law;
- 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 Delaware General Corporation Law, subject to limited exceptions; and
- the rights conferred in the restated bylaws are not exclusive.

The Registrant has entered, and intends to continue to enter, into indemnification agreements with each of its 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. At present, there is no pending litigation or proceeding involving a director or executive officer of the Registrant for which indemnification is sought. 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 currently carries liability insurance for its directors and officers.

Item 16. Exhibits

The exhibits listed below are filed (except where otherwise indicated) as part of this Registration Statement.

		INCORPORATED BY REFERENCE					
EXHIBIT NUMBER	EXHIBIT DESCRIPTION	FORM	FILE NO.	EXHIBIT	FILING DATE	FILED HEREWITH	
1.1*	Form of Underwriting Agreement						
1.2	<u>Open Market Sale AgreementSM. dated April 2, 2021.</u> by and between the Registrant and Jefferies LLC	S-3ASR	333-255014	1.2	4/2/2021		
3.1	Restated Certificate of Incorporation	S-1/A	333-227103	3.2	9/17/2018		
3.2	Restated Bylaws	S-1/A	333-227103	3.4	9/17/2018		
4.1	Form of Common Stock Certificate	S-1	333-227103	4.1	8/29/2018		
4.2	Amended and Restated Investors' Rights Agreement, dated May 24, 2018, by and among the Registrant and certain of its stockholders, as amended	S-1	333-227103	4.2(4)	8/29/2018		
4.3	Form of Debt Security	S-3ASR	333-255014	4.2(A) 4.3	4/2/2021		
4.3 4.4		S-3ASR S-3ASR	333-255014	4.3	4/2/2021		
4.4 4.5*	Form of Indenture Form of Warrant	3-3A3K	333-255014	4.4	4/2/2021		
4.5 4.6*	Form of Warrant Agreement						
4.7*	Form of Preferred Stock Certificate						
4.8*	Form of Subscription Rights Certificate						
4.9*	Form of Unit						
4.10*	Form of Unit Agreement						
5.1	Opinion of Fenwick & West LLP	POSASR	333-255014	5.1	2/28/2022		
23.1	Consent of Independent Registered Public Accounting					x	
23.2	Consent of Fenwick & West LLP (included in Exhibit 5.1)	POSASR	333-255014	5.1	2/28/2022		
24.1	Power of Attorney	POSASR	333-255014		2/28/2022		
25.1**	Form T-1 Statement of Eligibility of Trustee for Senior Indenture under the Trust Indenture Act of 1939.						
25.2**	Form T-1 Statement of Eligibility of Trustee for Subordinated Indenture under the Trust Indenture Act of 1939.						
107	Filing Fee Table.	POSASR	333-255014	107	2/28/2022		
* Tob	be filed by amendment or as an exhibit to a report pursuant to Section	on 13(a) or 15(d) of	the Securities Exchange Ad	ct of 1934, as amende	ed and incorporated her	rein by reference.	

** To be filed in accordance with the requirements of Section 305(b)(2) of the Trust Indenture Act of 1939 and Rule 5b-3 thereunder.

Item 17. Undertakings

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20

percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that subparagraphs (i), (ii), and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or made in an underwriter of the registration statement that was made in the registration statement or prospectus that is part of the registration statement or prospectus that was part of the registration statement or prospectus that was made in the registration statement or prospectus that was part of the registration statement or prospectus that immediately prior to such effective date.

(5) That, for the purpose of determining liability of the Registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;

(iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and

(iv) any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement 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.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 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 by the final adjudication of such issue.

(d) If and when applicable, the Registrant hereby further undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Securities and Exchange Commission under Section 305(b)(2) of the Trust Indenture Act.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective Amendment No. 3 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California, on May 18, 2022.

SUTRO BIOPHARMA, INC.

By: /s/ William J. Newell William J. Newell

Chief Executive Officer

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/s/ William J. Newell	Chief Executive Officer and Director	May 18, 2022
William J. Newell	(Principal Executive Officer)	
/s/ Edward C. Albini	Chief Financial Officer	May 18, 2022
Edward C. Albini	(Principal Accounting Officer and Principal Financial Officer)	
*	Chair of the Board of Directors	May 18, 2022
Connie Matsui		
*	Director	May 18, 2022
Michael Dybbs, Ph.D.		
*	Director	May 18, 2022
John G. Freund, M.D.		
*	Director	May 18, 2022
Heidi Hunter		
*	Director	May 18, 2022
Joseph M. Lobacki		
*	Director	May 18, 2022
James Panek		
*	Director	May 18, 2022
Daniel H. Petree		•
*	Director	May 18, 2022
Shalini Sharp		2
*	Director	May 18, 2022
Jon Wigginton, M.D.		

* By Attorney-in-Fact

/s/ William Newell William Newell

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3 No. 333-255014) and related Prospectus of Sutro Biopharma, Inc. for the registration of up to \$350,000,000 of its common stock, preferred stock, debt securities, warrants, subscription rights to purchase common stock, preferred stock or debt securities, and units consisting of some or all of these securities, and to the incorporation by reference therein of our reports dated February 28, 2022, with respect to the financial statements of Sutro Biopharma, Inc., and the effectiveness of internal control over financial reporting of Sutro Biopharma, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2021, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Redwood City, California May 18, 2022