UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934 (Amendment No)
Filed by the Registrant ⊠
Filed by a Party other than the Registrant \Box
Check the appropriate box:
□ Preliminary Proxy Statement
☐ Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
☑ Definitive Proxy Statement
☐ Definitive Additional Materials
□ Soliciting Material under §240.14a-12
GRAPHITE BIO, INC. (Name of registrant as specified in its charter) (Name of Person(s) Filing Proxy Statement, if other than the Registrant)
Payment of Filing Fee (Check all boxes that apply):
☑ No fee required.
☐ Fee paid previously with preliminary materials;
☐ Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules14a-6(i)(1) and 0-11

April 29, 2022

Dear fellow stockholder.

2021 was a truly transformational year for Graphite Bio as we advanced our mission to develop potentiabne-time cures for patients who have serious and life-threatening diseases, starting with sickle cell disease. At the beginning of 2021, we were in the early stages of company formation; today, we are establishing ourselves as a leader in gene editing.

In the face of significant challenges posed by the global pandemic, we quickly and strategically built the company in a virtual setting, raising \$150 million in a Series B financing in March followed by an upsized initial public offering of \$238 million in June, which is expected to support our operations into the fourth quarter of 2024. Our company has quadrupled in size since the start of 2021, welcoming 80 outstandingly talented professionals from across the biopharma industry. And we continue to plan for additional growth and expansion in the years ahead.

At Graphite Bio, we are advancing a powerful next-generation gene editing platform, called UltraHDR™, that was developed by our founders at Stanford University. Our platform builds on first-generation CRISPR technology, taking it beyond cutting and knocking out genes to realize the full promise of gene editing. We are harnessing the power of homology directed repair to efficiently and precisely write new DNA into target genes, giving us the ability to repair any genetic lesion that causes serious disease. With our UltraHDR™ platform, we have the potential to transform human health by achieving one of medicine's most elusive goals: to precisely "find & replace" any gene in the genome.

We have demonstrated in preclinical studies the potential to apply our UltraHDR™ platform to various cell types and address a wide range of diseases. We are initially focused on using our gene editing technology in autologous hematopoietic stem cells (HSCs) to develop one-time cures for diseases like sickle cell, which is caused by a single mutation and affects millions of people around the world. Directly correcting the disease-causing genetic mutation is viewed as the gold standard for curing sickle cell disease as it has the potential to restore normal physiology. Our UltraHDR™ platform enables us to correct the single misspelling in the beta-globin gene that causes sickle cell disease, thereby decreasing the production of harmful sickle hemoglobin and restoring the expression of adult hemoglobin. In November 2021, we enrolled our first patient in our Phase 1/2 CEDAR clinical trial. We intend to dose our first patient in the second half of 2022, with initial proof-of-concept data anticipated in 2023.

Our discovery research efforts are a critical part of our work as well, and we are focused on developing potentialone-time, HSC-based curative therapies for diseases where we can significantly impact patient outcomes. We have multiple efforts across a range of disease areas, including gene replacement programs that have the potential to cure diseases such as beta thalassemia and X-linked severe combined immunodeficiency syndrome, and targeted gene insertion programs to enable potentially permanent therapeutic protein production to address diseases like alpha-1 antitrypsin deficiency and Gaucher disease.

In addition, we believe that improving conditioning is the key to making our potentially curative therapies available, if approved, to as many appropriate patients as possible. We intend to do this by harnessing advances in non-genotoxic HSC-targeted conditioning (NGTC) regimens. We are building a team of experts in antibody and protein sciences to advance our internal research efforts, in addition to exploring strategic partnerships and collaborations in this area. We believe that our efforts in NGTC development could be industry leading and broaden the number of patients who can benefit from gene editing, going beyond those who have the most severe disease. We look forward to sharing more on our progress from our research-stage programs as they progress.

In closing, this was an extraordinary year for Graphite Bio — and we are just getting started. I feel incredibly lucky to lead such a talented and dedicated team, and I am deeply thankful to all our employees, as well as the physicians and patients who make our work possible, along with the continued support of our exceptional stockholders.



Josh Lehrer, M.D., M.Phil., FACC President and Chief Executive Officer



GRAPHITE BIO, INC. 201 Haskins Way, Suite 210 South San Francisco, CA, 94080

NOTICE OF 2022 ANNUAL MEETING OF STOCKHOLDERS To be held June 21, 2022

Notice is hereby given that the 2022 Annual Meeting of Stockholders, or Annual Meeting, Graphite Bio, Inc., will be held online on June 21, 2022 at 8:00 a.m. Pacific Time. Due to the public health concerns about COVID-19, and to support the health and well-being of our stockholders, employees and communities, this year's Annual Meeting will be held virtually. You may attend the meeting virtually via the Internet at www.virtualshareholdermeeting.com/GRPH2022, where you will be able to vote electronically and submit questions. You will need the 16-digit control number included with the Notice of Internet Availability of Proxy Materials being mailed to you separately in order to attend the Annual Meeting. The purpose of the Annual Meeting is the following:

- 1. To elect three Class I directors, Jerel Davis, Ph.D., Perry Karsen and Joseph Jimenez, to our board of directors, to serve until the 2025 annual meeting of stockholders and until their successor has been duly elected and qualified, or until their earlier death, resignation or removal;
- To ratify the appointment of Deloitte & Touche LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022; and
- 3. To transact any other business properly brought before the Annual Meeting or any adjournment or postponement of the Annual Meeting.

The proposal for the election of directors relates solely to the election of three Class I directors nominated by the board of directors.

Only Graphite Bio, Inc. stockholders of record at the close of business on April 25, 2022 will be entitled to vote at the Annual Meeting and any adjournment or postponement thereof.

Graphite Bio, Inc. is following the Securities and Exchange Commission's "Notice and Access" rule that allows companies to furnish their proxy materials by posting them on the Internet. As a result, we are mailing to our stockholders a Notice of Internet Availability of Proxy Materials, or the Notice, instead of a paper copy of the accompanying proxy statement and our Annual Report for the fiscal year ended December 31, 2021, or 2021 Annual Report. We plan to mail the Notice on or about April 29, 2022, and it contains instructions on how to access both the 2021 Annual Report and accompanying proxy statement over the Internet. This method provides our stockholders with expedited access to proxy materials and not only lowers the cost of printing and distribution but also reduces the environmental impact of the Annual Meeting. If you would like to receive a print version of the proxy materials, free of charge, please follow the instructions on the Notice.

Please see the "General Information" section of the proxy statement that accompanies this notice for more details regarding the logistics of the virtual Annual Meeting, including the ability of stockholders to submit questions during the Annual Meeting, and technical details and support related to accessing the virtual platform.

Your vote is important. Whether or not you expect to attend the virtual meeting, it is important that your shares be represented. To ensure that your vote is recorded promptly, please vote as soon as possible, even if you plan to attend the meeting, by submitting your proxy via the Internet at the address listed on the proxy card or by signing, dating and returning the proxy card. Even if you have voted by proxy, you may still vote at the virtual meeting. Please note, however, that if your shares are held through a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.

South San Francisco, CA April 29, 2022

By order of the Board of Directors,

/s/ Josh Lehrer Josh Lehrer, M.D. President and Chief Executive Officer

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GRAPHITE BIO, INC. 201 Haskins Way, Suite 210 South San Francisco, CA, 94080

PROXY STATEMENT FOR THE 2022 ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD JUNE 21, 2022

This proxy statement contains information about the 2022 Annual Meeting of Stockholders, or the Annual Meeting, of Graphite Bio, Inc., which will be held online on June 21, 2022 at 8:00 a.m. Pacific Time. Due to the public health concerns about COVID-19, and to support the health and well-being of our stockholders, employees and communities, this year's Annual Meeting will be held virtually. You may attend the Annual Meeting virtually via the Internet at www.virtualshareholdermeeting.com/GRPH2022, where you will be able to vote electronically and submit questions. You will need the 16-digit control number included with the Notice of Internet Availability of Proxy Materials being mailed to you separately in order to attend the Annual Meeting. The board of directors of Graphite Bio, Inc. is using this proxy statement to solicit proxies for use at the Annual Meeting. In this proxy statement, the terms "Graphite," "Graphite Bio," the "Company," "we," "us," and "our" refer to Graphite Bio, Inc. The mailing address of our principal executive offices is Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080.

All properly submitted proxies will be voted in accordance with the instructions contained in those proxies. If no instructions are specified, the proxies will be voted in accordance with the recommendation of our board of directors with respect to each of the matters set forth in this proxy statement and the accompanying proxy card. You may revoke your proxy at any time before it is exercised at the meeting by giving our corporate secretary written notice to that effect.

We made this proxy statement and our 2021 Annual Report to Stockholders on Form10-K for the fiscal year ended December 31, 2021, or the 2021 Annual Report, available to stockholders on or about April 29, 2022.

We are an "emerging growth company" under applicable federal securities laws and therefore permitted to conform with certain reduced public company reporting requirements. As an emerging growth company, we provide in this proxy statement the scaled disclosure permitted under the Jumpstart Our Business Startups Act of 2012, the JOBS Act, including the compensation disclosures required of a "smaller reporting company," as that term is defined in Rule 12b-2 promulgated under the Securities Exchange Act of 1934, as amended, the Exchange Act. In addition, as an emerging growth company, we are not required to conduct votes seeking approval, on an advisory basis, of the compensation of our named executive officers or the frequency with which such votes must be conducted. We will remain an "emerging growth company" until the earliest of (i) December 31, 2026; (ii) the last day of the fiscal year in which our total annual gross revenue is equal to or more than \$1.07 billion; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or the SEC. Even after we are no longer an "emerging growth company," we may remain a "smaller reporting company."

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held on June 21, 2022:

This proxy statement and our 2021 Annual Report to Stockholders are available for viewing, printing and downloading at www.ProxyVote.com/.

A copy of this proxy statement and our 2021 Annual Report, as filed with the SEC, except for exhibits, will be furnished without charge to any stockholder upon written request to Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary. This proxy statement and our 2021 Annual Report are also available on the SEC's website at www.sec.gov.

GRAPHITE BIO, INC. PROXY STATEMENT FOR THE 2022 ANNUAL MEETING OF STOCKHOLDERS

GENERAL INFORMATION

Why are you holding a virtual Annual Meeting?

The safety of our stockholders is important to us and due to the ongoing public health concerns about COVID-19, this year's Annual Meeting will be a "virtual meeting" of stockholders. We have implemented the virtual format in order to facilitate stockholder attendance at our Annual Meeting. We have designed our virtual format to enhance, rather than constrain, stockholder access, participation and communication. For example, the virtual format allows stockholders to communicate with us in advance of, and during, the Annual Meeting so they can ask questions of our board of directors or management.

How do I attend and participate in the Annual Meeting online?

To attend and participate in the Annual Meeting, stockholders will need to access the live audio webcast of the meeting. To do so, stockholders of record will need to visit www.virtualshareholdermeeting.com/GRPH2022 and use their control number provided in the proxy card to preregister to this website, and beneficial owners of shares held in street name will need to follow the same instructions. Registration will open 15 minutes prior to the meeting.

The live audio webcast of the Annual Meeting will begin promptly at 8:00 a.m. Pacific Time.

How can I get help if I have trouble checking in or listening to the meeting online?

There will be a support number available on the login page of the virtual meeting 15 minutes before the meeting begins for any stockholders having technical difficulties. The technical support line will not be able to provide control numbers, but will be able to assist with any technical issues.

When are this proxy statement and the accompanying materials scheduled to be sent to stockholders?

We have elected to provide access to our proxy materials to our stockholders via the Internet. Accordingly, on or about April 29, 2022, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice. Our proxy materials, including the Notice of the 2022 Annual Meeting of Stockholders, this proxy statement and the accompanying proxy card or, for shares held in street name (i.e., held for your account by a broker or other nominee), a voting instruction form, and the 2021 Annual Report to Stockholders, or 2021 Annual Report, will be made available to stockholders on the Internet on or about the same date. You will need the 16-digit control number included on the Notice to access these materials. If you would like to receive a print version of the proxy materials, free of charge, please follow the instructions on the Notice.

Who is soliciting my vote?

Our Board of Directors, or the board of directors, is soliciting your vote for the Annual Meeting.

When is the record date for the Annual Meeting?

The record date for determination of stockholders entitled to vote at the Annual Meeting is the close of business on April 25, 2022.

How many votes can be cast by all stockholders?

There were 57,970,110 shares of our common stock, par value \$0.00001 per share, outstanding on April 25, 2022, all of which are entitled to vote with respect to all matters to be acted upon at the Annual Meeting. Each stockholder of record is entitled to one vote for each share of our common stock held by such stockholder. As the

stockholder of record, you have the right to grant your voting proxy directly to the individuals listed on the proxy card or vote on your own behalf at our virtual Annual Meeting. None of our shares of preferred stock were outstanding as of April 25, 2022.

Who is entitled to vote?

Registered Stockholders. If shares of our common stock are registered directly in your name with our transfer agent, you are considered the stockholder of record with respect to those shares. As the stockholder of record, you have the right to grant your voting proxy directly to the individuals listed on the proxy card or vote on your own behalf at our virtual Annual Meeting. Throughout this proxy statement, we refer to these registered stockholders as "stockholders of record."

Street Name Stockholders. If shares of our common stock are held on your behalf in a brokerage account or by a bank or other nominee, you are considered to be the beneficial owner of shares that are held in "street name," and the proxy materials were forwarded to you by your broker or nominee, who is considered the stockholder of record with respect to those shares. As the beneficial owner, you have the right to direct your broker, bank or other nominee as to how to vote your shares. Beneficial owners are also invited to attend our virtual Annual Meeting. However, since a beneficial owner is not the stockholder of record, you may not vote your shares of our common stock on your own behalf at the Annual Meeting unless you follow your broker's procedures for obtaining a legal proxy. Note you should also be receiving a voting instruction form for you to use from your broker. Throughout this proxy statement, we refer to stockholders who hold their shares through a broker, bank or other nominee as "street name stockholders."

How do I vote?

If you are a stockholder of record, there are four ways to vote:

- **By Internet.** You may vote at www.ProxyVote.com, 24 hours a day, seven days a week. Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time the day before the meeting date. You will need the control number included on your proxy card.
- During the Annual Meeting. You may vote during the Annual Meeting by going to www.virtualshareholdermeeting.com/GRPH2022. You will need the control number included on your proxy card.
- By Telephone. You may vote using a touch-tone telephone by calling1-800-6903, 24 hours a day, seven days a week. Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time the day before the meeting date. You will need the control number included on your proxy card.
- **By Mail.** You may vote by completing and mailing your proxy card. Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717. Votes submitted through the mail must be received by June 20, 2022.

Even if you plan to participate in our virtual Annual Meeting, we recommend that you also vote by proxy so that your vote will be counted if you later decide not to participate in the Annual Meeting.

If you are a street name stockholder, you will receive voting instructions from your broker, bank or other nominee. You must follow the voting instructions provided by your broker, bank or other nominee in order to instruct your broker, bank or other nominee on how to vote your shares. Street name stockholders should generally be able to vote by returning an instruction card, or by telephone or on the Internet. However, the availability of telephone and Internet voting will depend on the voting process of your broker, bank or other nominee. As discussed above, if you are a street name stockholder, you may not vote your shares on your own behalf at the Annual Meeting unless you obtain a legal proxy from your broker, bank or other nominee.

By Proxy

If you will not be attending the Annual Meeting, you may vote by proxy. You can vote by proxy over the Internet by following the instructions provided in the enclosed proxy card. Proxies submitted by mail must be received before the start of the Annual Meeting.

If you complete and submit your proxy before the Annual Meeting, the persons named as proxies will vote the shares represented by your proxy in accordance with your instructions. If you submit a proxy without giving voting instructions, your shares will be voted in the manner recommended by the board of directors on all matters presented in this proxy statement, and as the persons named as proxies may determine in their discretion with respect to any other matters properly presented at the Annual Meeting. You may also authorize another person or persons to act for you as proxy in a writing, signed by you or your authorized representative, specifying the details of those proxies' authority. The original writing must be given to each of the named proxies, although it may be sent to them by electronic transmission if, from that transmission, it can be determined that the transmission was authorized by you.

If any other matters are properly presented for consideration at the Annual Meeting, including, among other things, consideration of a motion to adjourn the Annual Meeting to another time or place (including, without limitation, for the purpose of soliciting additional proxies), the persons named in your proxy and acting thereunder will have discretion to vote on those matters in accordance with their best judgment. We do not currently anticipate that any other matters will be raised at the Annual Meeting.

How do I revoke my proxy?

You may revoke your proxy by (1) entering a new vote by mail that we receive before the start of the Annual Meeting or over the Internet or via telephone, (2) attending and voting at the Annual Meeting online (although attendance at the Annual Meeting will not in and of itself revoke a proxy), or (3) by filing an instrument in writing revoking the proxy or another duly executed proxy bearing a later date with our Corporate Secretary. Any written notice of revocation or subsequent proxy card must be received by our Corporate Secretary prior to the taking of the vote at the Annual Meeting. Such written notice of revocation or subsequent proxy card should be sent to our principal executive offices at Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary.

If a broker, bank, or other nominee holds your shares, you must contact such broker, bank, or nominee in order to find out how to change your vote.

How is a quorum reached?

Our Amended and Restated Bylaws, or bylaws, provide that a majority of the shares entitled to vote, present or represented by proxy, will constitute a quorum for the transaction of business at the Annual Meeting.

Under the Delaware General Corporation Law, shares that are voted "abstain" or "withheld" and broker non-votes are counted as present for purposes of determining whether a quorum is present at the Annual Meeting. If a quorum is not present, the meeting may be adjourned until a quorum is obtained.

How is the vote counted?

Under our bylaws, any proposal other than an election of directors is decided by a majority of the votes properly cast for and against such proposal, except where a larger vote is required by law or by our Amended and Restated Certificate of Incorporation, or certificate of incorporation, or bylaws. Abstentions and broker "non-votes" are not included in the tabulation of the voting results on any such proposal and, therefore, do not have an impact on such proposals. A broker "non-vote" occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power with respect to that item, and has not received instructions from the beneficial owner.

If your shares are held in "street name" by a brokerage firm, your brokerage firm is required to vote your shares according to your instructions. If you do not give instructions to your brokerage firm, the brokerage firm will still be able to vote your shares with respect to certain "discretionary" items, but will not be allowed to vote your shares with respect to "non-discretionary" items. Proposal No. 1 is a "non-discretionary" item. If you do not instruct your broker how to vote with respect to this proposal, your broker may not vote for this proposal, and those votes will be counted as broker "non-votes." Proposal No. 2 is considered to be a discretionary item, and your brokerage firm will be able to vote on this proposal even if it does not receive instructions from you.

To be elected, the directors nominated via Proposal No. 1 must receive a plurality of the votes cast and entitled to vote on the proposal, meaning that the director nominees receiving the most votes will be elected. Shares voting "withheld" have no effect on the election of directors.

Who pays the cost for soliciting proxies?

We are making this solicitation and will pay the entire cost of preparing and distributing our proxy materials and soliciting votes. If you choose to access the proxy materials or vote over the Internet, you are responsible for any Internet access charges that you may incur. Our officers and employees may, without compensation other than their regular compensation, solicit proxies through further mailings, personal conversations, facsimile transmissions, e-mails, or otherwise. Proxy solicitation expenses that we will pay include those for preparation, mailing, returning, and tabulating the proxies.

How may stockholders submit matters for consideration at an Annual Meeting?

The required notice must be in writing and received by our corporate secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, or if no annual meeting were held in the preceding year, a stockholder's notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs.

In addition, any stockholder proposal intended to be included in the proxy statement for the next annual meeting of our stockholders in 2023 must also satisfy the requirements of SEC Rule 14a-8 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and be received not later than December 30, 2022. If the date of the annual meeting is moved by more than 30 days from the date contemplated at the time of the previous year's proxy statement, then notice must be received within a reasonable time before we begin to print and send proxy materials. If that happens, we will publicly announce the deadline for submitting a proposal in a press release or in a document filed with the SEC.

To comply with the universal proxy rules (once effective), stockholders who intend to solicit proxies in support of director nominees other than the Company's nominees must provide notice that sets forth the information required by Rule 14a-19 under the Exchange Act no later than April 22, 2023. Stockholder proposals and the required notice should be addressed to Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary.

How can I find out the results of the voting at the Annual Meeting?

We plan to announce preliminary voting results at the Annual Meeting. Final voting results will be published in a Current Report on Form8-K, or Form 8-K, that we expect to file with the SEC within four business days after the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Annual Meeting, we intend to file a Form8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

PROPOSAL NO. 1 — ELECTION OF CLASS I DIRECTORS

Our board of directors currently consists of ten members. In accordance with the terms of our certificate of incorporation and bylaws, our board of directors is divided into three classes, Class I, Class II and Class III, with members of each class serving staggered three-year terms. The members of the classes are divided as follows:

- the Class I directors are Jerel Davis, Ph.D., Perry Karsen and Joseph Jimenez, and their terms will expire at the Annual Meeting;
- the Class II directors are Abraham Bassan, Matthew Porteus, M.D., Ph.D. and Jo Viney, Ph.D., and their terms will expire at the annual meeting of stockholders to be held in 2023; and
- the Class III directors are Kristen M. Hege, M.D., Josh Lehrer, M.D., Carlo Rizzuto, Ph.D. and Smital Shah, and their terms will expire at the annual meeting of stockholders to be held in 2024.

Upon the expiration of the term of a class of directors, directors in that class will be eligible to be elected for a new three-year term at the annual meeting of stockholders in the year in which their term expires.

Our certificate of incorporation and bylaws provide that the authorized number of directors may be changed only by resolution of our board of directors. Our certificate of incorporation also provides that our directors may be removed only for cause and then only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office even if less than a quorum.

Our board of directors has nominated each of Jerel Davis, Ph.D., Perry Karsen and Joseph Jimenez for election as a Class I director at the Annual Meeting. Each of the nominees are currently directors, and each has indicated a willingness to continue to serve as directors, if elected. If the nominees become unable or unwilling to serve, however, the proxies may be voted for substitute nominees selected by our board of directors.

Nominees for Election as Class I Director

The following table identifies our director nominees, and sets forth their principal occupation and business experience during the last five years and age as of April 20, 2022.

	Positions and Offices Held	Director	
Name	with Graphite Bio, Inc.	Since	Age
Jerel Davis, Ph.D.	Director	2019	45
Perry Karsen	Director and Board Chair	2020	67
Joseph Jimenez	Director	2020	62

Jerel Davis, Ph.D. has served on our board of directors since our inception in October 2019. Since June 2011, Dr. Davis has served at Versant Venture Management, LLC, a healthcare investment firm, where he has held the position of managing director since 2015. He currently serves on the board of directors of Chinook Therapeutics, Inc. (NASDAQ GS: KDNY) since December 2018 and Repare Therapeutics, Inc. (NASDAQ: RPTX) since September 2016. Dr. Davis serves on the board of directors of a number of private companies including Nested Therapeutics, Inc., Tentarix Biotherapeutics, Inc., Ventus Therapeutics Inc., and Turnstone Biologics Corp., among others. Prior to joining Versant, Dr. Davis was at McKinsey & Company where he worked in various healthcare markets including the United States, Europe and China. Dr. Davis received a B.S. in mathematics and biology from Pepperdine University and a Ph.D. in population genetics from Stanford University. We believe that Dr. Davis' broad and extensive experience in the life sciences industry as both investing in and launching numerous life sciences companies qualifies him to serve on our board of directors.

Perry Karsen has served as the chair of our board of directors since October 2020 and as a member of our board of directors since June 2020. Mr. Karsen is currently a senior advisor at Samsara BioCapital, L.P. and the

executive chair of Autobahn Labs, Inc. From May 2013 to December 2015, Mr. Karsen was the chief executive officer of Celgene Cellular Therapeutics, Inc., a division of Celgene Corporation. Mr. Karsen served as chief operations officer and executive vice president of Celgene from July 2010 to May 2013, and as senior vice president and head of worldwide business development of Celgene from 2004 to 2009. Between February 2009 and July 2010, Mr. Karsen was chief executive officer of Pearl Therapeutics Inc., subsequently acquired by AstraZeneca plc. Prior to his tenure with Celgene, Mr. Karsen held executive positions at Human Genome Sciences, Inc., a publicly traded biotechnology company, since acquired by GlaxoSmithKline plc; Bristol-Myers Squibb Co.; Genentech, Inc., since acquired by Hoffmann-La Roche AG (Roche), and Abbott Laboratories. In addition, Mr. Karsen served as a general partner at Pequot Ventures. He is currently a member of the boards of directors of several companies, including Jounce Therapeutics, Inc. (NASDAQ: JNCE) since January 2016, Nitrase Therapeutics, Inc. since May 2020 and Escape Bio, Inc. since 2018. Mr. Karsen was formerly a member of the boards of directors of several public biotechnology companies, including Alliqua Biomedical, Inc. (NASDAQ: ALQA) from December 2013 to February 2016, Agios Pharmaceuticals, Inc. (NASDAQ: AGIO) from November 2011 to March 2016, Voyager Therapeutics, Inc. (NASDAQ: VYGR) from July 2015 to August 2019, OncoMed Pharmaceuticals, Inc., until it was acquired by Mereo BioPharma (NASDAO: MREO), from January 2016 to April 2019 and Intellia Therapeutics, Inc. (NASDAQ: NTLA) from April 2016 to December 2020. Mr. Karsen was also formerly a member of the boards of directors of the Biotechnology Innovation Organization (BIO) and the Alliance for Regenerative Medicine. Mr. Karsen received his B.S. in Biological Sciences from the University of Illinois, Urbana-Champaign, a Masters of Management from Northwestern University's Kellogg Graduate School of Management and an M.A.T. in Biology from Duke University. We believe that Mr. Karsen's executive leadership experience, including his experience as an executive at large and successful multi-national pharmaceutical companies and membership on boards of directors of various publicly traded biotechnology companies, qualifies him to serve as a member of the board of directors.

Joseph Jimenez has served on our board of directors since June 2020. Mr. Jimenez is theco-founder and managing partner of Aditum Bio, a biotechnology venture fund, where he has served since August 2019. He is the former chief executive officer of Novartis AG, a position he held from February 2010 to January 2018. Prior to this role, Mr. Jimenez held several senior positions at Novartis from April 2007 to January 2010, including division head of Novartis Pharmaceuticals and leadership of the company's Consumer Health Division. Mr. Jimenez also held various leadership roles at H. J. Heinz Company in Europe and North America from 1999 to 2006 and at ConAgra Foods from 1993 to 1998 and was an advisor to the Blackstone Group L.P. from July 2006 to March 2007. Mr. Jimenez is currently a member of the board of directors of General Motors (NYSE: GM) since June 2015, Procter & Gamble (NYSE: PG) since March 2018 and Century Therapeutics (NASDAQ: IPSC) since August 2019. Mr. Jimenez received a B.A. in Economics from Stanford University and an M.B.A. from University of California, Berkeley's Haas School of Business. We believe that Mr. Jimenez is qualified to serve on our board of directors based on his extensive leadership experience and executive leadership at various technology companies.

Vote Required and Board of Directors' Recommendation

The nominees for Class I director who receive the most votes (also known as a plurality) will be elected. You may vote either FOR all the nominees, FOR any one of the nominees, WITHHOLD your vote from all the nominees or WITHHOLD your vote from any one of the nominees. Votes that are withheld will not be included in the vote tally for the election of directors. If your shares are held in "street name" by a broker, bank or other nominee, your broker, bank or other nominee does not have authority to vote your unvoted shares held by the firm for the election of directors. As a result, any shares not voted by you will be treated as a broker non-vote. Such broker non-votes will have no effect on the results of this vote.

The proxies will be voted in favor of the above nominees unless a contrary specification is made in the proxy. The nominees have consented to serve as our directors if elected. However, if the nominees are unable to serve or for good cause will not serve as a director, the proxies will be voted for the election of such substitute nominee as our board of directors may designate.

The proposal for the election of directors relates solely to the election of Class I directors nominated by our board of directors.

The board of directors recommends voting "FOR" the election of Jerel Davis, Ph.D., Perry Karsen and Joseph Jimenez as Class I directors, to serve for a three-year term ending at the annual meeting of stockholders to be held in 2025.

Directors Continuing in Office

The following table identifies our continuing directors, and sets forth their principal occupation and business experience during the last five years and their ages as of April 20, 2022.

		Director	Class and Year in Which Term	
Name	Positions and Offices Held with Graphite Bio, Inc.	Since	Will Expire	Age
Abraham Bassan	Director	2020	Class II—2023	37
Matthew Porteus, M.D., Ph.D.	Director	2020	Class II—2023	57
Jo Viney, Ph.D.	Director	2021	Class II—2023	56
Josh Lehrer, M.D.	President, Chief Executive Officer and Director	2020	Class III—2024	48
Kristen M. Hege, M.D.	Director	2021	Class III—2024	58
Carlo Rizzuto, Ph.D.	Director	2020	Class III—2024	51
Smital Shah	Director	2021	Class III—2024	45

Class II Directors (Term Expires at 2023 Annual Meeting)

Abraham Bassan has served on our board of directors since June 2020. Mr. Bassan is currently a Principal at Samsara BioCapital, a life science investment firm that takes a long-term view to company building in the biotech space. Since 2017, Mr. Bassan has been part of the investment team at Samsara Biocapital, where he plays a central role in sourcing new investments and overseeing operations at current portfolio companies in his capacity as a director or board observer. In addition to his board role at Graphite, he also serves as a director at Syncopation Life Sciences, Inc., since February, 2021, Septerna, Inc., since November, 2021, and Vedere Bio II, Inc., since April, 2021. In addition to investing activity, Mr. Bassan has played a direct role in biotech operations, with roles in project management and drug development at bluebird bio (NASDAQ: BLUE) and Revolution Medicines (NASDAQ: RVMD), and the role of President at Syncopation Life Sciences, Inc., a CAR T cell therapy company. Mr. Bassan received his A.B. in Molecular Biology from Princeton University and a M.S. in Development Biology from Stanford University. We believe that Mr. Bassan is qualified to serve on our board of directors based on his significant knowledge of the life sciences industry and experience and expertise in evaluating and investing in life sciences companies.

Matthew Porteus, M.D., Ph.D. has served on our board of directors since March 2020. Dr. Porteus is an associate professor of pediatrics of the Department of Pediatrics, Divisions of Hematology/Oncology and Human Gene Therapy, at Stanford School of Medicine, where he has served in various leadership roles since October 2010. Prior to joining Stanford, Dr. Porteus served as an assistant professor at the University of Texas Southwestern Medical Center from February 2003 to August 2010. His research focuses on developing homologous recombination-based therapies for genetic and other diseases. Dr. Porteus also maintains a clinical practice at the Lucille Packard Children's Hospital, where he is an attending physician for the Pediatric Bone Marrow Transplant Service. Dr. Porteus graduated Magna Cum Laude with an A.B. in History and Science from Harvard University and completed his M.D. and Ph.D. degrees at Stanford University. Dr. Porteus completed his residency training in pediatrics at Boston Children's Hospital, and fellowship training in Pediatric Hematology/Oncology at Boston Children's Hospital and the Dana Farber Cancer Institute. For his post-doctoral work, Dr. Porteus trained at the Massachusetts Institute of Technology and the California Institute of Technology. During this time, he began studying gene editing and was the first to show that engineered nucleases could be used to precisely modify human cells by homologous recombination. We believe that Dr. Porteus is qualified to

serve on our board of directors based on his medical background and extensive knowledge surrounding genetic diseases, gene therapy and gene editing.

Jo Viney, Ph.D. has served as a member of our board of directors since March 2021. Dr. Viney is aCo-Founder and has served as President and Chief Executive Officer of Seismic Therapeutic, a biotechnology company, since October 2021. Previously, Dr Viney was Co-Founder and served as Chief Scientific Officer of Pandion Therapeutics Inc. (NASDAQ: PAND) from April 2017, and its President from July 2019. In April of 2021, Pandion Therapeutics was acquired by Merck & Co Inc (NYSE: MRK). Dr Viney remained in her role at Pandion Therapeutics, which became a wholly-owned subsidiary of Merck & Co Inc, until October 2021. From November 2015 to November 2016, Dr. Viney served as Senior Vice President, Drug Discovery at Biogen Inc. (NASDAQ: BIIB), after serving as Vice President, Immunology Research from July 2011 to October 2015. From September 2003 to April 2011, Dr. Viney served as Executive Director of Inflammation Research at Amgen, Inc. (NASDAQ: AMGN), after serving as Director of Inflammation Research from July 2002 to August 2003. Dr. Viney serves on the boards of public biotechnology companies Harpoon Therapeutics and Finch Therapeutics. Dr. Viney holds a Ph.D. in immunology from the University of London, St. Bartholomew's Hospital Medical School and a BSc in biophysical science from the University of East London. We believe that Dr. Viney's substantial leadership experience in the biotechnology industry qualifies her to serve on our board of directors.

Class III Directors (Term Expires at 2024 Annual Meeting)

Josh Lehrer, M.D., M.Phil., FACC has served as our President and Chief Executive Officer and on our board of directors since April 2020. From October 2013 to April 2020, Dr. Lehrer held various leadership roles at Global Blood Therapeutics, Inc. (NASDAQ: GBT), including chief medical officer where he oversaw the development and approval of Oxbryta® (voxelotor) for the treatment of sickle cell disease. From September 2009 to October 2013, Dr. Lehrer served in leadership roles at Genentech in clinical development and business development. Dr. Lehrer has also held attending physician roles at Stanford University Medical Center and the Palo Alto Veteran's Affairs Health System. He holds an A.B. in Biochemical Sciences from Harvard University and a Master of Philosophy in Biological Sciences from the University of Cambridge. Dr. Lehrer earned his Doctor of Medicine at the University of California, San Francisco (UCSF), School of Medicine and completed his residency at UCSF in internal medicine. Dr. Lehrer served as a clinical and postdoctoral fellow in cardiovascular medicine at Stanford University and attended the Institute for Entrepreneurship at the Stanford Graduate School of Business. We believe that Dr. Lehrer is qualified to serve on our board of directors based on his medical background, extensive experience in business and clinical development and knowledge of private and public development stage biotechnology companies.

Kristen M. Hege, M.D. has served as a member of our Board of Directors since April 2021. Dr. Hege joined Celgene Corporation in 2010 as Vice President, Translational Development and is currently Senior Vice President, Early Clinical Development, Hematology/Oncology & Cell Therapy at Bristol Myers Squibb Company (NYSE: BMY) (following its acquisition of Celgene in 2019). She has also held an active faculty position at the University of California, San Francisco Medical Center since 1996, most recently as Clinical Professor of Medicine, Hematology/Oncology, serving in that role as a volunteer since 2008. Prior to Celgene, she served as Chief Medical Officer at Cellerant Therapeutics and Acting Chief Medical Officer at Aragon Pharmaceuticals and Theraclone Sciences. Dr. Hege was also a Vice President, Clinical Research and Development at Cell Genesys. Dr. Hege currently serves as a member of the board of directors at Mersana Therapeutics (NASDAQ: MRSN) since 2016 and previously served as a member of the board of directors at Arcus Biosciences (NYSE: RCUS) from 2018 to 2019 and as a board observer for Flexus Biosciences from 2014 to 2015. She also previously served as a volunteer-at-large director for the Society for Immunotherapy of Cancer from 2016 to 2019 and the BayBio/California Life Sciences Association from 2014 to 2016. Dr. Hege received a B.A. in Biochemistry from Dartmouth College summa cum laude, an M.D. from University of California, San Francisco, Internal Medicine training at Harvard's Brigham & Women's Hospital, and Board certification in Hematology and Medical Oncology from the University of California, San Francisco. We believe that Dr. Hege's medical background and experience in the biotechnology industry qualify her to serve as a director.

Carlo Rizzuto, Ph.D. has served as a member of our board of directors since March 2020. Dr. Rizzuto joined Versant Ventures in November 2012 where he has served in a variety of roles including operating principal, venture partner and partner. Prior to joining Versant Ventures, Dr. Rizzuto worked at Novartis AG, where he was a global program team director from 2010 to 2012. Dr. Rizzuto currently serves on the board of directors of Century Therapeutics, Inc. (NASDAQ: IPSC) since March 2018 and served on the Pandion Therapeutics, Inc. board of directors from January 2018 until its acquisition by Merck (NYSE: MRK) in March 2021. Dr. Rizzuto received a Ph.D. in virology from Harvard University and a B.A. in biology from the University of Virginia. We believe that Dr. Rizzuto's experience as an investor in the life sciences industry qualifies him to serve on our board of directors.

Smital Shah, has served as a member of our board of directors since April 2021. Since October 2014, Ms. Shah has served in roles of increasing responsibility at ProQR Therapeutics NV (NASDAQ: PRQR), a rare disease company, including as chief financial officer from October 2014 to December 2018 and most recently as chief business and financial officer since December 2018. Previously, Ms. Shah served as a corporate treasurer at Gilead Sciences, Inc. (NASDAQ: GILD) from August 2012 to September 2014. Prior to Gilead, she was an investment banker at Leerink Partners and JP Morgan focused on capital raising and strategic transactions in the biotechnology space. Previously, Ms. Shah held various research and development roles at Johnson & Johnson Company. Since March 2019, Ms. Shah has served on the board of directors of Pliant Therapeutics, Inc. (NASDAQ: PLRX) Ms. Shah holds a B.S. in Chemical Engineering from the University of Mumbai, a M.S. in Chemical Engineering from Virginia Tech and an M.B.A. from the University of California, Berkeley Haas School of Business. We believe that Ms. Shah is qualified to serve on our board of directors due to her extensive experience in the life sciences industry and her leadership experience as a senior financial executive.

There are no family relationships between or among any of our directors or executive officers. The principal occupation and employment during the past five years of each of our directors was carried on, in each case except as specifically identified above, with a corporation or organization that is not a parent, subsidiary or other affiliate of us. There is no arrangement or understanding between any of our directors and any other person or persons pursuant to which he or she is to be selected as a director.

There are no material legal proceedings to which any of our directors is a party adverse to us or any of our subsidiaries or in which any such person has a material interest adverse to us.

PROPOSAL NO. 2 — RATIFICATION OF THE APPOINTMENT OF DELOITTE & TOUCHE LLP AS GRAPHITE BIO, INC.'S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2022

Graphite Bio's stockholders are being asked to ratify the appointment by the audit committee of the board of directors of Deloitte & Touche LLP as Graphite Bio's independent registered public accounting firm for the fiscal year ending December 31, 2022. Deloitte & Touche LLP has served as Graphite Bio's independent registered public accounting firm since 2021.

The audit committee is solely responsible for selecting Graphite Bio's independent registered public accounting firm for the fiscal year ending December 31, 2022. Stockholder approval is not required to appoint Deloitte & Touche LLP as Graphite Bio's independent registered public accounting firm. However, the board of directors believes that submitting the appointment of Deloitte & Touche LLP to the stockholders for ratification is good corporate governance. If the stockholders do not ratify this appointment, the audit committee will reconsider whether to retain Deloitte & Touche LLP. If the selection of Deloitte & Touche LLP is ratified, the audit committee, at its discretion, may direct the appointment of a different independent registered public accounting firm at any time it decides that such a change would be in the best interest of Graphite Bio and its stockholders.

A representative of Deloitte & Touche LLP is expected to be present at the Annual Meeting and will have an opportunity to make a statement if he or she desires to do so and to respond to appropriate questions from our stockholders.

Graphite Bio incurred the following fees from Deloitte & Touche LLP for the audit of the financial statements and for other services provided during the years ended December 31, 2021 and 2020.

	2021	2020
Audit fees (1)	\$ 1,166,820	\$ 813,000
Audit-Related fees (2)	\$ —	\$ —
Tax fees (3)	\$ —	\$ —
All other fees (4)	<u>\$</u>	<u>\$</u>
Total fees	\$ 1,166,820	\$ 813,000

- Audit fees consist of fees billed for the audit of our annual financial statements, the review of our interim financial statements included in our
 quarterly reports on Form 10-Q, and services in connection with the Company's securities offerings, including registration statements, responding to
 SEC comment letters, comfort letters and consents.
- (2) Audit-related fees consist of services that are reasonably related to the performance of the audit or review of our financial statements. There were no such fees incurred in 2021 or 2020.
- (3) Tax Fees consist of fees for tax compliance, advice and tax planning and includes fees for tax return preparation. There were no such fees incurred in 2021 or 2020.
- (4) There were no other fees incurred in 2021 or 2020.

Audit Committee Pre-approval Policy and Procedures

Our audit committee has adopted policies and procedures relating to the approval of all audit andnon-audit services that are to be performed by our independent registered public accounting firm. This policy provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by our audit committee or the engagement is entered into pursuant to the pre-approval procedure described below.

From time to time, our audit committee maypre-approve specified types of services that are expected to be provided to us by our independent registered public accounting firm during the next 12 months. Any such

pre-approval details the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

During our 2021 and 2020 fiscal years, no services were provided to us by Deloitte & Touche LLP other than in accordance with there-approval policies and procedures described above.

Vote Required and Board of Directors' Recommendation

The affirmative vote of a majority of the votes cast FOR this proposal is required to ratify the appointment of our independent registered public accounting firm. Votes that are withheld will be counted towards the tabulation of votes cast on this proposal and will have the same effect as a negative vote. If your shares are held in "street name" by a broker, bank or other nominee, your broker, bank or other nominee has authority to vote your unvoted shares held by the firm on this proposal. If your broker, bank or other nominee does not exercise this authority, such broker non-votes will have no effect on the results of this vote.

The board of directors recommends voting "FOR" Proposal No. 2 to ratify the appointment of Deloitte & Touche LLP as Graphite Bio's independent registered public accounting firm for the fiscal year ending December 31, 2022.

CORPORATE GOVERNANCE

Director Nomination Process

Our nominating and corporate governance committee is responsible for identifying individuals qualified to serve as directors, consistent with criteria approved by our board of directors, and recommending such persons to be nominated for election as directors, except where we are legally required by contract, law or otherwise to provide third parties with the right to nominate.

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates, and interviews of selected candidates by management, recruiters, members of the committee and our board of directors. The qualifications, qualities and skills that our nominating and corporate governance committee believes must be met by a committee-recommended nominee for a position on our board of directors are as follows:

- Nominees should have experience at a strategic or policymaking level in a business, government, non-profit or academic organization of high standing.
- · Nominees should be highly accomplished in the nominee's field, with superior credentials and recognition.
- · Nominees should be well regarded in the community and have a long-term reputation for high ethical and moral standards.
- Nominees should have sufficient time and availability to devote to the affairs of the Company, particularly in light of the number of boards of directors on which such nominee may serve.
- To the extent a nominee serves or has previously served on other boards, the nominee should have a demonstrated history of actively
 contributing at board meetings.
- Nominees should have skills that are complementary to those of the existing board of directors and should be effective, in conjunction with
 other members of and/or candidates to the board of directors, in collectively serving the long-term interests of the Company's stockholders.
- Nominees should have the ability to assist and support management and make significant contributions to the Company's success.
- Nominees should have an understanding of the fiduciary responsibilities that are required of a member of the board of directors and the commitment of time and energy necessary to diligently carry out those responsibilities.

Stockholders may recommend individuals to the nominating and corporate governance committee for consideration as potential director candidates. Any such proposals should be submitted to our corporate secretary at our principal executive offices no later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the one-year anniversary of the date of the preceding year's annual meeting and should include appropriate biographical and background material to allow the nominating and corporate governance committee to properly evaluate the potential director candidate and the number of shares of our stock beneficially owned by the stockholder proposing the candidate. Stockholder proposals should be addressed to Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary. Assuming that biographical and background material has been provided on a timely basis in accordance with our bylaws, any recommendations received from stockholders will be evaluated in the same manner as potential nominees proposed by the nominating and corporate governance committee. If our board of directors determines to nominate a stockholder-recommended candidate and recommends his or her election, then his or her name will be included on our proxy card for the next annual meeting of stockholders. See "Stockholder Proposals" for a discussion of submitting stockholder proposals.

Director Independence

Our common stock is listed on The Nasdaq Global Market. Under the Nasdaq listing rules, independent directors must comprise a majority of a listed company's board of directors within twelve months from the date of listing. In addition, the Nasdaq listing rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent within twelve months from the date of listing. Audit committee members must also satisfy additional independence criteria, including those set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and compensation committee members must also satisfy the independence criteria set forth in Rule 10C-1 under the Exchange Act. Under Nasdaq listing rules, 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. In order to be considered independent for purposes of Rule 10A-3 under the Exchange Act, 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: (1) accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries, other than compensation for board service; or (2) be an affiliated person of the listed company or any of its subsidiaries. In order to be considered independent for purposes of Rule 10C-1, the board of directors must consider, for each member of a compensation committee of a listed company, all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: the source of compensation of the director, including any consulting advisory or other compensatory fee paid by such company to the director, and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that all members of the board of directors, except Drs. Lehrer and Porteus, are independent directors, including for purposes of Nasdaq and the SEC rules. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock and with licensors and service providers of our Company. We expect that the composition and functioning of our board of directors and each of our committees will comply with all applicable requirements of Nasdaq and the rules and regulations of the SEC. Dr. Lehrer is not an independent director under these rules because he is currently employed as the chief executive officer of our Company, and Dr. Porteus is not an independent director under these rules because he is currently providing services as a paid consultant of our Company and has an affiliation with a licensor and service provider of our Company.

Board Diversity

Our Corporate Governance Guidelines provide that diversity of background and experience should be considered in determining director candidates as well as other factors such as a candidate's character, judgment, skills, education, expertise and absence of conflicts of interest. However, we do not have a formal policy concerning the diversity of the board of directors. Our priority in selection of board members is identification of members who will further the interests of our stockholders through their established records of professional accomplishment, their ability to contribute positively to the collaborative culture among board members, and their knowledge of our business and understanding of the competitive landscape in which we operate and adherence to high ethical standards. Although the nominating and corporate governance committee does not have a formal diversity policy and does not follow any ratio or formula with respect to diversity in order to determine the appropriate composition of the board of directors, the nominating and corporate governance committee and the full board of

directors are committed to creating a board of directors that promotes our strategic objectives and fulfills its responsibilities to our stockholders, and considers diversity of gender, race, national origin, education, professional experience, and differences in viewpoints and skills when evaluating proposed director candidates

We comply with Nasdaq Rule 5605 by having five diverse directors (50%), including three from underrepresented minorities. As required by Nasdaq Rule 5606 as approved by the SEC in August 2021, we are providing additional information about the gender and demographic diversity of our directors in the format required by such rule. The information in the matrix below is based solely on information provided by our directors about their gender and demographic self-identification.

Board Diversi	ty Matrix (As of April 29, 2022)		
Total Number of Directors				
	Female	Male	Non-Binary	Did Not Disclose Gender
Part I: Gender Identity				
Directors	3	7		
Part II: Demographic Background	<u>.</u>			
African American or Black				
Alaskan Native or Native American				
Asian	1			
Hispanic or Latinx		2		
Native Hawaiian or Pacific Islander				
White	2	7		
Two or More Races or Ethnicities		1		
LGBTQ+		-		
Did Not Disclose Demographic Background				

Board Committees

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee, each of which operate pursuant to a charter adopted by our board of directors. We believe that the composition and functioning of all of our committees comply with the applicable requirements of Nasdaq, the Sarbanes-Oxley Act of 2002 and SEC rules and regulations that are applicable to us. We intend to comply with future requirements to the extent they become applicable to us.

The full text of our audit committee charter, compensation committee charter and nominating and corporate governance charter is posted on the investor relations portion of our website at https://ir.graphitebio.com/corporate-governance.

The Board of Directors also has a standing science and technology committee, which is an advisory committee. Matthew Porteus, M.D., Ph.D., and Carlo Rizzuto, Ph.D., serve on the science and technology committee, which is chaired by both Kristen Hege, M.D., and Jo Viney, Ph.D.

Audit Committee

Smital Shah, Perry Karsen and Joseph Jimenez serve on the audit committee, which is chaired by Ms. Shah. Mr. Karsen was appointed to the audit committee on April 13, 2022 in the place of Dr. Davis. Our board of directors has determined that each member of the audit committee is "independent" for audit committee purposes as that term is defined in the rules of the SEC and the applicable Nasdaq rules, and that each member of the audit committee has sufficient knowledge in financial and auditing matters to serve on the audit committee. Our board

of directors has designated Ms. Shah as an "audit committee financial expert," as defined under the applicable rules of the SEC. The audit committee's responsibilities include:

- · appointing, approving the compensation of, and assessing the independence of our independentregistered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- · coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- · establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending based upon the audit committee's review and discussions with management and our independent registered public accounting firm whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- · reviewing all related person transactions for potential conflict of interest situations and approving all such transactions; and
- · reviewing quarterly earnings releases.

Compensation Committee

Abraham Bassan, Perry Karsen and Carlo Rizzuto, Ph.D. serve on the compensation committee, which is chaired by Mr. Bassan. Our board of directors has determined that each member of the compensation committee is "independent" as defined in the applicable Nasdaq rules. The compensation committee's responsibilities include:

- annually reviewing and recommending to the board of directors the corporate goals and objectives relevant to the compensation of our principal executive officer;
- evaluating the performance of our principal executive officer in light of such corporate goals and objectives and based on such evaluation:
 (i) determining, or recommending to the board of directors, cash compensation of our principal executive officer; and (ii) reviewing and approving, or recommending to the board of directors, grants and awards to our principal executive officer under equity-based plans;
- reviewing and approving the cash compensation of our other executive officers;
- reviewing management's aggregate decision regarding the compensation of all employees of the Company;
- reviewing and establishing our overall management compensation philosophy and policy;
- overseeing and administering our compensation and similar plans;
- evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq rules;

- reviewing and approving, or, at the request of the board of directors, recommending to the board of directors, our policies and procedures for the grant of equity-based awards;
- evaluating and determining, or recommending for determination by the board of directors, the achievement of milestones under any inventive or equity-based awards to officers, consultants and other employees;
- · reviewing and recommending to the board of directors the compensation of our directors;
- · preparing the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement; and
- reviewing and approving the retention, termination or compensation of any consulting firm or outside advisor to assist in the evaluation of compensation matters.

Nominating and Corporate Governance Committee

Perry Karsen, Jerel Davis, Ph.D., and Joseph Jimenez serve on the nominating and corporate governance committee, which is chaired by Mr. Karsen. Our board of directors has determined that each member of the nominating and corporate governance committee is "independent" as defined in the applicable Nasdaq rules. The nominating and corporate governance committee's responsibilities include:

- developing and recommending to the board of directors criteria for board and committee membership;
- · establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise
 to advise us;
- identifying individuals qualified to become members of the board of directors;
- · recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- developing and recommending to the board of directors a code of business conduct and ethics and a set of corporate governance guidelines;
- overseeing the evaluation of our board of directors and management.

The nominating and corporate governance committee considers candidates for board of directors membership suggested by its members and the chief executive officer. Additionally, in selecting nominees for directors, the nominating and corporate governance committee will review candidates recommended by stockholders in the same manner and using the same general criteria as candidates recruited by the committee and/or recommended by our board of directors. Any stockholder who wishes to recommend a candidate for consideration by the committee as a nominee for director should follow the procedures described later in this proxy statement under the heading "Stockholder Proposals." The nominating and corporate governance committee will also consider whether to nominate any person proposed by a stockholder in accordance with the provisions of our bylaws relating to stockholder nominations as described later in this proxy statement under the heading "Stockholder Proposals."

Identifying and Evaluating Director Nominees. Our board of directors is responsible for filling vacancies on our board of directors and for nominating candidates for election by our stockholders each year in the class of directors whose term expires at the relevant annual meeting. The board of directors delegates the selection and nomination process to the nominating and corporate governance committee, with the expectation that other members of the board of directors, and of management, will be requested to take part in the process as appropriate.

Generally, the nominating and corporate governance committee identifies candidates for director nominees in consultation with management, through the use of search firms or other advisors, through the recommendations submitted by stockholders or through such other methods as the nominating and corporate governance committee deems to be helpful to identify candidates. Once candidates have been identified, the nominating and corporate governance committee confirms that the candidates meet all of the minimum qualifications for director nominees established by the nominating and corporate governance committee. The nominating and corporate governance committee may gather information about the candidates through interviews, detailed questionnaires, comprehensive background checks or any other means that the nominating and corporate governance committee deems to be appropriate in the evaluation process. The nominating and corporate governance committee then meets as a group to discuss and evaluate the qualities and skills of each candidate, both on an individual basis and taking into account the overall composition and needs of our board of directors. Based on the results of the evaluation process, the nominating and corporate governance committee recommends candidates for the board of directors' approval to fill a vacancy or as director nominees for election to the board of directors by our stockholders each year in the class of directors whose term expires at the relevant annual meeting.

Board and Committee Meetings Attendance

During 2021, the full board of directors met seven times, the audit committee met three times, the compensation committee met four times, and the nominating and corporate governance committee met once. During 2021, each member of the board of directors attended in person or participated in 75% or more of the aggregate of (i) the total number of meetings of the board of directors (held during the period for which such person has been a director) and (ii) the total number of meetings held by all committees of the board of directors on which such person served (during the periods that such person served).

Director Attendance at Annual Meeting of Stockholders

Directors are encouraged to attend the annual meeting of stockholders to the extent practicable. We did not hold an annual meeting of stockholders in 2021 because we were not a public company.

Policy on Trading, Pledging and Hedging of Company Stock

Our Insider Trading Policy prohibits our executive officers, thenon-employee members of our board of directors and certain other employees from engaging in the following transactions:

- selling any of our securities that they do not own at the time of the sale (referred to as a "short sale");
- buying or selling puts, calls, other derivative securities of the Company or any derivative securities that provide the economic equivalent of ownership of any of our securities or an opportunity, direct or indirect, to profit from any change in the value of our securities or engaging in any other hedging transaction with respect to our securities;
- · using our securities as collateral in a margin account; and
- pledging our securities as collateral for a loan (or modifying an existing pledge).

As of the date of this proxy statement, none of our executive officers ornon-employee directors have previously engaged in any hedging or pledging transaction involving our securities.

Compensation Committee Interlocks and Insider Participation

During 2021, Abraham Bassan, Perry Karsen and Carlo Rizzuto, Ph.D. served on the compensation committee. None of the members of our compensation committee has at any time during the prior three years been one of our officers or employees. None of our executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Business Conduct and Ethics

Our board of directors adopted a Code of Business Conduct and Ethics in connection with our initial public offering in June 2021. The Code of Business Conduct and Ethics applies to all of our employees, officers (including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions), agents and representatives, including directors and consultants. The full text of our Code of Business Conduct and Ethics is posted on our website at https://ir.graphitebio.com/corporate-governance/documents-charters. If we make any substantive amendments to, or grant any waivers from, the Code of Business Conduct and Ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Board Leadership Structure and Board's Role in Risk Oversight

Perry Karsen is our current chair of the board and Josh Lehrer, M.D. is our current President and Chief Executive Officer, hence the roles of chair and the President and Chief Executive Officer are separated. We believe that separating these positions allows our President and Chief Executive Officer to focus on setting the overall strategic direction of the company, expanding the organization to deliver on our strategy and overseeing our day-to-day business, while allowing the chair of the board to lead the board of directors in its fundamental role of providing strategic advice to and independent oversight of management.

Our board of directors recognizes the time, effort and energy that the President and Chief Executive Officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our chair of the board, particularly as the board of directors' oversight responsibilities continue to grow. While our amended and restated bylaws and corporate governance guidelines do not require that our chair of the board and president positions be separate, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent with every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction and intellectual property. Management is responsible for the day-to-day management of risks we face, while our board of directors, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed.

The role of the board of directors in overseeing the management of our risks is conducted primarily through committees of the board of directors, as disclosed in the descriptions of each of the committees above and in the charters of each of the committees. The full board of directors (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, their potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairperson of the relevant committee reports on the discussion to the full board of directors during the committee reports portion of the next board meeting. This enables the board of directors and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

Communication with the Directors of Graphite Bio, Inc.

Any interested party with concerns about our company may report such concerns to the board of directors or the chairman of our board of directors or the chairman of our nominating and corporate governance committee, by submitting a written communication to the attention of such director at the following address:

c/o Graphite Bio, Inc. 201 Haskins Way, Suite 210 South San Francisco, CA, 94080 United States

A copy of any such written communication may also be forwarded to Graphite Bio's legal counsel and a copy of such communication may be retained for a reasonable period of time. The director may discuss the matter with Graphite Bio's legal counsel, with independent advisors, with non-management directors, or with Graphite Bio's management, or may take other action or no action as the director determines in good faith, using reasonable judgment, and applying his or her own discretion.

Communications may be forwarded to other directors if they relate to important substantive matters and include suggestions or comments that may be important for other directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances, and matters as to which we tend to receive repetitive or duplicative communications.

The audit committee oversees the procedures for the receipt, retention, and treatment of complaints received by Graphite Bio regarding accounting, internal accounting controls, or audit matters, and the confidential, anonymous submission by employees of concerns regarding questionable accounting, internal accounting controls or auditing matters. Graphite Bio has also established a toll-free telephone number for the reporting of such activity, which is 1-877-647-3335.

NON-EMPLOYEE DIRECTOR COMPENSATION

Prior to our initial public offering in June 2021, we did not have a formal director compensation policy, but provided compensation to our independent directors, Messrs. Karsen and Jimenez, in the form of a \$25,000 annual cash retainer, payable in monthly installments, and an early exercisable stock option to purchase 252,781 shares (before giving effect to the 1-for-2.432 reverse stock split of our common stock on June 21, 2021) of our common stock. The shares underlying the stock options vest in 48 equal monthly installments on the last day of each month over a period of four years beginning on the last day of the month that is the same month on which the director was appointed and are subject to acceleration in full upon a change of control of the Company so long as the individual continues to provide services to us as of such dates.

We also reimbursed all reasonable out-of-pocket expenses incurred by our directors for their attendance at the meetings of our board of directors or any committee thereof.

Non-Employee Director Advisor Agreements

We have entered into an advisor agreement with each of Drs. Porteus and Grazia Roncarolo, our founders. The material terms of their advisor agreements are summarized below.

Matthew Porteus, M.D., Ph.D.

On March 24, 2020, we entered into an advisory agreement with Dr. Porteus (the Porteus Agreement), pursuant to which he serves on our Scientific & Clinical Advisory Board and among other things, provides consulting services to us involving the development of techniques and improvements in the field of CRISPR, cell and gene therapy and derivatives technologies for the prevention and treatment of human disease, assists us in reviewing goals and developing strategies for achieving such goals, advises on scientific research and supports the recruitment of personnel in our research and product development activities. As consideration for such services, Dr. Porteus is entitled to receive an annual retainer of \$70,000, subject to his performance of services for nine (9) days per quarter. Furthermore, Dr. Porteus received a restricted stock grant of up to 3,819,901 shares, subject to reduction based on our issuance of common stock to Stanford University, as set forth in the applicable restricted stock purchase agreement. The shares of restricted stock are subject to a four year vesting schedule (up to 25% of the total amount of shares granted (to the extent not previously vested) will vest on June 24, 2021, the first anniversary of the date on which we sold preferred stock with aggregate proceeds of at least \$10 million, and the remaining 75% vests in equal monthly installments thereafter, subject to continued service through each such date); provided, that 364,884 shares vested on June 10, 2020 upon our execution of a term sheet for a license with Stanford and 100% of the then-unvested shares will vest upon a "change in control" (as defined in the Porteus Agreement) subject to Dr. Porteus remaining in continued service through such date. The Porteus Agreement also provides for reimbursement of travel and out-of-pocket expenses incurred by Dr. Porteus in providing serves at our request, with any expense in excess of \$500 per month requiring-e-approval by us. Pursuant to the Porteus Agreement, Dr. Porteus is subject to

Maria Grazia Roncarolo, M.D., Ph.D.

On March 26, 2020, we entered into an advisory agreement with Dr. Grazia Roncarolo (the Grazia Roncarolo Agreement), pursuant to which she serves on our Scientific & Clinical Advisory Board and among other things, provides consulting services to us involving the development of techniques and improvements in the field of CRISPR, cell and gene therapy and derivatives technologies for the prevention and treatment of human disease, assists us in reviewing goals and developing strategies for achieving such goals, advises on scientific research and supports the recruitment of personnel in our research and product development activities. As consideration for such services, Dr. Grazia Roncarolo is entitled to receive an annual retainer of \$70,000, subject to her

performance of services for six (6) days per quarter. Furthermore, Dr. Grazia Roncarolo received a restricted stock grant of 1,233,552 shares, subject to reduction based on our issuance of common stock to Stanford University, as set forth in the applicable restricted stock purchase agreement. The shares of restricted stock are subject to a four year vesting schedule (up to 25% of the total amount of shares granted (to the extent not previously vested) will vest on June 24, 2021, the first anniversary of the date on which we sold preferred stock with aggregate proceeds of at least \$10 million, and the remaining 75% vests in equal monthly installments thereafter, subject to continued service through each such date); provided, that 273,663 shares vested on June 10, 2020 upon our execution of a term sheet for a license with Stanford and 100% of the then-unvested shares will vest upon a "change in control" (as defined in the Grazia Roncarolo Agreement) subject to Dr. Grazia Roncarolo remaining in continued service through such date. The Grazia Roncarolo Agreement also provides for reimbursement of travel and out-of-pocket expenses incurred by Dr. Grazia Roncarolo in providing serves at our request, with any expense in excess of \$500 per month requiring pre-approval by us. Pursuant to the Grazia Roncarolo Agreement, Dr. Grazia Roncarolo is subject to certain standard assignment of intellectual property and confidentiality covenants, as well as twelve (12) month post-termination non-solicitation of employees, consultants and customers restrictive covenants.

Non-Employee Director Compensation Policy

In connection with our initial public offering, our board of directors adopted anon-employee director compensation policy. The policy is designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors. Under the policy, our non-employee directors are eligible to receive cash retainers (which are payable quarterly in arrears and prorated for partial years of service) and equity awards as set forth below:

Annual Retainer for Board Membership	
\$35,000 for general availability and participation in meetings and conference calls of our Board of Directors	
Additional Annual Retainer for Committee Membership	
Audit Committee Chairperson:	\$ 15,000
Audit Committee member (other than Chairperson):	\$ 7,500
Compensation Committee Chairperson:	\$ 10,000
Compensation Committee member (other than Chairperson):	\$ 5,000
Nominating and Corporate Governance Committee Chairperson:	\$ 8,000
Nominating and Corporate Governance Committee member (other than Chairperson):	\$ 4,000
Science & Technology Committee Chairperson:	\$ 10,000
Science & Technology Committee member (other than Chairperson):	\$ 5,000
Additional Retainer for Non-Executive Chairperson of the Board:	\$ 30,000

In addition, our policy provides that, upon initial election or appointment to our board of directors, each newnon-employee director will be granted a one-time grant of a non-statutory stock option to purchase 40,000 shares of our common stock on the date of such director's election or appointment to the board of directors, or the Director Initial Grant. The Director Initial Grant will vest in substantially equal monthly installments over three years, subject to the non-employee director's continued services to the us. On the date of each annual meeting of stockholders of our company, eachnon-employee director who will continue as a non-employee director following such meeting will be granted an annual award of anon-statutory stock option to purchase 20,000 shares of common stock, or the Director Annual Grant. The Director Annual Grant will vest in full on the earlier of the one-year anniversary of the grant date or on the date of our next annual meeting of stockholders, subject to the non-employee director's continued services to the us. If a new non-employee director joins our Board on a date other than the date of the Company's annual meeting of stockholders, then in lieu of the Director Annual Grant above, such non-employee director will be granted apro-rata portion of the Director Annual Grant at the next annual meeting of stockholders based on the time between such non-employee director's appointment and

such next annual meeting of stockholders. The Director Initial Grant and Director Annual Grant are subject to full acceleration vesting upon the sale of our company.

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to anynon-employee director for service as a non-employee director in a calendar year period will not exceed \$1,000,000 in the first calendar year such individual becomes anon-employee director and \$750,000 in any other calendar year.

We will reimburse all reasonable out-of-pocket expenses incurred by directors for their attendance at meetings of our board of directors or any committee thereof.

Employee directors will receive no additional compensation for their service as a director.

June 2021 Stock Option Grants to Directors

In connection with our initial public offering, we granted each of Mr. Abraham Bassan, Dr. Jerel Davis and Dr. Carlo Rizzuto anon-statutory stock option to purchase 40,000 shares of our common stock. The stock options have a per share exercise price equal to \$17.00, which was the fair market value of a share of our common stock on the grant date of the stock options. The stock options vest as follows: 1/36th of the shares underlying the stock options granted to each of the above directors vest on a monthly basis following June 24, 2021 such that the stock options shall be fully vested on June 24, 2024, so long as the grantee continues to be a member of our board of directors through each applicable vesting date. The stock options are subject to the terms and conditions of the 2021 Stock Option and Incentive Plan, or the 2021 Plan, and the applicable stock option agreements thereunder. Our board of directors elected to make these stock option grants to recognize the services of Mr. Bassan, Dr. Davis and Dr. Rizzuto on our board of directors through the date of pricing of our initial public offering.

Director Compensation Table

The following table presents the total compensation for each of ournon-employee directors who served as a member of our board of directors during the fiscal year ended December 31, 2021. Dr. Lehrer, who is our President and Chief Executive Officer, did not receive any additional compensation for his service as a director. The compensation received by Dr. Lehrer, as a named executive officer of the Company, is presented in the "2021 Summary Compensation Table" in the "Executive Compensation" section below. Other than as set forth in the table and described more fully below, we did not pay any compensation, make any equity or non-equity awards to or reimburse any expenses of, any of ournon-employee directors in 2021.

Name	or	Cash Awards Compe		l Other pensation (\$)	Total (\$)	
Abraham Bassan(2)	\$	23,365	\$446,417			\$469,782
Jerel Davis, Ph.D.(3)	\$	24,144	\$446,417		_	\$470,561
Maria Grazia Roncarolo, M.D., Ph.D.(4)		_	_	\$	70,000(5)	\$ 70,000
Kristen M. Hege, M.D.(6)	\$	29,949	\$487,428		_	\$517,377
Joseph Jimenez(7)	\$	36,148	\$311,697		_	\$347,845
Perry Karsen(8)	\$	62,507	\$467,399		_	\$529,906
Matthew Porteus, M.D., Ph.D. (9)	\$	20,769	_	\$	70,000(10)	\$ 90,769
Carlo Rizzuto, Ph.D.(11)	\$	23,365	\$446,417		_	\$469,782
Smital Shah(12)	\$	31,962	\$487,428		_	\$519,390
Jo Viney, Ph.D. (13)	\$	33,365	\$487,428		_	\$520,793

⁽¹⁾ The amounts reported represent the aggregate grant date fair value of the stock options granted to our directors during the 2021 fiscal year, calculated in accordance with Financial Accounting Standards Board

(FASB), Accounting Standards Codification (ASC), Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in notes 2 and 10 to our financial statements included in our Annual Report on Form 10-K filed with the SEC on March 21, 2022. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value that may be received by our directors upon the exercise of the stock options or any sale of the underlying shares of common stock.

- (2) As of December 31, 2021, Mr. Bassan held options to purchase an aggregate of 40,000 shares of common stock.
- (3) As of December 31, 2021, Dr. Davis held options to purchase an aggregate of 40,000 shares of common stock.
- (4) Dr. Grazia Roncarolo, a former director, resigned from our board of directors in April 2021. As of December 31, 2021, Dr. Grazia Roncarolo held 1,127,586 shares of founder restricted stock.
- (5) Amount represents the advisor fees earned by Dr. Grazia Roncarolo during the fiscal year ended December 31, 2021.
- (6) As of December 31, 2021, Dr. Hege held options to purchase an aggregate of 93,585 shares of common stock.
- (7) As of December 31, 2021, Mr. Jimenez held (i) 153,815 shares of restricted stock from the early exercise of his options and (ii) options to purchase an aggregate of 12,469 shares of common stock.
- (8) As of December 31, 2021, Mr. Karsen held (i) 155,908 shares of restricted stock acquired from the early exercise of his options and (ii) options to purchase an aggregate of 93,492 shares of common stock.
- (9) As of December 31, 2021, Dr. Porteus held 3,528,529 shares of founder restricted stock.
- (10) Amount represents the advisor fees earned by Dr. Porteus during the fiscal year ended December 31, 2021.
- (11) As of December 31, 2021, Mr. Rizzuto held options to purchase an aggregate of 40,000 shares of common stock.
- (12) As of December 31, 2021, Ms. Shah held options to purchase an aggregate of 93,585 shares of common stock.
- (13) As of December 31, 2021, Dr. Viney held options to purchase an aggregate of 93,585 shares of common stock.

EXECUTIVE OFFICERS

The following table identifies our executive officers and key employees, and sets forth their current positions at Graphite Bio and their ages as of April 20, 2022.

Name	Position Held with Graphite Bio, Inc.	Since	Age
Executive Officers			
Josh Lehrer, M.D.	President, Chief Executive Officer and Director	2020	48
Alethia Young	Chief Financial Officer	2022	43
Key Employees			
Philip P. Gutry	Chief Business Officer	2020	48
Jerry Cacia	Chief Technical Officer	2021	55
Jane Grogan	Chief Scientific Officer	2021	55
Julia Tran	Chief People Officer	2022	45
Christine Garrett	Chief of Staff and SVP, Operations	2022	51

You should refer to "Class III Directors" above for information about our Chief Executive Officer and President, Josh Lehrer, M.D. Biographical information for our other executive officers as of April 20, 2022, is set forth below.

Alethia Young has served as our chief financial officer since April 2022. Prior to joining us, Ms. Young served as senior biotech analyst and head of research at Cantor Fitzgerald, managing the equity research department covering large cap and small-mid-cap biotechnology companies. Prior to joining Cantor Fitzgerald in 2018, Ms. Young held senior biotech analyst positions at Credit Suisse and Deutsche Bank. Earlier in her career, she was a research policy analyst and president at Marwood Group, providing healthcare-focused advisory services to institutional investors. She began her career at J.P. Morgan in the investment banking and asset management divisions. She currently serves on the board of directors for BUILD NYC. Ms. Young earned a B.A. in economics and Spanish from Duke University.

Philip P. Gutry has served as our chief business officer since October 2020. Prior to joining Graphite Bio, Mr. Gutry worked at Kronos Bio, a clinical-stage oncology company focused on targeting dysregulated transcription, where he served as chief business officer from October 2018 to October 2020. Previously, Mr. Gutry served as the executive director of business development at Regeneron Pharmaceuticals from June 2015 to October 2018, a principal at MPM Capital from June 2011 to June 2015 and the associate director of corporate development at Glead Sciences. from August 2006 to May 2011. Mr. Gutry also previously served on the board of directors from April 2015 to November 2021 at Cerecor, now Avalo Therapeutics, a biopharmaceutical company focused on the development and commercialization of products in rare pediatric and orphan diseases. Mr. Gutry received his A.B. in earth sciences from Dartmouth College and his M.B.A. in healthcare management from The Wharton School of the University of Pennsylvania.

Jerry Cacia has served as our chief technical officer since April 2021. From January 2016 to February 2021, Mr. Cacia was employed at FHoffmann-La Roche AG, where he first served as the head of biologics and drug product manufacturing, and subsequently as the head of global technical development. Mr. Cacia began his career at Genentech in October 1988 and held various senior leadership roles until he left the company in January 2016, including head of global manufacturing science and technology and head of biologics process development. Mr. Cacia received his B.A. in biological sciences from the University of California, Santa Cruz.

Jane Grogan, Ph.D. has served as our chief scientific officer since April 2021. Prior to joining Graphite Bio, Dr. Grogan served as the chief scientific officer at ArsenalBio from October 2019 to March 2021. Dr. Grogan was previously employed at Genentech, where she served as the head of adaptive tumor immunity and the principal scientist of cancer immunology discovery research from January 2014 to September 2019 and as a senior scientist in immunology from February 2004 to January 2014. Dr. Grogan holds a B.Sc. with honors in biochemistry and pharmacology from the University of Melbourne and a Ph.D. in immunology from Leiden University.

Julia Tran has served as our chief people officer since February 2022. She joined Graphite Bio in April 2021 as senior vice president, people. Prior to joining Graphite Bio, Ms. Tran held various senior leadership roles at companies in the biotech, cleantech and cybersecurity industries. Most recently, as a Silicon Valley entrepreneur, she co-founded a venture-backed cybersecurity company, Blue Lava, where she served as both chief operating officer and chief community officer from concept to commercialization. Earlier in her career as a people executive and leader for biotech companies like Amyris, Millenium Pharmaceuticals and CV Therapeutics, she played a pivotal role in scaling and building the organizations. Ms. Tran received her B.A. in political science from Boston College.

Christine Garrett, Ph.D. has served as our chief of staff and senior vice president, operations, since January 2022. Prior to joining Graphite Bio, Dr. Garrett served as head of late development project management at Bristol Myers Squibb Company. She also held senior leadership roles in global R&D project and portfolio management at Leo Pharma, Celgene Corporation and Novartis AG. Dr. Garrett holds a B.S. in chemistry from the Rochester Institute of Technology and a Ph.D. in organic chemistry from MIT.

The principal occupation and employment during the past five years of each of our executive officers was carried on, in each case except as specifically identified above, with a corporation or organization that is not a parent, subsidiary or other affiliate of us. There is no arrangement or understanding between any of our executive officers and any other person or persons pursuant to which he or she was or is to be selected as an executive officer.

There are no material legal proceedings to which any of our executive officers is a party adverse to us or in which any such person has a material interest adverse to us.

EXECUTIVE COMPENSATION

Our named executive officers for the year ended December 31, 2021 are:

- Josh Lehrer, M.D., our President and Chief Executive Officer:
- Katherine V. Stultz, our former Chief Operating Officer*; and
- Philip P. Gutry, our Chief Business Officer.

2021 Summary Compensation Table

The following table presents the compensation awarded to, earned by or paid to each of our named executive officers for the years indicated.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)(1)	Option Awards (\$)(2)	Non-equity Incentive Plan Compensation (\$)(3)	All Other Compensation (\$)	Total (\$)
Josh Lehrer, M.D.,	2021	464,583			7,197,576	260,000		7,922,159
President and Chief Executive Officer	2020	298,045	133,880	23,138	_	_	_	455,063
Katherine V. Stultz,	2021	408,333	_	_	1,905,014	168,000	35,000(4)	2,516,347
Former Chief Operating Officer	2020	133,333	202,500	_	414,814	_	_	750,647
Philip P. Gutry,	2021	383,333	_	_	1,546,697	158,000	_	2,088,030
Chief Business Officer	2020	90,909	79,540	_	536,216	_	_	706,665

⁽¹⁾ The amounts reported represent the aggregate grant date fair value of the restricted stock awards granted to our named executive officers during the applicable fiscal year, calculated in accordance with FASB ASC

^{*} Katherine V. Stultz was our Chief Operating Officer through December 31, 2021.

- Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the restricted stock awards reported in this column are set forth in notes 2 and 10 to our financial statements included in our Annual Report on Form 10-K filed with the SEC on March 21, 2022. The amounts reported in this column reflect the accounting cost for these restricted stock awards and do not correspond to the actual economic value that may be received by our named executive officers upon the vesting of the restricted stock awards or any sale of the underlying shares of common stock.
- (2) The amounts reported represent the aggregate grant date fair value of the stock options granted to our named executive officers during the applicable fiscal year, calculated in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in notes 2 and 10 to our financial statements included in our Annual Report on Form 10-K filed with the SEC on March 21, 2022. The amounts reported in this column reflect the accounting cost for these stock options and do not correspond to the actual economic value that may be received by our named executive officers upon the exercise of the stock options or any sale of the underlying shares of common stock. For 2021 performance-based options, the aggregate grant date fair value, calculated in accordance with FASB ASC Topic 718, was based on probable outcome of applicable performance metrics, which is equal to the aggregate grant date fair value for such performance-based options, calculated in accordance with FASB ASC Topic 718, based on maximum achievement of applicable performance metrics.
- (3) The amounts reported for 2021 reflect the cash incentive compensation determined by our compensation committee for the named executive officers other than the CEO, and by our Board of Directors upon recommendation of our compensation committee for our CEO, based on achievement of certain research and development, clinical, financial and operational metrics related to our 2021 corporate objectives, as specified by our Board of Directors
- (4) Represents the cash severance paid to Ms. Stultz in connection with her termination of employment.

Narrative to 2021 Summary Compensation Table

Our compensation committee reviews compensation annually for all employees, including our executive officers. In setting executive base salaries and bonuses and granting equity incentive awards, the compensation committee considers compensation for comparable positions in the market, the historical compensation levels of our executive officers, individual performance as compared to our expectations and objectives, internal equity, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to us. We target a general competitive position, based on independent third-party benchmark analytics to inform the mix of compensation of base salary, bonus and long-term incentives.

Our compensation committee is primarily responsible for determining the compensation for our executive officers. Our compensation committee typically reviews and discusses management's proposed compensation with our Chief Executive Officer for all executives other than the Chief Executive Officer. Based on those discussions and its discretion, taking into account the factors noted above, the compensation committee then sets the compensation for each executive officer other than the Chief Executive Officer. For the Chief Executive Officer, our compensation committee determines and approves the compensation, or upon request of the Board, recommends our Chief Executive Officer's compensation for approval by our Board. Our compensation committee may delegate certain authorities to an officer of the Company and has delegated to our Chief Executive Officer the authority to make certain equity award grants to employees (other than our executive officers), within specified limits approved by the compensation committee. Our compensation committee has the authority to engage the services of a consulting firm or other outside advisor to assist it in designing our executive compensation programs and in making compensation decisions. During 2021, the compensation committee retained the services of Aon plc ("Aon"), formerly known as Radford, as its external compensation consultant to advise on executive compensation matters including our overall compensation program design and collection of market data to inform our compensation programs for our executive officers and members of our

Board. Aon reports directly to our compensation committee. Prior to engaging Aon, our compensation committee assessed its independence consistent with Nasdaq listing standards and concluded that the engagement of such consultant did not raise any conflict of interest.

Base Salaries

The annual base salaries for Dr. Lehrer, Ms. Stultz and Mr. Gutry from January 1, 2021 through July 31, 2021 were \$425,000, \$400,000 and \$375,000, respectively. Effective as of August 1, 2021, the annual base salaries for Dr. Lehrer, Ms. Stultz and Mr. Gutry were increased to \$520,000, \$420,000 and \$395,000, respectively. Our compensation committee reviews the base salaries of our executive officers, including our named executive officers, from time to time and makes adjustments (or, in the case of our Chief Executive Officer, may recommend adjustments for approval by the Board of Directors) as it determines to be reasonable and necessary to reflect the scope of the executive officer's performance, contributions, responsibilities, experience, prior salary level, position (in the case of a promotion) and market conditions, including base salary amounts relative to similarly situated executive officers at peer group companies.

Bonuses

Cash Incentive Compensation

In June 2021, the Board of Directors adopted the Company's Senior Executive Cash Incentive Bonus Plan (the "Incentive Plan"), which applies to certain key executives (the "Covered Executives"), that are selected by the compensation committee. The Incentive Plan provides for bonus payments based upon the attainment of performance objectives established by the compensation committee and related to financial and operational metrics with respect to the Company or any of its subsidiaries (the "Corporate Performance Goals"), including the following: developmental, publication, clinical or regulatory milestones; cash flow (including, but not limited to, operating cash flow and free cash flow); revenue; corporate revenue; earnings before interest, taxes, depreciation and amortization; net income (loss) (either before or after interest, taxes, depreciation and/or amortization); changes in the market price of the Company's common stock; economic value-added; acquisitions, licenses or strategic transactions; financing or other capital raising transactions; operating income (loss); return on capital, assets, equity, or investment; stockholder returns; return on sales; total shareholder return; gross or net profit levels; productivity; expense efficiency; margins, operating efficiency; customer satisfaction; working capital; earnings (loss) per share of the Company's common stock: bookings, new bookings or renewals; sales or market shares; number of prescriptions or prescribing physicians; coverage decisions; leadership development, employee retention, and recruiting and other human resources matters; operating income and/or net annual recurring revenue. Any bonuses paid under the Incentive Plan will be based upon objectively determinable bonus formulas that tie such bonuses to one or more performance targets relating to the Corporate Performance Goals. The bonus formulas will be adopted in each performance period by the compensation committee and communicated to each Covered Executive. No bonuses will be paid under the Incentive Plan unless and until the compensation committee makes a determination with respect to the attainment of the performance objectives. Notwithstanding the foregoing, the compensation committee may adjust bonuses payable under the Incentive Plan based on achievement of individual performance goals or pay bonuses (including, without limitation, discretionary bonuses) to Covered Executives under the Incentive Plan based on individual performance goals and/or upon such other terms and conditions as the compensation committee may in its discretion determine.

The target annual bonuses for Dr. Lehrer, Ms. Stultz and Mr. Gutry from January 1, 2021 through July 31, 2021 were 40%, 30%, and 30%, respectively, of the applicable named executive officer's annual base salary. Effective as of August 1, 2021, the target annual bonuses for Dr. Lehrer, Ms. Stultz and Mr. Gutry were increased to 50%, 40% and 40%, respectively, of the applicable named executive officer's annual base salary. For the fiscal year ended December 31, 2021, the compensation committee determined that the Company achieved 100% of its corporate performance objectives.

Equity Compensation

During the fiscal year ended December 31, 2021, we granted stock option awards to each of our named executive officers, as described in more detail in the "Outstanding Equity Awards at Fiscal 2021 Year-End" table.

Perquisites or Personal Benefits

We do not provide significant perquisites or personal benefits to our employees with an aggregate equal to or greater than \$10,000.

401(k) Plan

We maintain a tax-qualified retirement plan (the 401(k) Plan) that provides eligible U.S. employees with an opportunity to save for retirement on a tax-advantaged basis. Plan participants are able to defer eligible compensation subject to applicable annual Internal Revenue Code limits. We may provide matching contributions under the 401(k) Plan, but did not provide any such contributions during the 2021 fiscal year. The 401(k) Plan is intended to be qualified under Section 401(a) of the Internal Revenue Code with the 401(k) Plan's related trust intended to be tax exempt under Section 501(a) of the Internal Revenue Code. As a tax-qualified retirement plan, contributions to the 401(k) Plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) Plan.

Executive Employment Arrangements

We have entered into an offer letter with each of the named executive officers in connection with his or her employment with us, which set forth the terms and conditions of his or her employment. Each named executive officer has also entered into our standard proprietary information and inventions agreement.

Offer Letters in Place During the Fiscal Year Ended December 31, 2021 for Our Named Executive Officers

Josh Lehrer, M.D.

On February 28, 2020, we entered into an offer letter with Dr. Lehrer (the Lehrer Letter) for the position of Chief Executive Officer. The Lehrer Letter provides for Dr. Lehrer's at-will employment. Dr. Lehrer's current annual base salary effective as of January 1, 2022 is \$550,000, which is subject to periodic review and adjustment. Dr. Lehrer is eligible to earn an annual bonus with a target amount equal to a percentage of his annual base salary and to participate in the employee benefit plans generally available to our employees. Dr. Lehrer's current target bonus is equal to 50% of his annual base salary. The Lehrer Letter also provided for Dr. Lehrer's initial grant of restricted stock, which vested 25% on the 12-month anniversary of his start date and in monthly installments thereafter for the next three years, subject in each case to Dr. Lehrer's continuous service with the Company through each applicable date.

Pursuant to the Lehrer Letter, in the event that Dr. Lehrer's employment is terminated by us without "cause" or Dr. Lehrer resigns for "good reason" (as each term is defined in the Lehrer Letter) (each, a Qualifying Event), subject to the execution and effectiveness of a general release of claims, he was entitled to receive (i) if the Qualifying Event occurs prior to the first date on which we have sold preferred stock with aggregate gross proceeds of at least \$20,000,000 cumulatively to such date (Second Tranche Closing), (A) then six months' base salary continuation and (B) subject to Dr. Lehrer's timely election to continue COBRA health coverage, six (6) months of the employer-paid portion of his COBRA premiums or (ii) if the Qualifying Event occurs after the Second Tranche Closing, (A) then twelve (12) months' base salary continuation and (B) subject to Dr. Lehrer's timely election to continue COBRA health coverage, twelve (12) months of the employer-paid portion of his COBRA premiums. Additionally, if a Qualifying Event other than death or disability occurs within three (3) months prior to and twelve (12) months after a "change in control" (as defined the Lehrer Letter), Dr. Lehrer was entitled to 100% acceleration of vesting of his equity award grants. Such severance benefits and payments were superseded by the terms of the Executive Severance Plan.

The payments and benefits provided under the Lehrer Letter in connection with a change in control may not be eligible for a federal income tax deduction by us pursuant to Section 280G of the Internal Revenue Code. These payments and benefits may also subject Dr. Lehrer to an excise tax under Section 4999 of the Internal Revenue Code. If the payments or benefits payable to an eligible participant in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Internal Revenue Code, then those payments or benefits will be reduced if such reduction would result in a greater net after-tax benefit to Dr. Lehrer.

Katherine V. Stultz

On August 3, 2020, we entered into an offer letter with Ms. Stultz, (the Stultz Letter) for the position of Chief Operating Officer. The Stultz Letter provided for Ms. Stultz's at-will employment. Ms. Stultz's annual base salary as of December 31, 2021 was \$420,000. Ms. Stultz was eligible to earn an annual bonus with a target amount equal to 40% of her annual base salary and to participate in the employee benefit plans generally available to our employees. In addition, the Stultz Letter provided for a one-time signing bonus equal to \$150,000, subject to repayment if Ms. Stultz voluntarily terminated her employment (other than for "good reason," as defined in the Stultz Letter) prior to the twelve (12) month anniversary of her start date. The Stultz Letter also provided for Ms. Stultz's initial stock option grant, which vested 25% on the 12-month anniversary of her start date and in monthly installments thereafter for the next three years, subject in each case to Ms. Stultz's continuous service with the Company through each applicable date.

Pursuant to the Stultz Letter, in the event that Ms. Stultz's employment was terminated by us without "cause" or Ms. Stultz resigns for "good reason" (as each term is defined in the Stultz Letter) (each, a Qualifying Event), subject to the execution and effectiveness of a general release of claims, she was entitled to receive, if the Qualifying Event occurred after the Second Tranche Closing, (i) three (3) months' base salary continuation and (ii) subject to Ms. Stultz's timely election to continue COBRA health coverage, three (3) months of the employer-paid portion of her COBRA premiums. Additionally, if a Qualifying Event other than death or disability occurs within three (3) months prior to and twelve (12) months after a "change in control" (as defined the Stultz Letter), Ms. Stultz was entitled to 100% acceleration of vesting of all her equity award grants. Such severance benefits and payments were superseded by the terms of the Executive Severance Plan.

The payments and benefits provided under the Stultz Letter in connection with a change in control may not be eligible for a federal income tax deduction by us pursuant to Section 280G of the Internal Revenue Code. These payments and benefits may also subject Ms. Stultz to an excise tax under Section 4999 of the Internal Revenue Code. If the payments or benefits payable to an eligible participant in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Internal Revenue Code, then those payments or benefits will be reduced if such reduction would result in a greater net after-tax benefit to Ms. Stultz.

In connection with Ms. Stulz's termination of employment after December 31, 2021, we entered into a separation and release letter agreement with Ms. Stultz on December 16, 2021 (the "Termination Agreement"). Pursuant to the terms of the Termination Agreement, the Company agreed, in exchange for a full release of claims from Ms. Stultz, to (i) pay Ms. Stultz at a rate of \$35,000 per month, less applicable withholdings, for a period of nine months after December 31, 2021 (or until she commences other employment, if earlier), (ii) reimburse Ms. Stultz for COBRA coverage for a period of nine months after December 31, 2021 (or until she commences other employment, if earlier), (iii) pay Ms. Stultz her 2021 annual bonus pursuant to the Incentive Plan and (iv) extend the post-termination exercise period with respect to vested stock options held by Ms. Stultz as of December 31, 2021 to December 31, 2022. Since Ms. Stultz commenced other employment, we only paid Ms. Stultz one month of cash severance equal to \$35,000 and Ms. Stultz did not elect to receive any COBRA continuation coverage.

Philip P. Gutry

On September 14, 2020, we entered into an offer letter with Mr. Gutry, (the Gutry Letter) for the position of Chief Business Officer and Head of Finance and Investor Relations. The Gutry Letter provides for Mr. Gutry's at-will employment. Mr. Gutry's current annual base salary effective as of January 1, 2022 is \$409,000, which is

subject to periodic review and adjustment. Mr. Gutry is eligible to earn an annual bonus with a target amount equal to a percentage of his annual base salary and to participate in the employee benefit plans generally available to our employees. Mr. Gutry's current target bonus is equal to 40% of his annual base salary. In addition, the Gutry Letter provided for a one-time signing bonus equal to \$50,000, subject to repayment if Mr. Gutry voluntarily terminates his employment prior to the twelve (12) month anniversary of his start date. The Gutry Letter also provided for Mr. Gutry's initial stock option grant, which vested 25% on the 12-month anniversary of his start date and in monthly installments thereafter for the next three years, subject in each case to Mr. Gutry's continuous service with the Company through each applicable date.

Pursuant to the Gutry Letter, in the event that Mr. Gutry's employment is terminated by us without "cause" or Mr. Gutry resigns for "good reason" (as each term is defined in the Gutry Letter) (each, a Qualifying Event), subject to the execution and effectiveness of a general release of claims, he was entitled to receive, if the Qualifying Event occurs after the Second Tranche Closing, (i) three (3) months' base salary continuation and (ii) subject to the Mr. Gutry's timely election to continue COBRA health coverage, three (3) months of the employer-paid portion of his COBRA premiums. Additionally, if a Qualifying Event other than death or disability occurs within three (3) months prior to and twelve (12) months after a "change in control" (as defined the Gutry Letter), Mr. Gutry was entitled to 100% acceleration of vesting of all his equity award grants. Such severance benefits and payments were superseded by the terms of the Executive Severance Plan.

The payments and benefits provided under the Gutry Letter in connection with a change in control may not be eligible for a federal income tax deduction by us pursuant to Section 280G of the Internal Revenue Code. These payments and benefits may also subject Mr. Gutry to an excise tax under Section 4999 of the Internal Revenue Code. If the payments or benefits payable to an eligible participant in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Internal Revenue Code, then those payments or benefits will be reduced if such reduction would result in a greater net after-tax benefit to Mr. Gutry.

Executive Severance Plan

In connection with our initial public offering, our board of directors adopted an Executive Severance Plan, or the Severance Plan, in which our named executive officers, and certain other executives, participate. The benefits provided in the Severance Plan replace any severance for which our named executive officers may be eligible under their existing offer letters or other agreements or arrangements.

The Severance Plan provides that upon a termination by us for any reason other than for "cause," as defined in the Severance Plan, death or "disability," as defined in the Severance Plan, or resignation for "good reason", as defined in the Severance Plan, in each case outside of the change in control period (i.e., the period of one year after a "change in control," as defined in the Severance Plan), an eligible participant will be entitled to receive, subject to the execution and delivery of an effective release of claims in favor of the Company and continued compliance with all applicable restrictive covenants, (i) 12 months of "base salary" (i.e., the higher of the annual base salary in effect immediately prior to the date of termination or the annual base salary in effect for the year immediately prior to the year in which the date of termination occurs) for our Chief Executive Officer, 9 months for Tier 2 officers (which is determined by the plan administrator and includes the named executive officer other than the Chief Executive Officer) and 6 months for Tier 3 officers (which is determined by the plan administrator) and (ii) an amount equal to the monthly employer contribution, based on the premiums as of the date of termination, that we would have made to provide health insurance for the named executive officer if he or she had remained employed by us for up to 12 months for our Chief Executive Officer, 9 months for Tier 2 officers and 6 months for Tier 3 officers. The payments under (i) and (ii) will be paid in substantially equal installments in accordance with our payroll practice over 12 months for our Chief Executive Officer, 9 months for Tier 2 officers and 6 months for Tier 3 officers.

The Severance Plan also provides that upon a (A) termination by us other than for cause, death or disability or (B) resignation for good reason, in each case within the change in control period, an eligible participant will be

entitled to receive, in lieu of the payments and benefits above and subject to the execution and delivery of an effective release of claims in favor of the Company and continued compliance with all applicable restrictive covenants, (I) a lump sum amount equal to 150% of the base salary and 150% of the target annual bonus in effect immediately prior to the date of termination (or immediately prior to the change in control, if higher) for our Chief Executive Officer, 100% of the base salary and 100% of the target annual bonus in effect immediately prior to the date of termination (or immediately prior to the change in control, if higher) for our Tier 2 officers and 75% of the base salary for our Tier 3 officers, (II) a lump sum amount equal to the eligible participant's annual target bonus in effect immediately prior to such termination, pro-rated for the number of days of service provided by the participant during the year of the termination, (III) a lump sum amount equal to the monthly employer contribution, based on the premiums as of the date of termination, that we would have made to provide health insurance for the participant if the applicable named executive officer had remained employed by us for 18 months for our Chief Executive Officer, 12 months for our Tier 2 officers and 9 months for our Tier 3 officers, and (IV) for all outstanding and unvested equity awards of the Company that are subject to time-based vesting held by the participant, full accelerated vesting of such awards; provided, that the performance conditions applicable to any outstanding and unvested equity awards subject to performance-based vesting will be deemed satisfied at the target level specified in the terms of the applicable award agreement.

The payments and benefits provided under the Severance Plan in connection with a change in control may not be eligible for a federal income tax deduction by us pursuant to Section 280G of the Code. These payments and benefits may also subject an eligible participant, including the named executive officers, to an excise tax under Section 4999 of the Code. If the payments or benefits payable in connection with a change in control would be subject to the excise tax imposed under Section 4999 of the Code, then those payments or benefits will be reduced if such reduction would result in a higher net after-tax benefit to the participant.

Compensation Risk Assessment

We believe that although a portion of the compensation provided to our executive officers and other employees is performance-based, our executive compensation program does not encourage excessive or unnecessary risk taking. This is primarily due to the fact that our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals, in particular in connection with our pay-for-performance compensation philosophy. As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

Outstanding Equity Awards at Fiscal 2021 Year-End

The following table sets forth information regarding outstanding equity awards held by our named executive officers as of fiscal year 2021:

			Option Awards(1)					Stock Awards(1)		
Name	Grant Date	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Ex	ption ercise trice	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)(2)	
Josh Lehrer, M.D.	4/20/2020 5/20/2020 1/13/2021 3/17/2021 3/17/2021	4/20/2020 4/20/2020 4/20/2020 3/17/2021 3/17/2021	149,099(5) 63,899(5)(6)	646,097 276,899	\$ \$	- - 6.11 6.11	3/16/2031 3/16/2031	391,065(3) 63,662(3) 218,175(3)(4)	4,860,938 791,319 2,711,915	
Katherine V. Stultz	9/15/2020 1/13/2021 3/17/2021 3/17/2021	8/31/2020 8/31/2020 3/17/2021 3/17/2021	33,251(8) 39,346(5) 16,862(5)(6)	66,502(9) 170,500(9) 73,072(9)	\$ \$ \$	 0.30 6.11 6.11	12/31/2022(10) 12/31/2022(10) 12/31/2022(10)	138,596(3)(4)(7)	1,722,748 — — —	
Philip P. Gutry	10/20/2020 1/13/2021 3/17/2021 3/17/2021	10/5/2020 10/5/2020 3/17/2021 3/17/2021	27,068(5)(11) 13,050(5)(6)	131,959 56,554	\$	 6.11	3/16/2031 3/16/2031	134,978(3)(4) 64,746(3)(4) —	1,677,777 804,793 — —	

- (1) Each equity award is subject to the terms of our 2020 Stock Option Plan, or the 2020 Plan.
- (2) Based on the closing price of a share of our common stock on December 31, 2021, which was \$12.43.
- (3) The shares of restricted stock vest as follows: 25% of the shares on the first anniversary of the vesting commencement date and the remaining 75% in 36 equal monthly installments thereafter, subject to the named executive officer's continuous service relationship with the Company through each applicable vesting date. Notwithstanding the foregoing, in the event a Qualified Termination Event (as defined in the Severance Plan) occurs within the Change in Control Period (as defined in the Severance Plan), all unvested shares shall immediately vest and become nonforfeitable.
- (4) The named executive officer received an early exercisable stock option award, which the named executive officer early exercised in its entirety.
- (5) The shares of common stock underlying the option vest in 48 equal monthly installments following the vesting commencement date, subject to the named executive officer's continuous service relationship with the Company through each applicable vesting date. Notwithstanding the foregoing, in the event a Qualified Termination Event occurs within the Change in Control Period, all unvested shares shall immediately vest and become exercisable.
- (6) The option was granted subject to the achievement by the Company of performance vesting criteria. On June 29, 2021, the performance vesting criteria was met such that the option became subject to time-based vesting in accordance with the vesting schedule described in footnote (5) above.
- (7) These shares were subsequently repurchased at cost on January 14, 2022 in connection with Ms. Stultz's termination of employment.
- (8) The shares of common stock underlying the option vest as follows: 25% of the shares on the first anniversary of the vesting commencement date and the remaining 75% in 36 equal monthly installments thereafter, subject to the named executive officer's continuous service relationship with the Company through each applicable vesting date. Notwithstanding the foregoing, in the event a Qualified Termination Event occurs within the Change in Control Period, all unvested shares shall immediately vest and become exercisable.
- (9) The unvested options were canceled in connection with Ms. Stultz's termination of employment.

- (10) In connection with Ms. Stultz's termination of employment, the Company agreed to amend the post termination exercise period for vested stock options held by Ms. Stultz as of December 31, 2021, extending the exercisability of such options until December 31, 2022.
- (11) The total number of shares of common stock underlying the option upon grant was 162,410 shares. On April 18, 2021, Mr. Gutry exercised the option for 3,383 vested shares.

Employee Benefits and Stock Plans

The following table provides information as of December 31, 2021 with respect to the shares of our common stock that may be issued under our existing equity compensation plans.

	Equity Com	Equity Compensation Plan Information		
	Number of securities to be issued upon exercise of outstanding options, warrants	Weighted average exercise price of outstanding options, warrants and	Number of securities remaining available for future issuance under equity compensation plans (excluding securities in	
Plan Category	and rights	rights(1)	first column)	
Equity compensation plans approved by security holders(2)	5,056,743(3)	\$ 8.77	4,978,110(4)	
Equity compensation plans not approved by security holders	<u> </u>	<u>\$</u>		
Total	5,056,743	\$ 8.77	4,978,110	

- (1) The weighted average exercise price is calculated based solely on outstanding stock options.
- (2) Includes the following plans: our 2021 Plan, our 2020 Plan, and our 2021 Employee Stock Purchase Plan, or the 2021 ESPP.
- (3) Amount does not include any purchase rights accruing under the 2021 ESPP during the current purchase period, which commenced on December 1, 2021, because the purchase right (and therefore the number of shares to be purchased) will not be determined until the end of the purchase period on May 31, 2022. Subject to the number of shares remaining in the share reserve, the maximum number of shares purchasable by any participant in the 2021 ESPP on the purchase date for the current purchase period may not exceed 2,972 shares.
- (4) As of December 31, 2021, a total of 4,454,004 shares of our common stock have been reserved for issuance pursuant to the 2021 Plan, which number excludes the 2,900,541 shares that were added to the plan as a result of the automatic annual increase on January 1, 2022. 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 compensation committee or the board of directors. This number will be subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization. The shares of common stock underlying any awards that are forfeited, cancelled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without the issuance of stock, expire or are otherwise terminated, other than by exercise, under the 2021 Plan and the 2020 Plan will be added back to the shares of common stock available for issuance under the 2021 Plan. The Company no longer makes grants under the 2020 Plan. As of December 31, 2021, a total of 524,106 shares of our common stock have been reserved for issuance pursuant to the 2021 ESPP, which number excludes the 564,000 shares that were added to the plan as a result of the automatic annual increase on January 1, 2022 and which number includes shares subject to purchase during the current purchase periods which commenced on December 1, 2021, since the exact number of which will not be known until the end of the purchase periods on May 31, 2022. 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 compensation committee or the board of directors. This number will be subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Certain Relationships and Transactions

Other than the compensation agreements and other arrangements described under "Executive Compensation" and "Non-Employee Director Compensation" in this proxy statement and the transactions described below, since January 1, 2021, there has not been and there is not currently proposed, any transaction or series of similar transactions to which we were, or will be, a party in which the amount involved exceeded, or will exceed, \$120,000 (or, if less, 1% of the average of our total assets amounts at December 31, 2020 and 2021) and in which any director, executive officer, holder of five percent or more of any class of our capital stock or any member of the immediate family of, or entities affiliated with, any of the foregoing persons, had, or will have, a direct or indirect material interest.

Initial Public Offering

On June 29, 2021, we completed our initial public offering and issued 14,000,000 shares of our common stock at an initial offering price of \$17.00 per share. On July 2, 2021, we issued 2,100,000 shares of our common stock to the underwriters of the initial public offering pursuant to the exercise of their option to purchase additional shares at a price of \$17.00 per share less underwriting discounts and commissions. We received net proceeds from the initial public offering of approximately \$251.3 million, after deducting underwriting discounts and commissions of approximately \$19.1 million and offering expenses of approximately \$3.2 million. The following table summarizes purchases of our shares of common stock by related persons in connection with our initial public offering:

	SHARES	
	OF	TOTAL
	COMMON	PURCHASE
STOCKHOLDER	STOCK	PRICE
Entities affiliated with Samsara Biocapital (1)	500,000	\$ 8,500,000
Versant Vantage II, L.P. (2)	180,000	\$ 3,060,000

- (1) Consists of (i) 485,000 shares of common stock purchased by Samsara BioCapital, L.P. and (ii) 15,000 shares of common stock purchased by 436, L.P. Samsara BioCapital is a holder of 5% or more of our outstanding common stock. Abraham Bassan, a member of our board of directors, is a Vice President at Samsara BioCapital.
- (2) Consists of shares held by Versant Vantage II, L.P. Versant Vantage II, L.P. (together with its affiliates, Versant Ventures) is a holder of 5% or more of our total outstanding shares, on an as-converted to common stock basis. Jerel Davis, Ph.D. and Carlo Rizzuto, Ph.D., members of our board of directors, are partners at Versant Ventures.

Private Placements of Securities

Series A Redeemable Convertible Preferred Stock Financing

On June 24, 2020, we sold an aggregate of 15,019,945 shares of our Series A redeemable convertible preferred stock at a purchase price of \$1.00 per share, for an aggregate purchase price of approximately \$15.0 million.

On December 28, 2020, we sold an additional 15,000,000 shares of our Series A redeemable convertible preferred stock at a purchase price of \$1.00 per share, for an aggregate purchase price of approximately \$15.0 million.

On February 16, 2021, we sold an additional 15,000,000 shares of our Series A redeemable convertible preferred stock at a purchase price of \$1.00 per share, for an aggregate purchase price of approximately \$15.0 million.

All purchasers of our Series A redeemable convertible preferred stock are entitled to specified registration rights. See the section titled "Description of Capital Stock — Registration Rights" for more information regarding these registration rights.

The following table summarizes the Series A 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.

	Shares of Series A Redeemable		
Name of Stockholder	Convertible Preferred Stock	Total Purchase Price	
Versant Venture Capital VI, L.P.(1)	30,019,945	\$ 30,019,945	
Samsara BioCapital, L.P.(2)	15,000,000	15,000,000	
Total	45,019,945	\$ 45,019,945	

- (1) Versant Venture Capital VI, L.P. (together with its affiliates, Versant Ventures) is a holder of 5% or more of our total outstanding shares, on an as-converted to common stock basis. Jerel Davis, Ph.D. and Carlo Rizzuto, Ph.D., members of our board of directors, are partners at Versant Ventures.
- (2) Samsara BioCapital, L.P., together with its affiliates (Samsara BioCapital), is a holder of 5% or more of our total outstanding shares, on an as-converted to common stock basis. Abraham Bassan, a member of our board of directors, is a Vice President at Samsara BioCapital.

Series B Redeemable Convertible Preferred Stock Financing

On March 11, 2021, we sold an aggregate of 29,792,487 shares of our Series B redeemable convertible preferred stock at a purchase price of \$5.06 per share, for an aggregate purchase price of approximately \$150.7 million.

All purchasers of our Series B redeemable convertible preferred stock are entitled to specified registration rights. See the section titled "Description of Capital Stock — Registration Rights" for more information regarding these registration rights.

The following table summarizes the Series B redeemable convertible preferred stock purchased by our executive officers, members of our board of directors or their affiliates and holders of more than 5% of our outstanding capital stock.

	Shares of		
	Series B		
	Redeemable		
	Convertible		
	Preferred		Total
Name of Stockholder	Stock	(Conversion Price
Versant Vantage II, L.P.(1)	3,715,415	\$	18,799,999.90
Entities affiliated with Samsara BioCapital(2)	1,857,708		9,400,002.48
Perry Karsen(3)	19,763		100,000.78
Joseph Jimenez(3)	19,763		100,000.78
Josh Lehrer, M.D.(3)	19,763		100,000.78
Katherine V. Stultz(4)	19,763		100,000.78
Philip P. Gutry(4)	19,763		100,000.78
Total	5,671,938	\$	28,700,006.28

⁽¹⁾ Versant Vantage II, L.P. is a holder of 5% or more of our Series B redeemable convertible preferred stock and a holder of 5% or more of our total outstanding shares, on an as-converted to common stock basis. Jerel Davis, Ph.D. and Carlo Rizzuto, Ph.D., members of our board of directors, are partners at Versant Ventures.

- (2) Consists of (i) 1,802,372 shares of Series B redeemable convertible preferred stock held by Samsara BioCapital, L.P. and (ii) 55,336 shares of Series B redeemable convertible preferred stock held by 436, L.P. Samsara BioCapital is a holder of 5% or more of our Series B redeemable convertible preferred stock and a holder of 5% or more of our total outstanding shares, on an as-converted to common stock basis. Abraham Bassan, a member of our board of directors, is a Vice President at Samsara Capital.
- (3) Each of Perry Karsen, Joseph Jimenez and Josh Lehrer, M.D. are members of our board of directors.
- (4) Each of Josh Lehrer, M.D., Katherine V. Stultz and Philip P. Gutry is our executive officer.

Agreements with Stockholders

Investors' Rights Agreement

On March 11, 2021, we entered into an Amended and Restated Investors' Rights Agreement, as amended to date, which we refer to as our investors' rights agreement, with certain holders of our outstanding redeemable convertible preferred stock, including entities with which certain of our directors are affiliated. The holders of shares of our common stock issuable in connection with the automatic conversion of all outstanding shares of our redeemable convertible preferred stock into common stock, are entitled to rights with respect to the registration of their shares under the Securities Act. See the Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934, filed as Exhibit 4.3 to the Annual Report for more information regarding these registration rights.

Right of First Refusal and Co-Sale Agreement

On March 11, 2021, we entered into an Amended and Restated Right of First Refusal and Co-Sale Agreement, as amended to date, which we refer to as our right of first refusal and co-sale agreement, which imposes restrictions on the transfer of our capital stock. Upon the completion of our initial public offering, the right of first refusal and co-sale agreement terminated and the restrictions on the transfer of our capital stock set forth in this agreement no longer apply.

Voting Agreement

On March 11, 2021, we entered into an Amended and Restated Voting Agreement, as amended to date, which we refer to as our voting agreement, under which certain holders of our capital stock, including persons who hold more than 5% of our outstanding capital stock and entities with which certain of our directors are affiliated, have agreed to vote their shares on certain matters, including with respect to the election of directors. Upon the completion of our initial public offering, the voting agreement terminated and none of our stockholders have any special rights regarding the election or designation of members of our board of directors or the voting of our capital stock of the company.

Indemnification Agreements

In connection with our initial public offering in June 2021, we entered into new agreements to indemnify our directors and executive officers and intend to enter into similar agreements with any new directors and executive officers upon their appointment. These agreements and our amended and restated certificate of incorporation and amended and restated bylaws require us, among other things, to indemnify these individuals for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our Company or that person's status as a member of our board of directors to the maximum extent allowed under Delaware law.

Policies for Approval of Related Party Transactions

Prior to our initial public offering, we did not have a formal policy regarding approval of transactions with related parties. In connection with the completion of our initial public offering in June 2021, we adopted a

written related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions. For purposes of our policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were, or will be participants and in which the amount involved exceeds \$120,000 or one percent of the Company's total assets at year-end for the last two completed fiscal years. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director, or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration, and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction, and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer, and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related person transactions and to effectuate the terms of the policy.

In addition, under our Code of Business Conduct and Ethics, our employees and directors have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest.

In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs, and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director, or an entity with which a director is affiliated;
- · the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify, or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion. All of the transactions described above were entered into prior to the adoption of the written policy, but all were approved by our board of directors considering similar factors to those described above.

PRINCIPAL STOCKHOLDERS

The following table sets forth information, to the extent known by us or ascertainable from public filings, with respect to the beneficial ownership of our common stock as of March 31, 2022 by:

- each of our directors;
- each of our named executive officers;
- all of our directors and executive officers as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own greater than 5.0% of our outstanding common stock.

The column entitled "Shares Beneficially Owned" is based on a total of 58,010,823 shares of our common stock outstanding as of March 31, 2022.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options that are currently exercisable or exercisable within 60 days of March 31, 2022 are considered outstanding and beneficially owned by the person holding the options for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise noted, the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to community property laws, where applicable. Except as otherwise indicated in the table below, addresses of named beneficial owners are in care of Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080.

	Shares benefic	eficially owned	
Name and address of beneficial owner (1)			
5% or Greater Stockholders:			
Entities Affiliated with Versant Ventures(1)	16,416,117	28.30%	
Entities Affiliated with Samsara BioCapital(2)	8,072,603	13.92%	
Entities Affiliated with FMR LLC(3)	6,247,690	10.77%	
Matthew Porteus, M.D., Ph.D.(4)	3,528,529	6.08%	
Named Executive Officers and Directors:			
Josh Lehrer, M.D.(5)	1,547,167	2.65%	
Katherine V. Stultz (6)	305,479	*	
Philip P. Gutry(7)	323,355	*	
Perry Karsen(8)	205,325	*	
Abraham Bassan(9)	12,222	*	
Jerel Davis, Ph.D.(10)	16,428,339	28.31%	
Kristen M. Hege, M.D.(11)	25,345	*	
Joseph Jimenez(12)	165,577	*	
Matthew Porteus, M.D., Ph.D.(4)	3,528,529	6.08%	
Carlo Rizzuto, Ph.D.(13)	12,222	*	
Smital Shah(14)	31,227	*	
Jo Viney, Ph.D.(15)	27,295	*	
Alethia Young	0	_	
All executive officers and directors as a group (12 persons) (16)	22,306,603	38.45%	

- * Represents beneficial ownership of less than one percent.
- (1) Consists of (i) 14,708,398 shares of common stock held by Versant Venture Capital VI, L.P., or Versant VI, and (ii) 1,707,719 shares of common stock held by Versant Vantage II, L.P. or Versant Vantage II, and

together with Versant VI, the Versant Funds. Versant Ventures VI GP, L.P. is the sole general partner of Versant VI, and Versant Ventures VI GP-GP, LLC is the sole general partner of Versant Ventures VI GP, L.P. and has voting and dispositive control over the shares held by Versant VI. Each of Bradley J. Bolzon, Jerel C. Davis, Ph.D., Kirk G. Nielsen, Clare Ozawa, Robin L. Praeger, and Thomas Woiwode Ph.D., are the managing directors of Versant Ventures VI GP-GP, LLC, may be deemed to possess voting and dispositive control over the shares held by Versant VI and may be deemed to have indirect beneficial ownership of the shares held by Versant VI but disclaims beneficial ownership of such securities, except to the extent of their respective pecuniary interest therein, if any. Versant Vantage II GP, L.P. is the sole general partner of Versant Vantage II and Versant Vantage II GP-GP, LLC is the sole general partner of Versant Vantage II GP, L.P. and has voting and dispositive control over the shares held by Versant Vantage II. Each of Bradley J. Bolzon, Jerel C. Davis, Ph.D., Alexander Mayweg, Clare Ozawa, Robin L. Praeger, and Thomas Woiwode Ph.D., are the managing directors of Versant Vantage II GP-GP, LLC, may be deemed to possess voting and dispositive control over the shares held by Versant Vantage II and may be deemed to have indirect beneficial ownership of the shares held by Versant Vantage II but disclaims beneficial ownership of such securities, except to the extent of their respective pecuniary interest therein, if any. Dr. Davis is a member of our board of directors. The address for the Versant Funds is One Sansome Street, Suite 3630, San Francisco, CA 94104.

- (2) Consists of (i) 8,034,850 shares of common stock held by Samsara BioCapital, L.P., or Samsara LP and (ii) 37,753 shares of common stock held by 436, L.P. The general partner of Samsara LP is Samsara BioCapital GP, LLC, or Samsara LLC. The general partner of 436, L.P. is 436, LLC. Voting and dispositive decisions with respect to the shares held by Samsara LP and 436, L.P. are made by Dr. Srinivas Akkaraju, MD, Ph.D., a manager of Samsara GP LLC and 436, LLC, and, accordingly, Dr. Akkaraju may be deemed to beneficially own the shares held by Samsara LP. And 436, L.P. The address of the principal business and office of Samsara LP and 436, L.P. is 628 Middlefield Road, Palo Alto, CA 94301.
- (3) Consists of 6,247,690 shares of common stock held by FMR LLC. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. The general partner of 436, L.P. is 436, LLC. Neither FMR LLC nor Ms. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act ("Fidelity Funds") advised by Fidelity Management & Research Company LLC ("FMR Co. LLC"), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. FMR Co. LLC carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees.. The address of the principal business and office of FMR LLC is 245 Summer Street, Boston, Massachusetts 02210.
- (4) Consists of 3,528,529 shares of common stock held by Dr. Porteus.
- (5) Consists of (i) 1,161,670 shares of common stock held by Dr. Lehrer, and (ii) 385,497 shares of common stock underlying options directly held by Dr. Lehrer exercisable within 60 days of March 31, 2022.
- (6) Consists of (i) 216,020 shares of common stock held by Ms. Stultz, and (ii) 89,459 shares of common stock underlying options held by Ms. Stultz exercisable within 60 days of March 31, 2022.
- (7) Consists of (i) 293,471 shares of common stock held by Mr. Gutry, and (ii) 29,884 shares of common stock underlying options held by Mr. Gutry exercisable within 60 days of March 31, 2022.
- (8) Consists of (i) 164,034 shares of common stock held by Mr. Karsen, and (ii) 41,291 shares of common stock underlying options held by Mr. Karsen exercisable within 60 days of March 31, 2022. Mr. Karsen, a member of our board of directors, is a venture partner at Samsara BioCapital, L.P. Mr. Karsen has no voting or dispositive power over the shares held by the Samsara BioCapital entities referred to in Footnote 2 above.
- (9) Consists of 12,222 shares of common stock underlying options directly held by Mr. Bassan exercisable within 60 days of March 31, 2022. Mr. Bassan, a member of our board of directors, is a vice president at Samsara BioCapital. Mr. Bassan has no voting or dispositive power over the shares held by the Samsara BioCapital entities referred to in Footnote 2 above.
- (10) Dr. Davis, a member of our board of directors, is a managing director at Versant Ventures. Consists of (i) 14,708,398 shares of common stock held by Versant Venture Capital VI, L.P., or Versant VI, and (ii) 1,707,719 shares of common stock held by Versant Vantage II, L.P. or Versant Vantage II, and together with Versant VI, the Versant Funds. Versant Ventures VI GP, L.P. is the sole general partner of Versant VI,

and Versant Ventures VI GP-GP, LLC is the sole general partner of Versant Ventures VI GP, L.P. and has voting and dispositive control over the shares held by Versant VI.. Dr. Davis is a managing director of Versant Ventures VI GP-GP, LLC, may be deemed to possess voting and dispositive control over the shares held by Versant VI and may be deemed to have indirect beneficial ownership of the shares held by Versant VI but disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein, if any. Dr. Davis is a managing director of Versant Vantage II GP-GP, LLC, may be deemed to possess voting and dispositive control over the shares held by Versant Vantage II and may be deemed to have indirect beneficial ownership of the shares held by Versant Vantage II but disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein, if any. 12,222 shares of common stock underlying options directly held by Dr. Davis will be exercisable within 60 days of March 31, 2022 and are included in determining the percentage of shares beneficially owned after the offering for Dr. Davis.

- (11) Consists of 25,345 shares of common stock underlying options held by Dr. Hege exercisable within 60 days of March 31, 2022.
- (12) Consists of (i) 161,941 shares of common stock held by Mr. Jimenez, and (ii) 3,636 shares of common stock underlying options held by Mr. Jimenez exercisable within 60 days of March 31, 2022.
- (13) Consists of 12,222 shares of common stock underlying options directly held by Dr. Rizzuto exercisable within 60 days of March 31, 2022 and are included in determining the percentage of shares beneficially owned after the offering for Dr. Rizzuto. Dr. Rizzuto, a member of our board of directors, is a partner at Versant Ventures. Dr. Rizzuto has no voting or dispositive power over the shares held by the Versant Ventures entities referred to in Footnote 1 above.
- (14) Consists of (i) 5,882 shares of common stock held by Ms. Shah, and (ii) 25,345shares of common stock underlying options held by Ms. Shah exercisable within 60 days of March 31, 2022.
- (15) Consists of 27,295 shares of common stock underlying options held by Dr. Viney exercisable within 60 days of March 31, 2022.
- (16) Includes the number of shares beneficially owned by the named executive officers and directors listed in the table above, but excludes shares beneficially owned by Katherine V. Stultz, who resigned as an executive officer effective as of the close of business on December 31, 2021.

DELINQUENT SECTION 16(a) REPORTS

Section 16(a) of the Exchange Act requires our directors, executive officers, and persons holding more than 10% of our common stock to report their initial ownership of the common stock and other equity securities and any changes in that ownership in reports that must be filed with the SEC. The SEC has designated specific deadlines for these reports, and we must identify in this proxy statement those persons who did not file these reports when due. During the year ended December 31, 2021, Samsara BioCapital, L.P., a holder of more than 10% of our common stock, filed one Form 4 late with respect to a transaction that occurred on December 15, 2021 that was filed on December 20, 2021 due to an administrative error.

Based solely on a review of reports furnished to us, or written representations from reporting persons, other than as disclosed above, we believe all directors, executive officers, and 10% owners timely filed all reports regarding transactions in our securities required to be filed for 2021 by Section 16(a) under the Exchange Act. In making this statement, the Company has relied solely upon an examination of the copies of Forms 3, 4 and 5, and amendments thereto, provided to the Company and the written representations of its reporting persons.

REPORT OF THE AUDIT COMMITTEE

The audit committee is appointed by the board of directors to assist the board of directors in fulfilling its oversight responsibilities with respect to (1) the integrity of Graphite Bio's financial statements and financial reporting process and systems of internal controls regarding finance, accounting, and compliance with legal and regulatory requirements, (2) the qualifications, independence, and performance of Graphite Bio's independent registered public accounting firm, (3) the performance of Graphite Bio's internal audit function, if any, and (4) other matters as set forth in the charter of the audit committee approved by the board of directors.

Management is responsible for the preparation of Graphite Bio's financial statements and the financial reporting process, including its system of internal control over financial reporting and its disclosure controls and procedures. The independent registered public accounting firm is responsible for performing an audit of Graphite Bio's financial statements in accordance with the standards of the Public Company Accounting Oversight Board, or the PCAOB, and issuing a report thereon. The audit committee's responsibility is to monitor and oversee these processes.

In connection with these responsibilities, the audit committee reviewed and discussed with management and the independent registered public accounting firm the audited financial statements of Graphite Bio, Inc. for the fiscal year ended December 31, 2021. The audit committee also discussed with the independent registered public accounting firm the matters required to be discussed by the PCAOB's Auditing Standard No. 1301, Communication with Audit Committees. In addition, the audit committee received written communications from the independent registered public accounting firm confirming their independence as required by the applicable requirements of the PCAOB and has discussed with the independent registered public accounting firm their independence.

Based on the reviews and discussions referred to above, the audit committee recommended to the board of directors that the audited financial statements of Graphite Bio be included in Graphite Bio's 2021 Annual Report, that was filed with the SEC. The information contained in this report shall not be deemed to be (1) "soliciting material," (2) "filed" with the SEC, (3) subject to Regulations 14A or 14C of the Exchange Act, or (4) subject to the liabilities of Section 18 of the Exchange Act. This report shall not be deemed incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent that we specifically incorporate it by reference into such filing.

THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS OF GRAPHITE BIO, INC.

Smital Shah, Chairperson Jerel Davis, Ph.D.* Joseph Jimenez

April 29, 2022

* Perry Karsen was appointed to the audit committee on April 13, 2022 in the place of Jerel Davis, Ph.D. Mr. Karsen did not participate in the audit committee discussions regarding the financial statements for the fiscal year ended December 31, 2021.

HOUSEHOLDING

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our documents, including the Annual Report to stockholders and proxy statement, may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you upon written or oral request to Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary, telephone: (650) 484-0886. If you want to receive separate copies of the proxy statement or Annual Report to stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact us at the above address and phone number.

STOCKHOLDER PROPOSALS

A stockholder who would like to have a proposal considered for inclusion in our 2023 proxy statement must submit the proposal in accordance with the procedures outlined in Rule 14a-8 of the Exchange Act so that it is received by us no later than December 30, 2022. However, if the date of the 2023 Annual Meeting of Stockholders is changed by more than 30 days from the date of the previous year's meeting, then the deadline is a reasonable time before we begin to print and send our proxy statement for the 2023 Annual Meeting of Stockholders. SEC rules set standards for eligibility and specify the types of stockholder proposals that may be excluded from a proxy statement. Stockholder proposals should be addressed to Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary.

To comply with the universal proxy rules (once effective), stockholders who intend to solicit proxies in support of director nominees other than the Company's nominees must provide notice that sets forth the information required by Rule 14a-19 under the Exchange Act no later than April 22, 2023. Stockholder proposals and the required notice should be addressed to Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary.

If a stockholder wishes to propose a nomination of persons for election to our board of directors or present a proposal at an annual meeting but does not wish to have the proposal considered for inclusion in our proxy statement and proxy card, our bylaws establish an advance notice procedure for such nominations and proposals. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors or by a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely notice in proper form to our corporate secretary of the stockholder's intention to bring such business before the meeting.

The required notice must be in writing and received by our corporate secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a stockholder's notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. For stockholder proposals to be brought before the 2023 Annual Meeting of Stockholders, the required notice must be received by our corporate secretary at our principal executive offices no earlier than February 21, 2023 and no later than March 23, 2023. Stockholder proposals and the required notice should be addressed to Graphite Bio, Inc., 201 Haskins Way, Suite 210, South San Francisco, CA, 94080, Attention: Corporate Secretary.

OTHER MATTERS

Our board of directors does not know of any other matters to be brought before the Annual Meeting. If any other matters not mentioned in this proxy statement are properly brought before the meeting, the individuals named in the enclosed proxy intend to use their discretionary voting authority under the proxy to vote the proxy in accordance with their best judgment on those matters.

GRAPHITEBIQ W.C. 2011 HASKINS WAY, SUITE 21 0 SDUTH SAN MANCECQ, CA SASSE



VOTE BY INTERNET Before The Meeting - Go to "waste, proxy, exist.com" or scan the QR Barcode above

11-90 pm. Extrain Time on July 20, 2022. Here your proxy card in handwhely ou access the web site and follow the instructions to botaling you records and of dealer an electronic violing instruction to botaling you records and of dealer an electronic violing instruction from.

Duting The Meeting - Go to "www.wiftub.libr.choklermeeting.com/GFPH2022.

You may attend the meeting via the internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

EJECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you would like to reduce the costs incurred by our company in malarial, you can coment to severing all future proxy distancement, proxy carest and annual reporter electronically via entire to the cost of the

VOTE BY MAIL
Mark, sign and date your proxy card and return it in the postage-paid envelops we have provided or return it to Vote Processing, c/b Broadridge, 51 Metrodet Way, Edgewdod, NY 11717.

				D81927-P68321 KEEP THIS R			
THIS PROD	XY CA	RD IS VA	LID ON	Y WHEN SIGNED AND DATED. DETACH AND	RETUR!	I THIS PO	RTION O
RAPHITE BIO, INC. The Board of Directors recommends you vote FOR the following:	For All	Withhold All	For All Except	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.			\exists
Election of Directors	D	0	0				- 1
Nominees:				\$ 			
O1) Jerel Davis, Ph.D. O2) Perry Karsen O3) Joseph Jimenez							
The Board of Directors recommends you vote FOR the follow	owing	proposal:			For	Against	Abstair
To ratify the appointment of Deloitte & Touche LLP as December 31, 2022.	the Co	mpany's ir	ndepender	nt registered public accounting firm for the fiscal year ending	0	0	0
NOTE: Such other business as may properly come before the me	eeting o	or any adjo	urnment t	nereor.			
101 10 100 201 10							
Please sign exactly as your name(s) appear(s) hereon. When sig administrator, or other fiduciary, please give full title as such. Joir personally, All holders must sign. If a corporation or partnership, j or partnership name by authorized officer.	ining as nt owne please s	attorney, ers should ign in full	executor, each sign corporate				
Signature (DLEASE SIGN WITHIN BOX) Date				Signature (Inint Ouners)			

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:

The Notice and Proxy Statement and Form 10-K are available at www.proxyvote.com.

DB1928-P68321

GRAPHITE BIO, INC. Annual Meeting of Stockholders June 21, 2022 8:00 AM PDT This proxy is solicited by the Board of Directors

The undersigned hereby appoint(s) Josh Lehrer, Philip Gutry and Alethia Young, and each or any of them, as proxies, each with the power to appoint his or her substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of Graphite Bio, Inc. that the undersigned is/are entitled to vote at the Annual Meeting of Stockholders of Graphite Bio, Inc. (the "Annual Meeting") to be held at 8:00 AM PDT at www.virtualshareholdermeeting.com/GRPH2022 on June 21, 2022 and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side