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

FORM S-1
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)

2836
(Primary Standard Industrial
Classification Code Number)

84-4867570
(I.R.S. Employer
Identification No.)

Graphite Bio, Inc.
279 East Grand Avenue, Suite 430
South San Francisco, CA 94080
(650) 484-0886

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

Copies to:

Mitchell S. Bloom
Maggie Wong
Shoaib 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
279 East Grand Avenue, Suite 430
South San Francisco, CA 94080
(650) 484-0886

Charles S. Kim
Kristin VanderPas
Dave Peinsipp
Denny Won
Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
(858) 550-6000

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, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. - 333-256838

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 statement 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, anon-accelerated filer, 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 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.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be registered(1)	Proposed maximum aggregate offering price per share	Proposed maximum aggregate offering price	Amount of registration fee(2)
Common stock, par value \$0.00001 per share	1,725,000	\$17.00	\$29,325,000	\$3,199.36

- (1) Represents only the additional number of shares being registered and includes 225,000 shares of common stock issuable upon exercise of the underwriters’ option to purchase additional shares to cover over-allotments, if any. Does not include the securities that the registrant previously registered on the Registration Statement on Form S-1 (File No. 333-256838).
- (2) The registration fee is calculated in accordance with Rule 457(a) under the Securities Act of 1933, as amended, based on the proposed maximum aggregate offering price. The registrant previously registered securities at an aggregate offering price not to exceed \$244,375,000 on a Registration Statement on Form S-1 (File No. 333-256838), which was declared effective by the Securities and Exchange Commission on June 24, 2021. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$29,325,000 is hereby registered, which includes shares issuable upon the exercise of the underwriters’ option to purchase additional shares.

The Registration Statement shall become effective upon filing in accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended.

EXPLANATORY NOTE AND INCORPORATION BY REFERENCE

This Registration Statement is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the “Securities Act”), for the sole purpose of increasing the aggregate number of shares of common stock offered by Graphite Bio, Inc. (the “Registrant”) by 1,725,000 shares, 225,000 of which are subject to purchase upon exercise of the underwriters’ option to purchase additional shares of the Registrant’s common stock. The contents of the Registration Statement on Form S-1, as amended (File No. 333-256838), filed by the Registrant with the Securities and Exchange Commission (the “Commission”) pursuant to the Securities Act, including all amendments and exhibits thereto, which was declared effective by the Commission on June 24, 2021, or the Prior Registration Statement, are incorporated by reference into this Registration Statement.

The 1,725,000 additional shares of common stock, which includes 225,000 additional shares that the underwriters have the option to purchase, that are being registered for sale are in an amount and at a price that together represent no more than 20% of the maximum aggregate offering price set forth in the Calculation of Registration Fee table contained in the Prior Registration Statement.

The required opinion and consents are listed on an Exhibit Index attached hereto and filed herewith or incorporated by reference herein.

EXHIBIT INDEX

Exhibit No.	Exhibit Index
5.1	<u>Opinion of Goodwin Procter LLP</u>
23.1	<u>Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm.</u>
23.2	<u>Consent of Goodwin Procter LLP (included in Exhibit 5.1)</u>
24.1*	<u>Power of Attorney</u>

* Previously filed on the signature page to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-256838), originally filed with the Securities and Exchange Commission on June 4, 2021 and incorporated by reference herein.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, Graphite Bio, Inc. has duly caused this Registration Statement on FormS-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, California, on the 24th day of June, 2021.

Graphite Bio, Inc.

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

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on FormS-1 has been signed by the following persons in their capacities and on the date indicated.

SIGNATURE	TITLE	DATE
<u>/s/ Josh Lehrer</u> Josh Lehrer, M.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	June 24, 2021
<u>/s/ Philip P. Gutry</u> Philip P. Gutry	Chief Business Officer, Head of Finance & Investor Relations (Principal Financial and Accounting Officer)	June 24, 2021
<u>*</u> Perry Karsen	Chairman of the Board and Director	June 24, 2021
<u>*</u> Abraham Bassan	Director	June 24, 2021
<u>*</u> Jerel Davis, Ph.D.	Director	June 24, 2021
<u>*</u> Kristen M. Hege, M.D.	Director	June 24, 2021
<u>*</u> Joseph Jimenez	Director	June 24, 2021
<u>*</u> Matthew Porteus, M.D., Ph.D.	Director	June 24, 2021
<u>*</u> Carlo Rizzuto, Ph.D.	Director	June 24, 2021
<u>*</u> Smital Shah	Director	June 24, 2021
<u>*</u> Jo Viney, Ph.D.	Director	June 24, 2021

*By: /s/ Josh Lehrer
Josh Lehrer, M.D.
Attorney-in-fact

June 24, 2021

Graphite Bio, Inc.
279 East Grand Avenue, Suite 430
South San Francisco, CA 94080

Re: Securities Registered under Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of (i) a Registration Statement on Form S-1 (File No. 333-256838) (as amended or supplemented, the "Initial Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act") and (ii) a second Registration Statement on Form S-1 filed pursuant to Rule 462(b) promulgated under the Securities Act (the "462(b) Registration Statement," and together with the Initial Registration Statement, the "Registration Statement"). This opinion letter is being furnished to you in connection with your filing of the 462(b) Registration Statement, relating to the registration of the offering by Graphite Bio, Inc., a Delaware corporation (the "Company"), of up to 1,725,000 shares (the "Shares") of the Company's Common Stock, \$0.00001 par value per share, including Shares purchasable by the underwriters upon their exercise of an over-allotment option granted to the underwriters by the Company. The Shares are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the "Underwriting Agreement").

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 opinions set forth below, on certificates of officers of the Company.

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

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 Underwriting Agreement, the Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption "Legal Matters" in 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-1 MEF of our report dated April 16, 2021 (June 21, 2021, as to effects of the reverse stock split discussed in Note 1), relating to the financial statements of Graphite Bio, Inc. included in Registration Statement No. 333-256838 on Form S-1 of Graphite Bio, Inc. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Deloitte & Touche LLP

San Francisco, California
June 24, 2021