

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

**FORM S-8
REGISTRATION STATEMENT**

*Under
The Securities Act of 1933*

GRAPHITE BIO, INC.

(Exact name of Registrant as Specified in Its Charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

84-4867570

(I.R.S. Employer
Identification No.)

**201 Haskins Way, Suite 210
South San Francisco, CA 94080
(650) 484-0886**

(Address, including zip code and telephone number, including area code, of Registrant's principal executive offices)

**Graphite Bio, Inc. 2021 Stock Option and Incentive Plan
Graphite Bio, Inc. 2021 Employee Stock Purchase Plan**

**Josh Lehrer, M.D.
President and Chief Executive Officer
201 Haskins Way, Suite 210
South San Francisco, CA 94080
(650) 484-0886**

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

Copies to:

**Mitchell S. Bloom
Maggie Wong
Shoab Ghias
Goodwin Procter LLP
Three Embarcadero Center, Floor 28
San Francisco, CA 94111
(415) 733-6000**

**Josh Lehrer, M.D.
President and Chief Executive Officer
201 Haskins Way, Suite 210
South San Francisco, CA 94080
(650) 484-0886**

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.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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.

EXPLANATORY NOTE

This Registration Statement on Form S-8 registers 2,911,088 additional shares of Common Stock under the Graphite Bio, Inc. 2021 Stock Option and Incentive Plan (the "2021 Plan") and 564,000 additional shares of Common Stock under the Graphite Bio, Inc. 2021 Employee Stock Purchase Plan (the "2021 ESPP"). The number of shares of Common Stock reserved and available for issuance under the 2021 Plan is subject to an automatic annual increase on each January 1, beginning January 1, 2022, by an amount equal to the lesser of: (i) 5% of the number of shares of Common Stock issued and outstanding on the immediately preceding December 31, and (ii) such lesser number of shares of Common Stock as determined by the Administrator (as defined in the 2021 Plan). Accordingly, on January 1, 2023, the number of shares of Common Stock reserved and available for issuance under the 2021 Plan increased by 2,911,088. The number of shares of Common Stock reserved and available for issuance under the 2021 ESPP is subject to an automatic annual increase on each January 1, beginning January 1, 2022, by an amount equal to the least of: (i) 564,000 shares of Common Stock, (ii) 1% of the number of shares of Common Stock issued and outstanding on the immediately preceding December 31, and (iii) such lesser number of shares of Common Stock as determined by the Administrator (as defined in the 2021 ESPP). Accordingly, on January 1, 2023, the number of shares of Common Stock reserved and available for issuance under the 2021 ESPP increased by 564,000. The additional shares are of the same class as other securities relating to the 2021 Plan and the 2021 ESPP for which the Registrant's registration statements filed on Form S-8 filed with the Securities and Exchange Commission on June 28, 2021 (File No. [333-257486](#)) (the "2021 Registration Statement") and on March 21, 2022 (File No. [333-263747](#)) (the "2022 Registration Statement") are effective, and the contents of the 2021 Registration Statement and 2022 Registration Statement, as amended, or as modified or superseded pursuant to Rule 412 under the Securities Act of 1933, as amended (the "Securities Act"), are incorporated by reference into this Registration Statement.

Part II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8 Exhibits

EXHIBIT INDEX

Exhibit Number	Description
4.1	Amended and Restated Certificate of Incorporation, as currently in effect (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-40532) filed on June 30, 2021).
4.2	Amended and Restated Bylaws, as currently in effect (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-40532) filed on June 30, 2021).
4.3	Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated March 11, 2021 (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-256838) filed on June 4, 2021).
4.4	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-256838) filed on June 11, 2021).
5.1*	Opinion of Goodwin Procter LLP.
23.1*	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm.
23.2*	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (included on signature page to this registration statement).
99.1	2021 Stock Option and Incentive Plan and forms of award agreements thereunder (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256838)).
99.2	2021 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256838)).
107*	Filing Fee Table
*	Filed herewith

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-8 and has duly caused this 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 this 20th day of March, 2023.

GRAPHITE BIO, INC.

By: /s/ Josh Lehrer
Name: Josh Lehrer, M.D.
Title: President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL BY THESE PRESENT, that each individual whose signature appears below hereby constitutes and appoints each of Josh Lehrer and Alethia Young as such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for such person in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that any said attorney-in-fact and agent, or any substitute or substitutes of any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in their capacities and on the date indicated.

NAME	TITLE	DATE
/s/ Josh Lehrer Josh Lehrer, M.D.	President, Director and Chief Executive Officer (Principal Executive Officer)	March 20, 2023
/s/ Alethia Young Alethia Young	Chief Financial Officer (Principal Financial and Accounting Officer)	March 20, 2023
/s/ Perry Karsen Perry Karsen	Chairman of the Board and Director	March 20, 2023
/s/ Abraham Bassan Abraham Bassan	Director	March 20, 2023
/s/ Jerel Davis Jerel Davis, Ph. D.	Director	March 20, 2023
/s/ Kristen M. Hege Kristen M. Hege, M.D.	Director	March 20, 2023
/s/ Joseph Jimenez Joseph Jimenez	Director	March 20, 2023
/s/ Matthew Porteus Matthew Porteus, M.D., Ph.D.	Director	March 20, 2023
/s/ Carlo Rizzuto Carlo Rizzuto, Ph.D.	Director	March 20, 2023
/s/ Smital Shah Smital Shah	Director	March 20, 2023



Goodwin Procter LLP
3 Embarcadero Center
San Francisco, CA 94111
goodwinlaw.com
+1 415 733 6000

March 20, 2023

Graphite Bio, Inc.
201 Haskins Way, Suite 210
South San Francisco, CA 94080

Re: Securities Being Registered under Registration Statement on Form S-8

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of 3,475,088 shares (the "Shares") of Common Stock, \$0.00001 par value per share ("Common Stock"), of Graphite Bio, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to the Company's 2021 Stock Option and Incentive Plan and 2021 Employee Stock Purchase Plan (collectively, the "Plans").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

For purposes of the opinion set forth below, we have assumed that no event occurs that causes the number of authorized shares of Common Stock available for issuance by the Company to be less than the number of then unissued Shares.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Plans, will be validly issued, fully paid and nonassessable.

This opinion letter and the opinion it contains shall be interpreted in accordance with the Core Opinion Principles as published in *74 Business Lawyer* 815 (Summer 2019).

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 20, 2023 relating to the financial statements of Graphite Bio, Inc. appearing in the Annual Report on Form 10-K of Graphite Bio, Inc. for the year ended December 31, 2022.

/s/ Deloitte & Touche LLP
San Francisco, California
March 20, 2023

Calculation of Filing Fee Tables

Form S-8

(Form Type)

Graphite Bio, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Share(2)	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, \$0.00001 par value per share	Rule 457(c) and Rule 457(h)(1)	2,911,088(3)	\$2.42	\$7,044,833	0.0001102	\$776.34
Equity	Common Stock, \$0.00001 par value per share	Rule 457(c) and Rule 457(h)(1)	564,000(4)	\$2.42	\$1,364,880	0.0001102	\$150.41
Total Offering Amounts							\$926.75
Total Fee Offsets							\$0
Net Fee Due							\$926.75

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of common stock which become issuable under the above-named plans by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of our outstanding shares of common stock. Pursuant to Rule 416(c) under the Securities Act, this Registration Statement shall also cover an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plans described herein.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and (h)(1) of the Securities Act, and based on \$2.42, the average of the high and low sale prices of the of the Registrant's common stock as reported on the Nasdaq Global Market on March 15, 2023.
- (3) Represents an automatic increase to the number of shares available for issuance under the Registrant's 2021 Stock Option and Incentive Plan (the "2021 Plan") effective as of January 1, 2023. Shares available for issuance under the 2021 Plan were previously registered on Form S-8 filed with the Securities and Exchange Commission on June 28, 2021 (File No. [333-257486](#)) and on March 21, 2022 (File No. [333-263747](#)).
- (4) Represents an automatic increase to the number of shares available for issuance under the Registrant's 2021 Employee Stock Purchase Plan (the "2021 ESPP") effective as of January 1, 2023. Shares available for issuance under the 2021 ESPP were previously registered on Form S-8 filed with the Securities and Exchange Commission on June 28, 2021 (File No. [333-257486](#)) and on March 21, 2022 (File No. [333-263747](#)).

