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

SCHEDULE 14A

**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

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

Verve Therapeutics, 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 Rules 14a-6(i)(1) and 0-11.
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VERVE THERAPEUTICS, INC.
201 Brookline Avenue
Boston, MA 02215

NOTICE OF 2023 ANNUAL MEETING OF STOCKHOLDERS
To be held June 15, 2023

You are cordially invited to attend the 2023 Annual Meeting of Stockholders, or the Annual Meeting, of Verve Therapeutics, Inc., which is scheduled to be held on Thursday, June 15, 2023 at 10:00 a.m. Eastern Time. We have determined that the Annual Meeting will be held in a virtual meeting format only via the Internet. At our virtual Annual Meeting, stockholders will be able to attend, vote and submit questions by visiting www.proxydocs.com/VERV. Further information about how to attend the Annual Meeting online, vote your shares during the meeting and submit questions during the meeting is included in the accompanying proxy statement.

Only stockholders who owned common stock at the close of business on April 20, 2023 can vote at the Annual Meeting or any adjournment or postponement that may take place. At the Annual Meeting, the stockholders will consider and vote on the following matters:

1. Election of three Class II directors to our board of directors, each to serve until the 2026 annual meeting of stockholders;
2. Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023; and
3. Transaction of any other business properly brought before the Annual Meeting or any adjournment or postponement of the Annual Meeting.

You can find more information, including the nominees for directors, in the accompanying proxy statement. The board of directors recommends that you vote in favor of each of proposals one and two as outlined in the accompanying proxy statement.

Instead of mailing a printed copy of our proxy materials to all of our stockholders, we are providing access to these materials via the Internet. This reduces the amount of paper necessary to produce these materials as well as the costs associated with mailing these materials to all stockholders. Accordingly, on or about April 28, 2023, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice, to all stockholders of record on our books at the close of business on April 20, 2023, the record date for the Annual Meeting, and we will post our proxy materials on the website referenced in the Notice. As more fully described in the Notice, stockholders may choose to access our proxy materials on the website referenced in the Notice or may request to receive a printed set of our proxy materials. The Notice and website provide information regarding how you may request to receive proxy materials in printed form by mail, or electronically by email, for the Annual Meeting and on an ongoing basis.

If you are a stockholder of record, you may vote in one of the following ways:

- **Vote over the Internet**, by going to www.proxypush.com/VERV (have your Notice or proxy card in hand when you access the website);
 - **Vote by Telephone**, by calling the toll-free number 1-866-853-1541 (have your Notice or proxy card in hand when you call);
 - **Vote by Mail**, if you received (or requested and received) a printed copy of the proxy materials, by completing, signing and dating the proxy card provided to you and returning it in the prepaid envelope provided to you; or
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- **Vote online during the Annual Meeting.** The Annual Meeting will be a virtual only meeting, which can be accessed at www.proxydocs.com/VERV. Stockholders who register to attend the meeting prior to the registration deadline of 5:00 PM, Eastern Time, on June 14, 2023 can vote online during the meeting at www.proxydocs.com/VERV.

If your shares are held in “street name,” that is, held for your account by a bank, broker or other nominee or custodian, you should receive instructions from the bank, broker or nominee or custodian that you must follow for your shares to be voted.

A list of registered stockholders as of the close of business on April 20, 2023 will be available for examination by any stockholder for any purpose germane to the Annual Meeting for a period of 10 days prior to the Annual Meeting. If you wish to view this list, please contact our corporate secretary at Verve Therapeutics, Inc., 201 Brookline Avenue, Boston, MA 02215, Attention: Corporate Secretary, (617) 603-0070.

Whether or not you plan to attend the Annual Meeting online, we urge you to take the time to vote your shares.

By order of the Board of Directors,

/s/ Sekar Kathiresan
Sekar Kathiresan, M.D.
Chief Executive Officer

Boston, MA
April 28, 2023

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**VERVE THERAPEUTICS, INC.
201 Brookline Avenue
Boston, MA 02215
(617) 603-0070
PROXY STATEMENT
FOR THE 2023 ANNUAL MEETING OF STOCKHOLDERS
to be held June 15, 2023**

This proxy statement and the proxy card contain information about the Annual Meeting of Stockholders of Verve Therapeutics, Inc., or the Annual Meeting, to be held on Thursday, June 15, 2023 at 10:00 a.m. Eastern Time. We have determined that the Annual Meeting will be held in a virtual meeting format only via the Internet. At our virtual Annual Meeting, stockholders will be able to attend, vote and submit questions by visiting www.proxydocs.com/VERV. Stockholders who wish to attend the Annual Meeting should register at www.proxydocs.com/VERV by the registration deadline of 5:00 pm Eastern Time on June 14, 2023. Stockholders that registered to attend the Annual Meeting prior to the registration deadline will receive an email approximately one hour before the Annual Meeting providing access instructions and offering technical assistance if needed. Further information about how to attend the Annual Meeting online, vote your shares during the meeting and submit questions during the meeting is included in this proxy statement.

The board of directors of Verve Therapeutics, Inc. is using this proxy statement to solicit proxies for use at the Annual Meeting. In this proxy statement, unless expressly stated otherwise or the context otherwise requires, the use of "Verve," "the Company," "our," "we" or "us" refers to Verve Therapeutics, Inc. and its wholly owned subsidiary.

**Important Notice Regarding the Availability of Proxy Materials for
the Annual Meeting of Stockholders to be Held on June 15, 2023:
This proxy statement and our 2022 Annual Report to Stockholders are
available for viewing, printing and downloading at www.proxydocs.com/VERV.**

You may also access this proxy statement and our 2022 Annual Report to Stockholders on the "Investors" section on our website, which is located at <http://www.vervetx.com>.

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, or 2022 Annual Report, as filed with the Securities and Exchange Commission, or SEC, except for exhibits, will be furnished without charge to any stockholder upon written request to Verve Therapeutics, Inc., 201 Brookline Avenue, Boston, MA 02215. This proxy statement and our 2022 Annual Report are also available on the SEC's website at <http://www.sec.gov>.

On or about April 28, 2023, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice, to all stockholders of record (other than those who previously requested electronic or paper delivery of proxy materials), directing stockholders to a website where they can access our proxy materials, including this proxy statement, a proxy card and our 2022 Annual Report, and view instructions on how to vote online or by telephone. If you would prefer to receive a paper copy of our proxy materials, please follow the instructions included in the Notice. If you have previously elected to receive our proxy materials electronically, you will continue to receive access to those materials via e-mail unless you elect otherwise.

IMPORTANT INFORMATION ABOUT THE ANNUAL MEETING AND VOTING

Purpose of the annual meeting

At the Annual Meeting, our stockholders will consider and vote on the following matters:

1. Election of three Class II directors to our board of directors, each to serve until the 2026 annual meeting of stockholders;
2. Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023; and

3. Transaction of any other business properly brought before the Annual Meeting or any adjournment or postponement thereof.

As of the date of this proxy statement, we are not aware of any business to come before the Annual Meeting other than the first two items noted above.

Board of directors recommendation

Our board of directors unanimously recommends that you vote:

FOR the election of the three nominees to serve as Class III directors on our board of directors for a three-year term; and

FOR the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023.

Availability of proxy materials

The Notice regarding our proxy materials, including this proxy statement and our 2022 Annual Report to Stockholders, is being mailed to stockholders beginning on or about April 28, 2023. Our proxy materials, including this proxy statement, a proxy card and our 2022 Annual Report to Stockholders, are also available for viewing, printing and downloading on the Internet at www.proxydocs.com/VERV.

Who can vote at the Annual Meeting

Only holders of our common stock as of the close of business on the record date of April 20, 2023, or the Record Date, are entitled to receive notice of the Annual Meeting and to vote the shares of our common stock that they held on that date. As of the Record Date, there were 61,917,884 shares of common stock outstanding. Each share of common stock is entitled to one vote on each matter properly brought before the Annual Meeting.

Difference between a “stockholder of record” and a beneficial owner of shares held in “street name”

Stockholder of Record. If your shares are registered directly in your name with our transfer agent, Computershare, Inc., then you are considered a “stockholder of record” of those shares. In this case, the Notice has been sent to you directly by us. You may vote your shares by proxy prior to the Annual Meeting by following the instructions contained in this proxy statement or in the Notice.

Beneficial Owners of Shares Held in Street Name. If your shares are held in a brokerage account or by a bank, broker or other nominee or custodian, then you are considered the beneficial owner of those shares, which are held in “street name.” In this case, the Notice and voting instructions should have been forwarded to you by that organization. The organization holding your account is considered the stockholder of record for purposes of voting at the Annual Meeting. As the beneficial owner, you have the right to instruct that organization as to how to vote the shares held in your account by following the instructions contained on the voting instruction card provided to you by that organization.

How to vote

If you are a stockholder of record, you can vote your shares in one of two ways: either by proxy or live online at the Annual Meeting. If you choose to vote by proxy, you may do so by telephone, via the Internet or by mail. Each of these methods is explained below. If you are a beneficial owner of shares held in “street name,” you can vote your shares by following the instructions contained on the voting instruction card provided to you by the bank, broker or other nominee or custodian that holds your shares. **If you hold your shares of our common stock in multiple accounts, you should vote your shares as described in each set of proxy materials you receive.**

- *By Telephone.* You may transmit your proxy voting instructions by calling 1-866-853-1541. You will need to have your Notice or proxy card in hand when you call.
- *Via the Internet.* You may transmit your proxy voting instructions via the Internet by accessing the website specified on the enclosed proxy card. You will need to have your Notice or proxy card in hand when you access the website.
- *By Mail.* If you received (or requested and received) a printed copy of the proxy materials, you may vote by proxy by completing, signing and dating the proxy card provided to you and returning it in the prepaid envelope provided to you.
- *Live online at the Annual Meeting.* The Annual Meeting will be a virtual only meeting, which can be accessed at www.proxydocs.com/VERV. Stockholders who have registered by 5:00 p.m. Eastern Time on June 14, 2023 will have the ability to attend the virtual meeting and vote online during the meeting up until the closing of the polls.

Telephone and Internet voting for stockholders of record will be available up until 11:59 p.m. Eastern Time on June 14, 2023, and mailed proxy cards must be received by June 14, 2023 in order to be counted at the Annual Meeting. If the Annual Meeting is adjourned or postponed, these deadlines may be extended. The voting deadlines and availability of telephone and Internet voting for beneficial owners of shares held in “street name” will depend on the voting processes of the organization

that holds your shares. Therefore, we urge you to carefully review and follow the voting instruction card and any other materials that you receive from that organization.

Ballot measures considered “discretionary” and “non-discretionary”

If your shares are held in “street name,” your bank, broker or other nominee or custodian may under certain circumstances vote your shares if you do not return voting instructions. Banks, brokers or other nominees or custodians are permitted to vote customers’ shares for which they have received no voting instructions on specified “discretionary” matters, but they are not permitted to vote these shares on other “non-discretionary” matters.

The election of directors (Proposal No. 1) is considered a non-discretionary matter under applicable rules. Therefore, if your shares are held in “street name,” your bank, broker or other nominee or custodian cannot vote on this matter without voting instructions from you. If you do not instruct your bank, broker or other nominee or custodian how to vote with respect to the election of directors (Proposal No. 1), your bank, broker or other nominee or custodian may not vote with respect to this proposal and your shares will be counted as “broker non-votes.” Broker non-votes are shares that are held in “street name” by a bank, broker or other nominee or custodian that indicates on its proxy that it does not have or did not exercise discretionary authority to vote on a particular matter.

The ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2023 (Proposal No. 2) is considered a discretionary matter under applicable rules. A bank, broker or other nominee or custodian generally may exercise discretionary authority and vote on discretionary matters. Therefore, if your shares are held in “street name,” your bank, broker or other nominee or custodian may exercise discretionary authority to vote on Proposal No. 2 in the absence of voting instructions from you. If they exercise this discretionary authority, no broker non-votes are expected to occur in connection with Proposal No. 2.

Quorum

A quorum of stockholders is necessary to hold a valid meeting. Our second amended and restated bylaws provide that a quorum will exist if stockholders holding a majority of the shares of stock issued and outstanding and entitled to vote are present at the meeting in person or by proxy. If a quorum is not present, the meeting may be adjourned until a quorum is obtained.

For purposes of determining whether a quorum exists, we will count as present any shares that are voted by completing and submitting a proxy by mail, via the Internet, or by telephone or that are represented in person at the Annual Meeting. Shares present virtually during the Annual Meeting will be considered shares of common stock represented in person at the meeting. Further, for purposes of establishing a quorum, we will count as present shares that a stockholder holds even if the stockholder votes to abstain or only votes on one of the proposals. In addition, we will count as present shares that are “broker non-votes.”

Votes required

To be elected, a director must receive a plurality of the votes cast by stockholders entitled to vote at the meeting (Proposal No. 1). This means that the three nominees receiving the highest number of “FOR” votes will be elected as Class II directors. Votes withheld and broker non-votes will not be counted as votes cast or voted on Proposal No. 1. Accordingly, votes withheld and broker non-votes will have no effect on the voting on Proposal No. 1.

The ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm requires the affirmative vote of a majority of the shares of common stock present or represented by proxy and voted “for” or “against” such matter (Proposal No. 2).

Abstentions and broker non-votes will not be counted as votes cast or votes on Proposal No. 2. Accordingly, abstentions and broker non-votes will have no effect on the voting on Proposal No. 2.

Method of counting votes

Each holder of common stock is entitled to one vote at the Annual Meeting on each matter to come before the Annual Meeting, including the election of directors, for each share held by such stockholder as of the Record Date. Votes cast online during the Annual Meeting or by proxy by mail, via the Internet or by telephone will be tabulated by the inspector of election appointed for the Annual Meeting, who will also determine whether a quorum is present.

Revoking a proxy; Changing your vote

If you are a stockholder of record, you may revoke your proxy before the vote is taken at the meeting:

- by submitting a new proxy with a later date before the applicable deadline either signed and returned by mail or transmitted using the telephone or internet voting procedures described in the “How to vote” section above;
- by voting online during the meeting; or

- by filing a written revocation with our corporate Secretary.

If your shares are held in “street name,” you may submit new voting instructions by contacting your bank, broker or other nominee or custodian holding your account. You may also vote online during the Annual Meeting, which will have the effect of revoking any previously submitted voting instructions, by following the instructions provided to you by the bank, broker or other nominee or custodian that holds your shares.

Your attendance at the Annual Meeting will not automatically revoke your proxy.

Costs of proxy solicitation

We will bear the costs of soliciting proxies. In addition to solicitations by mail, our directors, officers and regular employees, without additional remuneration, may solicit proxies by telephone, facsimile, email, personal interviews and other means.

Voting results

We plan to announce preliminary voting results at the Annual Meeting and will publish final voting results in a Current Report on Form 8-K to be filed with the SEC within four business days following the Annual Meeting.

Householding

Some banks, brokers and other nominee or custodian record holders may be participating in the practice of “householding” proxy statements, annual reports, and notices of Internet availability of proxy materials. This means that only one copy of our documents, including the Notice, may have been sent to multiple stockholders in your household unless you requested otherwise. We will promptly deliver a separate copy of any such document to you upon written or oral request prior to May 30, 2023 to Verve Therapeutics, Inc. 201 Brookline Avenue, Boston, MA 02215, Attention: Corporate Secretary, telephone: (617) 603-0070. If you want to receive separate copies of our proxy statements, annual reports, or notices of Internet availability of proxy materials 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 or custodian record holder, or you may contact us at the above address and phone number.

PROPOSAL NO. 1—ELECTION OF THREE CLASS II DIRECTORS

Our board of directors currently consists of seven members. In accordance with the terms of our restated certificate of incorporation and our second amended and restated 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 II directors are Alexander Cumbo, Michael MacLean and Sheila Mikhail, J.D., and their term expires at the Annual Meeting;
- the Class III directors are Burt Adelman, M.D. and Sekar Kathiresan, M.D., and their term expires at the annual meeting of stockholders to be held in 2024; and
- the Class I directors are Lonnel Coats and Krishna Yeshwant, M.D., and their term expires at the annual meeting of stockholders to be held in 2025.

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 restated certificate of incorporation and our second amended and restated bylaws provide that the authorized number of directors may be changed only by resolution of our board of directors. Our restated certificate of incorporation and second amended and restated bylaws also provide that our directors may be removed only for cause by the affirmative vote of the holders of at least 75% of the votes that all our stockholders would be entitled to cast in an annual 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.

Our board of directors, following the recommendation of our nominating and corporate governance committee, has nominated Alexander Cumbo, Michael MacLean and Sheila Mikhail, J.D., for election as Class II directors at the Annual Meeting. Each of the nominees is presently a director, and each has indicated a willingness to continue to serve as director, if elected. If a nominee becomes unable or unwilling to serve, however, the proxies may be voted for substitute nominees selected by our board of directors. Mr. MacLean and Ms. Mikhail are standing for re-election by the stockholders at this Annual Meeting. Mr. Cumbo was elected to our board of directors in June 2022 by our board of directors, upon the recommendation of the nominating and corporate governance committee, and he is standing for election by our stockholders for the first time at this Annual Meeting.

We have no formal policy regarding board diversity, but our corporate governance guidelines provide that the background and qualifications of the members of our board of directors considered as a group should provide a significant breadth of experience, knowledge, and abilities to assist our board of directors in fulfilling its responsibilities. Our priority in selection of

board members is identification of members who will serve the best interests of the company and our stockholders through their reputation for integrity, honesty and adherence to high ethical standards; their demonstrated business acumen, experience, and ability to exercise sound judgment; their commitment to understanding the company and our industry; and their background, including prior experience and knowledge of the life sciences industry. Certain individual qualifications and skills of our directors that contribute to our board of directors' effectiveness as a whole are described in the following paragraphs.

Nominees for election as Class II Directors

Biographical information as of the Record Date, including principal occupation and business experience during the last five years, for our nominees for election as Class II directors at our Annual Meeting is set forth below.

Alexander Cumbo, age 52, has served on our board of directors since June 2022. Mr. Cumbo has served as director and the president and chief executive officer of Solid Biosciences Inc., or Solid, a life sciences company, since December 2022. Mr. Cumbo previously served as president and chief executive officer of AavantiBio, Inc., a gene therapy company, from October 2020 to December 2022, when it was acquired by Solid. From January 2013 to October 2020, Mr. Cumbo held positions of increasing responsibility at Sarepta Therapeutics, Inc., a biotechnology company, ultimately serving as executive vice president, chief commercial officer. Prior to joining Sarepta in 2013, Mr. Cumbo served as vice president of sales and treatment education at Vertex Pharmaceuticals Incorporated, a global biotechnology company, launching Incivek, a treatment for hepatitis C, and from 2010 to 2011, he served as area director for Vertex. Mr. Cumbo served in multiple commercial roles supporting the HIV, HBV, and cardiovascular franchises at Gilead Sciences, Inc., a biopharmaceutical company. Mr. Cumbo previously served on the board of RA Pharmaceuticals, Inc., a clinical stage biopharmaceutical company acquired by UCB, from November 2018 to April 2020. He received his B.S. in Laboratory Technology from Auburn University. We believe Mr. Cumbo is qualified to serve on our board of directors because of his experience as a chief executive officer of life sciences companies and his experience in the life sciences industry.

Michael MacLean, age 57, has served on our board of directors since May 2021. Mr. MacLean has served as chief financial officer of Avidity Biosciences, Inc., a publicly traded biopharmaceutical company pioneering a new class of oligonucleotide-based therapies, since May 2020 and chief financial officer and chief business officer since April 2022. Mr. MacLean previously served as chief financial officer of Akcea Therapeutics, Inc., a biopharmaceutical company focused on developing and commercializing drugs to treat patients with serious and rare disease that was acquired by Ionis Pharmaceuticals, Inc. in October 2020, from September 2017 to April 2020. Prior to his time at Akcea, Mr. MacLean served as chief financial officer of PureTech Health plc, a clinical-stage biotherapeutics company dedicated to discovering, developing and commercializing highly differentiated medicines for devastating diseases, from September 2015 to August 2017. Mr. MacLean is a former certified public accountant who practiced accounting for more than 18 years, during which time he served as a partner of Arthur Andersen LLP and KPMG International Limited. Mr. MacLean received a B.S. in Accounting from Boston College. We believe Mr. MacLean is qualified to serve on our board of directors because of his experience as a chief financial officer of life sciences companies and his experience in the life sciences industry.

Sheila Mikhail, J.D., age 56, has served on our board of directors since April 2021. Ms. Mikhail has served as chief executive officer of Asklepios BioPharmaceutical, Inc., or AskBio, an AAV gene therapy company that was acquired by Bayer AG in 2020, from April 2017 to March 2023. She co-founded AskBio in 2001. Since July 2021, Ms. Mikhail has also served as the chief executive officer of Jurata Thin Film, Inc., a privately held biomedical device company that she co-founded. Ms. Mikhail previously served as chief executive officer of Bamboo Therapeutics, Inc., a gene therapy company that she co-founded, from December 2014 until its acquisition by Pfizer Inc. in November 2016. Prior to Bamboo, Ms. Mikhail was part of the management team at Chatham Therapeutics, LLC, a clinical development-stage biotechnology company engaged in the development of novel, gene therapy-mediated treatments for hemophilia, from 2010 until its acquisition by Baxter International Inc. in 2014. Ms. Mikhail has practiced law for more than 15 years, during which time she founded and served as managing member of Life Sciences Law, PLLC, which serviced clients including Bayer, Gilead Sciences, Inc., GlaxoSmithKline plc and Sanofi S.A. Ms. Mikhail received a B.S. from the University of Illinois at Urbana-Champaign, a J.D. from Northwestern University and an M.B.A. from the University of Chicago Booth School of Business and is a former certified public accountant. We believe Ms. Mikhail is qualified to serve on our board of directors because of her experience as a chief executive officer of life sciences companies and her experience in the life sciences industry.

The board of directors recommends voting "FOR" the election of Alexander Cumbo, Michael MacLean and Sheila Mikhail, J.D. as Class II directors, for a three-year term ending at the annual meeting of stockholders to be held in 2026.

Any properly submitted proxy will be voted in favor of the nominees unless a contrary specification is made in the proxy. The nominees have consented to serve as directors if elected. However, if any nominee is unable to serve or for good cause will not serve as a director, the persons named in the proxy intend to vote in their discretion for one or more substitutes who will be designated by our board of directors.

Directors continuing in office

Biographical information as of the Record Date, including principal occupation and business experience during the last five years, for our directors continuing in office after the Annual Meeting is set forth below.

Class III Directors (term expires at 2024 Annual Meeting)

Burt Adelman, M.D., age 70, has served on our board of directors since February 2018. Previously, Dr. Adelman was executive vice president, research and development and chief medical officer of Dyax Corp., or Dyax, a commercial-stage biotechnology company, from February 2012 until its acquisition by Shire plc in January 2016. Prior to joining Dyax, he worked at Sesen Bio, Inc. (formerly known as Eleven Biotherapeutics Inc.), a biotechnology company, where he served as interim president of research and development from 2009 to 2010 and as senior advisor until December 2011. From 1991 to 2007, Dr. Adelman held positions of increasing responsibility at Biogen Inc., a global biotechnology company, ultimately as executive vice president, portfolio strategy. From 1998 through 2020, Dr. Adelman served as a lecturer in medicine at Harvard Medical School and as an associate physician at Brigham and Women's Hospital. Since May 2017 Dr. Adelman has been a member of the board of directors of Clear Creek Bio, Inc., a clinical stage company. From June 2015 until 2021 he served on the board of directors of Sirona Medical Technologies Inc., a medical device company, and from April 2016 until January 2021, he served on the board of directors of Catabasis Pharmaceuticals, Inc., a pharmaceuticals company. Dr. Adelman also served on the board of directors of Syntimmune Inc., a biotechnology company, from November 2016 until November 2018 when Syntimmune was acquired by Alexion Pharmaceuticals. Dr. Adelman provided consulting services as a senior advisor to Novo Ventures US Inc., a venture capital firm, from September 2017 until 2022. Dr. Adelman holds a B.S. in biology from Trinity College and an M.D. from Cornell Medical College. He completed residency training and a hematology fellowship at the Peter Bent Brigham Hospital. We believe that Dr. Adelman is qualified to serve on our board of directors because of his broad experience in drug development and his depth of knowledge of our company based on his role as a co-founder.

Sekar Kathiresan, M.D., age 51, has served on our board of directors and as our chief executive officer since July 2019. Dr. Kathiresan is currently an honorary physician at Massachusetts General Hospital, or MGH and was an assistant physician and cardiologist at MGH from July 1997 to August 2021. Dr. Kathiresan served as director of the MGH Center for Genomic Medicine from April 2016 to June 2019. He also served as director of the Cardiovascular Disease Initiative at The Broad Institute from 2014 to June 2019. He is currently a lecturer in medicine at Harvard Medical School and was professor of medicine at Harvard Medical School from June 2018 to June 2021. Dr. Kathiresan has served as a member of the board of directors of Relay Therapeutics, Inc., a clinical-stage precision medicine company, since July 2022. He has also served as a founder and member of the board of directors of Maze Therapeutics, Inc., a biopharmaceutical company, since April 2022. Dr. Kathiresan holds a B.A. in history from the University of Pennsylvania and an M.D. from Harvard Medical School. He completed his clinical training in internal medicine and cardiology at MGH and his postdoctoral research training in human genetics at the Framingham Heart Study and The Broad Institute. We believe that Dr. Kathiresan's leadership, experience in the life sciences industry and his extensive knowledge of our company based on his current role as our chief executive officer qualify him to serve on our board of directors.

Class I Directors (term expires at 2025 Annual Meeting)

Krishna Yeshwant, M.D., age 44, has served on our board of directors since August 2018. Dr. Yeshwant has served as a general partner at GV, a venture capital firm, since June 2009 and has been working with GV since June 2008. Dr. Yeshwant was previously employed by Partners Healthcare, a not-for-profit health care system, as an Internal Medicine physician at Brigham and Women's Hospital from 2009 to 2021. Before joining GV, Dr. Yeshwant helped start Stanford Students Consulting, an electronic data interchange company that was acquired by The Hewlett-Packard Company in 2000. In 2000, he was part of the early team at Recourse Technologies, Inc., a network security company that was acquired by Symantec Corporation in 2002. Dr. Yeshwant has served on the board of directors of EQRx, Inc., a biotechnology company, since January 2020 and previously served on the board of directors of Foundation Medicine, Inc., a molecular information company, from 2011 to July 2018 and other private company boards. Dr. Yeshwant received a B.S. in computer science from Stanford University, an M.D. from Harvard Medical School and an M.B.A. from Harvard Business School. We believe Dr. Yeshwant is qualified to serve on our board of directors because of his medical experience as a physician, his experience working with and serving on the boards of directors of life sciences companies and his experience working in the venture capital industry.

Lonnel Coats, age 58, has served on our board of directors since August 2022. Mr. Coats has served as chief executive officer and director of Lexicon Pharmaceuticals, Inc., a biopharmaceutical company, since July 2014, and previously served as Lexicon's president and chief executive officer from July 2014 to October 2021. From 1996 through June 2014, Mr. Coats served in a series of leadership positions at Eisai Inc. and Eisai Corporation of North America, U.S. subsidiaries of Tokyo-based Eisai Co., Ltd., a Japanese pharmaceutical company, including as chief executive officer of Eisai Inc. from 2010 to June 2014 and as president and chief operating officer of Eisai Inc. from 2004 to 2010. As president and chief executive officer of Eisai, Mr. Coats oversaw the commercialization of Eisai products in the therapeutic areas of oncology, neurology, GI, epilepsy and metabolic disorders. Prior to joining Eisai, Mr. Coats spent eight years with Janssen Pharmaceuticals, Inc., a division of Johnson & Johnson, where he held a variety of management and sales positions. Mr. Coats has served on the board of Blueprint Medicines Corporation, a global precision therapy company, since February 2016. Mr. Coats hold a B.S. in Public Administration from Oakland University. We believe Mr. Coats is qualified to serve on our board of directors because of his

experience as a chief executive officer of life science and pharmaceutical companies and his experience in the pharmaceutical industry.

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 our subsidiary or in which any such person has a material interest adverse to us or our subsidiary.

Executive officers who are not directors

Biographical information for our executive officers who are not directors is listed below.

Andrew Ashe, J.D., age 56, has served as our president and chief operating officer since August 2018 and as our general counsel since June 2022. Prior to joining our company, Mr. Ashe served as general counsel of Applied Genetic Technologies Corporation, a biotechnology company, from August 2017 to August 2018. Mr. Ashe was a consultant for Shire plc, or Shire, a pharmaceutical company, following Shire's acquisition of Dyax, from January 2016 until September 2016. He served in various roles at Dyax from June 2003 until its acquisition by Shire in January 2016, including general counsel and executive vice president, operations and administration from January 2013 to January 2016, general counsel and senior vice president, administration from January 2007 to January 2013 and associate general counsel from June 2003 to December 2006. Earlier in his career, Mr. Ashe served as a trading specialist and senior analyst at the American and New York Stock Exchanges. Mr. Ashe's expertise includes legal affairs as well as financial and operations management. Mr. Ashe holds a B.B.A. in finance from the Isenberg School of Management at the University of Massachusetts, Amherst and a J.D. from The George Washington University Law School.

Andrew Bellinger, M.D., Ph.D., age 45, has served as our chief scientific officer since October 2019 and as our chief medical officer since June 2022. Dr. Bellinger is board-certified in cardiovascular medicine and internal medicine, and practiced cardiology at Brigham and Women's Hospital from August 2015 to December 2021. Dr. Bellinger previously served as chief scientific officer of Lyndra Therapeutics, Inc., a clinical-stage biotechnology company, which he co-founded, from July 2015 to September 2019. Prior to Lyndra, Dr. Bellinger served as chief scientific officer of Cocoon Biotech, Inc., a biotechnology company, from February 2014 to February 2015. Dr. Bellinger has served as a member of the board of directors of Corner Therapeutics, Inc., a biotechnology company that he co-founded, since September 2019. Dr. Bellinger's scientific expertise includes translational medicine, drug delivery, biomedical engineering and clinical strategy. Dr. Bellinger holds an A.B. in physics from Princeton University, an M.S. in mathematics from New York University and an M.D. and Ph.D. from Columbia University.

Allison Dorval, C.P.A., age 47, has served as our chief financial officer since November 2021. Prior to joining our company, Ms. Dorval served as chief financial officer at Voyager Therapeutics, Inc., or Voyager, a gene therapy company, from November 2018 to November 2021 and as vice president of finance at Voyager from June 2017 to November 2018. Prior to Voyager, she served as vice president and controller of Juniper Pharmaceuticals, Inc., a biopharmaceutical company, from August 2016 to June 2017 and as a consultant at Danforth Advisors, a life sciences consultancy focusing on accounting and financial matters, from September 2015 to August 2016. In connection with her role at Danforth, Ms. Dorval served as interim chief financial officer of medical device companies 480 Biomedical, Inc. and Arsenal Medical, Inc. from December 2015 to August 2016. Prior to her time at Danforth, Ms. Dorval served in several roles at Insulet Corporation, a medical device company, from August 2008 to July 2015, including as chief financial officer from November 2014 to May 2015 and as vice president and controller from August 2008 to November 2014. Earlier in her career, Ms. Dorval served in various financial and accounting capacities at iBasis, Inc., a telecommunications company; Digitas Inc., an advertising company; and PricewaterhouseCoopers LLP. Ms. Dorval has served as a member of the board of directors of Puma Biotechnology, Inc., a publicly traded biopharmaceutical company, and Aerovate Therapeutics, Inc., a publicly traded biopharmaceutical company, since July 2021. Ms. Dorval received a B.S. in Business Administration from the University of Vermont, is a certified public accountant and has completed a graduate-level certificate program in taxation at Bentley University's McCallum Graduate School of Business.

Joan Nickerson, age 55, has served as our chief administrative officer since February 2023. Ms. Nickerson previously served as our senior vice president, human resources and facilities from April 2021 to February 2023. Ms. Nickerson previously served as senior vice president, human resources at Sarepta Therapeutics, Inc., a global biotechnology company, from October 2016 to March 2021. From 2012 to March 2016, Ms. Nickerson held roles of increasing responsibility at Dyax, ultimately serving as senior director of human resources and administrative services. Ms. Nickerson holds a B.S. in business administration from the University of Massachusetts Lowell and an M.B.A. from Simmons College.

PROPOSAL NO. 2—RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our stockholders are being asked to ratify the appointment by the audit committee of the board of directors of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023.

The audit committee is solely responsible for selecting our independent registered public accounting firm for the fiscal year ending December 31, 2023. Stockholder approval is not required to appoint Ernst & Young LLP as our independent registered public accounting firm. However, our board of directors believes that submitting the appointment of Ernst & Young 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 Ernst & Young LLP. If the selection of Ernst & Young LLP is ratified, the audit committee, in 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 our company and our stockholders.

A representative of Ernst & Young LLP is expected to attend 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.

We incurred the following fees from Ernst & Young LLP for the audit of the consolidated financial statements and for other services provided during the years ended December 31, 2022 and 2021.

	2022	2021
Audit fees(1)	\$ 769,000	\$ 1,525,536
Audit-related fees	-	-
Tax fees	-	-
All other fees	-	-
Total fees	\$ 769,000	\$ 1,525,536

(1) Consist of aggregate fees for professional services provided in connection with the annual audit of our consolidated financial statements, the review of our quarterly condensed consolidated financial statements, consultations on accounting matters directly related to the audit, and comfort letter procedures in connection with our public offerings in 2022 and our initial public offering, or the IPO, in 2021.

The aggregate fees included in the Audit fees are those fees billed for the applicable fiscal year.

Audit committee pre-approval policy and procedures

The audit committee of our board of directors has adopted policies and procedures for the pre-approval of audit and non-audit services for the purpose of maintaining the independence of our independent auditor. We may not engage our independent auditor to render any audit or non-audit service unless either the service is approved in advance by the audit committee, or the engagement to render the service is entered into pursuant to the audit committee's pre-approval policies and procedures.

From time to time, our audit committee may pre-approve services that are expected to be provided to us by the independent auditor during the following 12 months. At the time such pre-approval is granted, the audit committee must identify the particular pre-approved services in a sufficient level of detail so that our management will not be called upon to make a judgment as to whether a proposed service fits within the pre-approved services and, at each regularly scheduled meeting of the audit committee following such approval, management or the independent auditor shall report to the audit committee regarding each service actually provided to us pursuant to such pre-approval.

During 2022 and 2021, no services were provided to us by Ernst & Young LLP other than in accordance with the pre-approval policies and procedures described above.

The board of directors recommends voting "FOR" Proposal No. 2 to ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023.

Any properly submitted proxy will be voted in favor of the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023 unless a contrary specification is made in the proxy.

REPORT OF THE AUDIT COMMITTEE

The primary purpose of our audit committee is to assist our board of directors' oversight of our accounting and financial reporting processes and the audits of our consolidated financial statements, as is more fully described in the audit committee charter. In the performance of its oversight function, our audit committee has reviewed our audited financial statements for the year ended December 31, 2022 and discussed them with our management and our independent registered public accounting firm, Ernst & Young LLP.

Our audit committee has also received from, and discussed with, Ernst & Young LLP various communications that Ernst & Young LLP is required to provide to our audit committee, including the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board and the SEC.

In addition, Ernst & Young LLP provided our audit committee with the written disclosures and the letter required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the audit committee concerning independence, and the audit committee has discussed with the company's independent registered public accounting firm their independence.

Based on the review and discussions referred to above, our audit committee recommended to our board of directors that our consolidated financial statements audited by Ernst & Young LLP be included in our Annual Report on Form 10-K for the year ended December 31, 2022.

*By the audit committee of the board of directors of Verve
Therapeutics, Inc.*

Michael MacLean, Chairman

Lonnel Coats

Sheila Mikhail, J.D.

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, and recommending the 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 members of the nominating and corporate governance committee and our board. 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 a reputation for integrity, honesty and adherence to high ethical standards.
- Nominees should have demonstrated business acumen, experience and ability to exercise sound judgments in matters that relate to our current and long-term objectives and should be willing and able to contribute positively to our decision-making process.
- Nominees should have a commitment to understand our company and our industry and to regularly attend and participate in meetings of our board of directors and its committees.
- Nominees' background, including prior experience and knowledge of the life sciences industry, should be considered.
- Nominees should have the interest and ability to understand the sometimes conflicting interests of our various constituencies, which include stockholders, employees, customers, governmental units, creditors and the general public, and to act in the interests of all stockholders.
- Nominees should not have, nor appear to have, a conflict of interest that would impair the nominee's ability to represent the interests of all of our stockholders and to fulfill the responsibilities of a director.
- Nominees shall not be discriminated against on the basis of race, religion, national origin, sex, sexual orientation, disability or any other basis proscribed by law. The value of diversity on our board of directors is considered.

The nominating and corporate governance committee may use a third party search firm in those situations where particular qualifications are required or where existing contacts are not sufficient to identify an appropriate candidate.

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 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. The specific requirements for the information that is required to be provided for such recommendations to be considered are specified in our second amended and restated bylaws and must be received by us no later than the date referenced below under the heading "Stockholder Proposals." Assuming that biographical and background material has been provided on a timely basis, 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.

Board diversity matrix as of April 28, 2023

Board size:

Total number of Directors 7

	Female	Male	Non-binary	Did not disclose
Part I: Gender identity				
Directors	1	6	—	—
Part II: Demographic background				
African American or Black	—	1	—	—
Alaskan Native or Native American	—	—	—	—
Asian	—	2	—	—
Hispanic or Latinx	1	—	—	—
Native Hawaiian or Pacific Islander	—	—	—	—
White	—	3	—	—
Two or more races or ethnicities	—	—	—	—
LGBTQ+	—	—	—	—
Did not disclose demographic background	—	—	—	—

Director independence

Applicable Nasdaq rules require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, Nasdaq rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Exchange Act, and compensation committee members must also satisfy the independence criteria set forth in Rule 10C-1 under the Exchange Act. Under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed 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, 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, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise 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 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: (1) the source of compensation of the director, including any consulting, advisory or other compensatory fee paid by such company to the director; and (2) whether the director is affiliated with the Company or any of its subsidiaries or affiliates.

In February 2023, our board of directors undertook a review of the composition of our board of directors and its committees and the independence of each director. 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 each of our directors, with the exception of Dr. Kathiresan is an "independent director" as defined under applicable Nasdaq rules, including, in the case of all the members of our audit committee, the independence criteria set forth in Rule 10A-3 under the Exchange Act, and in the case of all the members of our compensation committee, the independence criteria set forth in Rule 10C-1 under the Exchange Act. In making such determination, our board of directors considered the relationships that each such non-employee director has with our company and all other facts and circumstances that our board of directors deemed relevant in determining his or her independence, including the beneficial ownership of our capital stock by each non-employee director. Dr. Kathiresan is not an independent director under these rules because he is our chief executive officer. John Evans, a former director who resigned from our board of directors in August 2022, was determined not to be an independent director under these rules because of the transactions between us and Beam Therapeutics Inc., for which Mr. Evans serves as chief executive officer.

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 under a charter approved by our board of directors. A current copy of the charter for each of the audit committee, compensation committee and nominating and corporate governance committee is posted under the heading "Corporate Governance" of the "Investors" section of our website, which is located at <https://www.vervetx.com>.

Audit committee

The members of our audit committee are Lonnel Coats, Michael MacLean and Sheila Mikhail. Michael MacLean is the chair of the audit committee. Burt Adelman served on our audit committee until August 2022. The audit committee met five times during the year ended December 31, 2022, including telephonic meetings.

Our audit committee assists our board of directors in its oversight of our accounting and financial reporting process and the audits of our consolidated financial statements. Our audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of reports from that firm;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- overseeing our internal audit function;
- overseeing our risk assessment and risk management policies;
- establishing policies regarding hiring employees from our independent registered public accounting firm and procedures for the receipt and retention of accounting-related complaints and concerns;
- meeting independently with our internal auditing staff, if any, our independent registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions; and

- preparing the audit committee report required by SEC rules.

All audit and non-audit services, other than de minimis non-audit services, to be provided to us by our independent registered public accounting firm must be approved in advance by our audit committee.

Our board of directors has determined that Michael MacLean and Sheila Mikhail are “audit committee financial experts” as defined in applicable SEC rules and that each of the members of our audit committee possesses the financial sophistication required for audit committee members under Nasdaq rules. We believe that the composition of our audit committee meets the requirements for independence under current Nasdaq and SEC rules and regulations.

Compensation committee

The members of our compensation committee are Burt Adelman, Alexander Cumbo and Krishna Yeshwant. Burt Adelman is the chair of the compensation committee. Alexander Cumbo joined the compensation committee in June 2022. John Evans served on our compensation committee until May 31, 2022. The compensation committee met four times during the year ended December 31, 2022, including telephonic meetings.

Our compensation committee assists our board of directors in the discharge of its responsibilities relating to the compensation of our executive officers. Our compensation committee’s responsibilities include:

- reviewing and approving, or making recommendations to our board of directors with respect to, the compensation of our chief executive officer and our other executive officers;
- overseeing and administering our cash and equity incentive plans;
- reviewing and making recommendations to our board of directors with respect to director compensation;
- reviewing and discussing annually with management our “Compensation Discussion and Analysis” disclosure if and to the extent then required by SEC rules;
- reviewing our strategies related to human capital management and in support of an inclusive and diverse company culture; and
- preparing the compensation committee report if and to the extent then required by SEC rules.

Our board of directors has determined that each of Burt Adelman, Alexander Cumbo and Krishna Yeshwant is independent under applicable Nasdaq listing standards. Under applicable Nasdaq rules, we were permitted to phase in our compliance with the independent compensation committee requirements of Nasdaq as follows: (1) one independent member at the time of listing, (2) a majority of independent members within 90 days of listing and (3) all independent members within one year of listing. Following the resignation of Mr. Evans from the compensation committee on May 31, 2022, our compensation committee is composed solely of independent directors in accordance with Nasdaq Rule 5605(d).

Nominating and corporate governance committee

The members of our nominating and corporate governance committee are Burt Adelman, Sheila Mikhail and Krishna Yeshwant. Burt Adelman is the chair of the nominating and corporate governance committee. The nominating and corporate governance committee met three times during the year ended December 31, 2022, including telephonic meetings.

Our nominating and corporate governance committee’s responsibilities include:

- recommending to our board of directors the persons to be nominated for election as directors and to each of our board’s committees;
- reviewing and making recommendations to our board with respect to our board leadership structure;
- reviewing and making recommendations to our board with respect to management succession planning;
- developing and recommending to our board of directors corporate governance principles; and
- overseeing a periodic evaluation of our board of directors.

We believe that the composition of our nominating and corporate governance committee meets the requirements for independence under current Nasdaq and SEC rules and regulations.

Compensation committee interlocks and insider participation

During 2022, the members of our compensation committee were Burt Adelman, Alexander Cumbo, Krishna Yeshwant and, until he resigned from the compensation committee on May 31, 2022, John Evans. None of our executive officers serves as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any other entity that has one or more of its executive officers serving as a member of our board of directors or our compensation committee. None of the former or current members of our compensation committee is, or has ever been, an officer or employee of our company.

John Evans was appointed to our compensation committee effective at the time of our initial public offering. Mr. Evans is the chief executive officer and a member of the board of directors of Beam Therapeutics, Inc., or Beam. In April 2019, we entered into a collaboration and license agreement with Beam, which agreement was amended and restated in July 2022 and is described below under “*Transactions with Related Persons— Collaboration and license agreement with Beam Therapeutics.*”

Code of business conduct and ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We have posted a current copy of the code on the investor section of our website, www.vervetx.com. We intend to disclose on our website any amendments to, or waivers from, the code that are required to be disclosed pursuant to SEC rules.

Board and committee meetings attendance

The full board of directors met eight times during the year ended December 31, 2022, including telephonic meetings. During 2022, each incumbent 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

Although we do not have a formal policy regarding attendance by members of our board of directors at our annual meeting of stockholders, we encourage all of our directors to attend. Five of our directors attended our 2022 annual meeting of stockholders.

Anti-hedging policy

Our board of directors has adopted an Insider Trading Policy, which applies to all of our directors and employees and certain of their family members and any entities any of them control. The policy prohibits the following transactions in our securities:

- short sales, including short sales “against the box”;
- purchases or sales of puts, calls or other derivative securities; or
- purchases of financial instruments (including prepaid variable forward contracts, equity swaps, collars and exchange funds) or other transactions that hedge or offset, or are designed to hedge or offset, any decrease in the market value of our securities.

Corporate governance guidelines

Our board of directors has adopted corporate governance guidelines to assist in the exercise of its duties and responsibilities and to serve the best interests of our company and our stockholders. The guidelines provide that:

- our board’s principal responsibility is to oversee the management of our company;
- except as required by Nasdaq rules, a majority of the members of our board must be independent directors;
- the independent directors meet in executive session at least twice a year;
- directors have full and free access to our officers and employees and, as necessary, independent advisors; and
- our nominating and corporate governance committee will oversee periodic self-evaluations of the board to determine whether it and its committees are functioning effectively.

A copy of the corporate governance guidelines is posted under the heading “Corporate Governance” on the Investors section of our website, which is located at <http://www.vervetx.com>.

Board leadership structure and board’s role in risk oversight

Our corporate governance guidelines provide that the roles of chair of the board and chief executive officer may be separated or combined. Our board of directors has considered its leadership structure and determined that, at this time, the roles of chair of the board of directors and chief executive officer should be separate. Separating the chair and the chief executive officer positions allows our Chief Executive Officer, Dr. Kathiresan, to focus on running the business, while allowing our chair of the board of directors, Dr. Adelman, to lead our board in its fundamental role of providing advice to and oversight of management. Our chair promotes effective and transparent communication and consideration of matters presenting significant risks to the company through his role in assisting with developing the agendas for the meetings of our board of directors, presiding over meetings and facilitating communications between management and the board of directors. As our board of directors has determined that each of our directors other than Dr. Kathiresan is independent, our board of directors believes that the independent directors provide effective oversight of management. Our board of directors believes that its leadership structure is appropriate because it strikes an effective balance between strategic development and independent leadership and management oversight in the board process. However, our board of directors will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

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 those described under “Risk Factors” in our 2022 Annual Report. Our board of directors is actively involved in oversight of risks that could affect us. This oversight is conducted primarily by our full board of directors, which has responsibility for general oversight of risks. Our board of directors oversees our risk management processes directly and

through its committees. Our risk management processes are intended to identify, manage and control risks so that they are appropriate considering our scope, operations and business objectives. Our management is responsible for risk management on a day-to-day basis and our board and its committees oversee the risk management activities of management. Our board of directors encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Our board of directors satisfies its risk oversight responsibility through full reports by each committee chair regarding such committee's considerations and actions, as well as through regular reports directly from officers responsible for oversight of particular risks within our company. This enables our board of directors to coordinate risk oversight, particularly with respect to interrelated or cumulative risks that may involve multiple areas for which more than one committee may have responsibility.

Our audit committee oversees risk management activities related to financial controls and legal and compliance risks. Our audit committee discusses our policies with respect to risk assessment and risk management, including with respect to financial, operational, privacy, security, cybersecurity, business continuity and legal and regulatory risks, as well as guidelines and policies to govern the process by which our exposure to risk is handled. Oversight by the audit committee includes direct communication with our external auditors. Our compensation committee oversees risk management activities relating to our compensation policies and practices and with respect to human capital management. Oversight by the compensation committee includes direct communication with our compensation consultants. Our nominating and corporate governance committee oversees risk management activities relating to board and committee composition and management succession planning. In addition, members of our senior management team attend our quarterly board meetings and are available to address any questions or concerns raised by the board on risk management and any other matters. Our board of directors believes that full and open communication between management and the board of directors is essential for effective risk management and oversight.

Communication with our directors

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

c/o Verve Therapeutics, Inc.
201 Brookline Avenue
Boston, MA 02215
Attention: Board of Directors

You may submit your concern anonymously or confidentially by postal mail. You may also indicate whether you are a stockholder, customer, supplier, or other interested party.

A copy of any such written communication may also be forwarded to our legal counsel and a copy of such communication may be retained for a reasonable period of time. The director may discuss the matter with our legal counsel, with independent advisors, with non-management directors, or with our management, or may take other action or no action as the director determines in good faith, using reasonable judgment, and discretion. Communications may be forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the chair of the board (if one is appointed and is an independent director), the lead director (if one is appointed) or otherwise the chair of the nominating and corporate governance committee, subject to the advice and assistance of counsel, consider to be important for the directors to know. In general, communications relating to corporate governance and corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we receive repetitive or duplicative communications.

EXECUTIVE AND DIRECTOR COMPENSATION

This section discusses the material elements of our executive compensation policies for our "named executive officers" and the most important factors relevant to an analysis of these policies. It provides qualitative information regarding the manner and context in which compensation is awarded to and earned by our executive officers named in the "Summary compensation table" below, or our "named executive officers," and is intended to place in perspective the data presented in the following tables and the corresponding narrative: Sekar Kathiresan, M.D., our chief executive officer, Andrew Bellinger, M.D., Ph.D., our chief scientific officer and chief medical officer, and Andrew Ashe, J.D., our president, chief operating officer and general counsel. Dr. Kathiresan, Dr. Bellinger and Mr. Ashe are collectively referred to in this proxy statement as our "named executive officers".

Summary compensation table

The following table sets forth information regarding compensation awarded to, earned by or paid to our chief executive officer, Sekar Kathiresan, our chief scientific officer and chief medical officer, Andrew Bellinger, and our president, chief operating officer and general counsel, Andrew Ashe for the years ended December 31, 2022 and 2021.

Name and principal position	Year	Salary (\$)	Option awards (\$)(1)	Non-equity incentive plan compensation (\$)(2)	All other compensation (\$)	Total (\$)
Sekar Kathiresan, M.D. Chief Executive Officer	2022	571,320	6,947,166	315,744	12,488 (3)	7,846,718
	2021	519,000	4,585,975	455,400	12,183 (4)	5,572,558
Andrew Bellinger, M.D., Ph.D. Chief Scientific Officer and Chief Medical Officer	2022	476,100	2,615,650	215,280	12,468 (5)	3,319,498
	2021	409,583	2,588,979	310,500	7,117 (6)	3,316,179
Andrew Ashe, J.D. President, Chief Operating Officer and General Counsel (8)	2022	476,100	2,615,650	215,280	12,468 (7)	3,319,498

- (1) The amounts reported in the “Option awards” column reflect the aggregate fair value of stock options awarded during the year computed in accordance with the provisions of FASB ASC, Topic 718. See Note 11 to our audited consolidated financial statements included in our 2022 Annual Report regarding assumptions underlying the valuation of equity awards. The amounts reported in the “Option awards” column reflect the accounting cost for these stock options and do not reflect the actual economic value that may be realized by the named executive officers upon the vesting of the stock options, the exercise of the stock options or the sale of the common stock underlying such stock options.
- (2) The amounts reported represent performance-based cash bonuses earned by our named executive officers in the applicable year. See “—Narrative to summary compensation table—Annual bonus” below for a general description of the criteria that our board of directors used to determine the performance-based cash bonuses.
- (3) Consists of \$12,200 in 401(k) plan matching contributions and \$288 in life insurance premiums.
- (4) Consists of \$11,600 in 401(k) plan matching contributions and \$583 in life insurance premiums.
- (5) Consists of \$12,200 in 401(k) plan matching contributions and \$268 in life insurance premiums.
- (6) Consists of \$6,793 in 401(k) plan matching contributions and \$324 in life insurance premiums.
- (7) Consists of \$12,200 in 401(k) plan matching contributions and \$268 in life insurance premiums.
- (8) Mr. Ashe was not a named executive officer for 2021. Therefore, the Summary Compensation Table includes information for 2022 only.

Narrative to summary compensation table

Our executive compensation program is administered by the compensation committee of our board of directors, subject to the oversight and approval of our board of directors. Our compensation committee reviews our executive compensation practices on an annual basis and based on this review approves, or, as appropriate, makes recommendations to our board of directors for approval of, our executive compensation program. In designing our executive compensation program, our compensation committee considers compensation data for national and regional companies in the biotechnology/pharmaceutical industry provided by our independent compensation consultant to help guide its executive compensation decisions at the time of hiring and for subsequent adjustments in compensation. During the past fiscal year, the compensation committee retained Radford Data & Analytics from Aon plc, or Radford, an international compensation consulting firm, to advise the compensation committee on our compensation program for executive officers, which includes base salaries, annual performance-based cash incentives and equity incentive awards. Radford made recommendations with respect to the amount and form of executive and director compensation. Although our compensation committee considers the advice and guidance of Radford as to our executive compensation program, our compensation committee ultimately makes its own decisions about these matters. In the future, we expect that our compensation committee will continue to engage independent compensation consultants to provide additional guidance on our executive compensation programs and to conduct further competitive benchmarking against a peer group of publicly traded companies.

Base salary. In 2022, we paid a base salary of \$574,080, \$478,400, and \$478,400 with the effective date of February 16, 2022 to Dr. Kathiresan, Dr. Bellinger, and Mr. Ashe, respectively.

We use base salaries to recognize the experience, skills, knowledge and responsibilities required of all our employees, including our named executive officers. None of our named executive officers is currently party to an employment agreement or other agreement or arrangement that provides for automatic or scheduled increases in base salary.

Annual bonus. Our board of directors may, in its discretion, award bonuses to our named executive officers from time to time. Our letter agreements with our named executive officers provide that they will be eligible for annual performance-based bonuses up to a specified percentage of their salary (55% for Dr. Kathiresan, 45% for Dr. Bellinger and 45% for Mr. Ashe), subject to approval by our board of directors. Performance-based bonuses, which are calculated as a percentage of base salary, are designed to motivate our employees to achieve annual goals based on our strategic, financial and operating performance objectives. From time to time, our board of directors has approved discretionary annual cash bonuses to our named executive officers with respect to their prior year performance.

With respect to 2022, our board of directors awarded performance-based cash bonuses of \$315,744, \$215,280 and \$215,280 to Dr. Kathiresan, Dr. Bellinger and Mr. Ashe, respectively.

Equity incentives. Although we do not have a formal policy with respect to the grant of equity incentive awards to our executive officers, or any formal equity ownership guidelines applicable to them, we believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our

executives and our stockholders. In addition, we believe that equity grants with a time-based vesting feature promote executive retention because this feature incentivizes our executive officers to remain in our employment during the vesting period. Accordingly, our board of directors periodically reviews the equity incentive compensation of our named executive officers and from time to time may grant equity incentive awards to them.

In February 2022, we granted options to purchase 332,000 shares of common stock, 125,000 shares of common stock, and 125,000 shares of common stock to Dr. Kathiresan, Dr. Bellinger, and Mr. Ashe, respectively, at an exercise price per share of \$30.94. These options vest as to 25% of the shares underlying the option on the first anniversary of the vesting commencement date and as to an additional 2.0833% of the original number of shares underlying the option monthly thereafter, subject to continued service.

We have used stock options to compensate our executive officers in the form of initial grants in connection with the commencement of employment and also at various times, often but not necessarily annually, if we or they have performed as expected or better than expected. Awards of stock options, restricted stock and restricted stock units to our executive officers have been made by our board of directors. The options, restricted stock and restricted stock units that we have granted to our executive officers are typically subject to time-based vesting, generally over four years following the vesting commencement date. Upon certain terminations of employment in connection with a change of control, vesting is fully accelerated; upon other involuntary terminations, 25% of the unvested portion of each grant will vest as of the date of the termination. Prior to the exercise of a stock option, the holder has no rights as a stockholder with respect to the shares subject to such option, including no voting rights and no right to receive dividends or dividend equivalents.

We have historically awarded stock options with exercise prices that are equal to the fair market value of our common stock on the date of grant.

Outstanding equity awards at December 31, 2022

The following table sets forth information regarding all outstanding equity awards for each of our named executive officers as of December 31, 2022.

Name	Option Awards			
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price (\$)	Option expiration date
Sekar Kathiresan, M.D.	79,925	59,070 (1)	1.39	4/14/2029
	96,552	70,873 (2)	1.39	4/14/2029
	310,003	295,305 (3)	2.87	9/15/2030
	197,994	233,994 (4)	8.24	2/11/2031
	20,248	33,750 (5)	19.00	6/16/2031
	—	332,000 (6)	30.94	2/10/2032
Andrew Bellinger, M.D., Ph.D.	1,599	— (7)	1.39	6/24/2029
	53,246	33,749 (8)	1.48	9/16/2029
	14,198	9,000 (9)	1.48	9/16/2029
	85,496	94,498 (10)	2.87	9/15/2030
	49,498	58,499 (11)	8.24	2/11/2031
	8,099	13,500 (12)	19.00	6/16/2031
	13,751	41,249 (13)	34.88	12/15/2031
—	125,000 (14)	30.94	2/10/2032	
Andrew Ashe, J.D.	11,249	15,750 (15)	1.48	9/16/2029
	81,478	71,800 (16)	2.87	9/15/2030
	49,498	58,499 (17)	8.24	2/11/2031
	8,099	13,500 (18)	19.00	6/16/2031
	—	125,000 (19)	30.94	2/10/2032

(1) This option vests over four years, with 25% of the shares having vested on March 25, 2021 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through March 25, 2024, subject to continued service.

(2) This option vests over four years, with 25% of the shares having vested on July 22, 2020 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through July 22, 2023, subject to continued service.

(3) This option vests over four years, with 25% of the shares having vested on September 16, 2021 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through September 16, 2024, subject to continued service. This option includes 160,000 shares held by the Sekar Kathiresan 2022 Annuity Trust, a grantor retained annuity trust of which Mr. Kathiresan is a trustee and which were transferred from Sekar Kathiresan to the trust in July 2022 for no value.

(4) This option vests over four years, with 25% of the shares having vested on February 1, 2022 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through February 1, 2025, subject to continued service. This option includes 140,000 shares held by the Sekar Kathiresan 2022 Annuity Trust, a grantor retained annuity trust of which Mr. Kathiresan is a trustee and which were transferred from Sekar Kathiresan to the trust in July 2022 for no value.

- (5) This option vests over four years, with 25% of the shares having vested on June 17, 2022 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through June 17, 2025, subject to continued service.
- (6) This option vests over four years, with 25% of the shares vesting on February 11, 2023 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through February 11, 2026, subject to continued service.
- (7) This option was fully vested as of May 1, 2020.
- (8) This option vests over four years, in equal monthly installments, through October 1, 2023, subject to continued service.
- (9) This option vests over four years, with 25% of the shares having vested on October 1, 2020 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through October 1, 2023, subject to continued service.
- (10) This option vests over four years, with 25% of the shares having vested on September 16, 2021 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through September 16, 2024, subject to continued service.
- (11) This option vests over four years, with 25% of the shares having vested on February 1, 2022 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through February 1, 2025, subject to continued service.
- (12) This option vests over four years, with 25% of the shares having vested on June 17, 2022 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through June 17, 2025, subject to continued service.
- (13) This option vests over four years, with 25% of the shares having vested on December 16, 2022 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through December 16, 2025, subject to continued service.
- (14) This option vests over four years, with 25% of the shares vesting on February 11, 2023 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through February 11, 2026, subject to continued service.
- (15) This option vests over four years, in equal monthly installments, through July 26, 2023, subject to continued service.
- (16) This option vests over four years, with 25% of the shares having vested on September 16, 2021 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through September 16, 2024, subject to continued service.
- (17) This option vests over four years, with 25% of the shares having vested on February 1, 2022 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through February 1, 2025, subject to continued service.
- (18) This option vests over four years, with 25% of the shares having vested on June 17, 2022 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through June 17, 2025, subject to continued service.
- (19) This option vests over four years, with 25% of the shares vesting on February 11, 2023 and 2.0833% of the original number of shares vesting thereafter in equal monthly installments through February 11, 2026, subject to continued service.

Employment agreements

Employment agreements with named executive officers

We entered into written employment agreements with our named executive officers, Dr. Kathiresan, Dr. Bellinger, and Mr. Ashe, which became effective as of June 16, 2021. These agreements set forth the terms of the named executive officer's compensation, including his base salary and annual performance bonus opportunity. In addition, the agreements provide that, subject to eligibility requirements under the plan documents governing such programs and our policies, the named executive officers are eligible to participate in company-sponsored benefit programs that are generally available to all of our similarly situated employees. Each named executive officer is also eligible to receive equity awards at such times and on such terms and conditions as our board of directors may determine.

Pursuant to their respective employment agreements, each of our named executive officers was initially entitled to an annual base salary as follows: Dr. Kathiresan was entitled to receive an annual base salary of \$552,000, Dr. Bellinger was entitled to receive an annual base salary of \$460,000 and Mr. Ashe was entitled to receive an annual base salary of \$460,000. Each named executive officer's base salary is reviewed by our board of directors, or a committee of our board of directors, on an annual or more frequent basis. Each named executive officer's contractual base salary is subject to increase, but not decrease, in the discretion of our board of directors or the compensation committee. The annual full-time base salary for 2023 is currently set at \$600,000, \$500,000, and \$470,000 for Dr. Kathiresan, Dr. Bellinger, and Mr. Ashe, respectively.

Pursuant to their respective employment agreements, each of our named executive officers is also eligible to earn an annual discretionary bonus, with a target bonus amount equal to a specified percentage of such named executive officer's annual base salary, based upon periodic assessments of the named executive officer's performance as well as the achievement of specific individual and corporate objectives determined by our board of directors or a committee of our board of directors. For 2022, Dr. Kathiresan was eligible for an annual discretionary bonus targeted at 55% of his base salary. Dr. Bellinger was eligible for an annual discretionary bonus targeted at 45% of his base salary. Mr. Ashe was eligible for an annual discretionary bonus targeted at 45% of his base salary. Each named executive officer's target bonus amount is reviewed by our board of directors, or a committee of our board of directors, on an annual or more frequent basis and is subject to increase, but not decrease, in the discretion of our board of directors or the compensation committee. For 2023, Dr. Kathiresan is eligible for an annual discretionary bonus targeted at 55% of his base salary, Dr. Bellinger is eligible for an annual discretionary bonus targeted at 45% of his base salary and Mr. Ashe is eligible for an annual discretionary bonus targeted at 45% of his base salary.

Potential payments upon termination or change in control

The employment agreements and the employment of each of Dr. Kathiresan, Dr. Bellinger, and Mr. Ashe provide that they may be terminated as follows: (1) upon the death or "disability" (as defined in the applicable employment agreement) of such executive officer; (2) at our election, with or without "cause" (as defined in the applicable employment agreement); and (3) at such executive officer's election, with or without "good reason" (as defined in the applicable employment agreement).

In the event of the termination of the employment of a named executive officer by us without cause, or by him for good reason, more than three months prior to or more than 12 months following a "change in control" (as such term is defined in his employment agreement), the named executive officer is entitled to his base salary that has accrued and to which he is entitled as of the termination date and other accrued benefits, including, for Dr. Kathiresan, any bonus that has been earned but not yet paid, which we refer to collectively as the accrued obligations. In addition, subject to his execution and nonrevocation of a severance and release of claims agreement, or the severance agreement, in our favor and his continued compliance with his "confidentiality agreement" (as such term is defined in his employment agreement), the severance agreement and/or any similar agreement, as applicable, with us, the named executive officer is entitled to (1) continued payment of his base salary, in accordance with our regular payroll procedures, for a period of 12 months in the case of Dr. Kathiresan, 12 months in the case of Mr. Ashe, and eight months in the case of Dr. Bellinger, (2) a lump sum payment equal to 100% in the case of Dr. Kathiresan, 100% in the case of Mr. Ashe, and 67% in the case of Dr. Bellinger, of his target bonus for the year in which the termination occurs, (3) provided he is eligible for and timely elects to continue receiving group medical insurance under COBRA and the payments would not result in the violation of nondiscrimination requirements of applicable law, payment by us of the portion of health coverage premiums we pay for similarly situated, active employees who receive the same type of coverage, for a period of up to 12 months in the case of Dr. Kathiresan, 12 months in the case of Mr. Ashe and nine months in the case of Dr. Bellinger following his date of termination and (4), for Dr. Kathiresan, Mr. Ashe, and Dr. Bellinger, immediate vesting and exercisability, or immediate release from our repurchase option, as applicable, of the number of shares subject to any unvested equity awards granted or issued to him, in the case of Dr. Kathiresan, prior to or following the effective date of his employment agreement and, in the case of Dr. Bellinger and Mr. Ashe, prior to the effective date of his employment agreement, that would have vested or been released, as applicable, had he remained an employee for 12 months in the case of Dr. Kathiresan and Mr. Ashe and nine months in the case of Dr. Bellinger, following his termination date (assuming no change in control occurred within such period). In addition, Dr. Kathiresan shall have until the earlier of 24 months following his termination date and the expiration of the applicable option grant to exercise all vested options then held by him (after giving effect to any vesting acceleration to which he is entitled).

In the event of the termination of the employment of a named executive officer by us without cause, or by him for good reason, within three months prior to or 12 months following a change in control, the named executive officer will be entitled to the accrued obligations. In addition, subject to his execution and nonrevocation of a severance and release of claims in our favor and his continued compliance with his confidentiality agreement, the severance agreement and/or any similar agreement, as applicable, with us, the named executive officer will be entitled to (1) a single lump sum payment equal to the sum of 18 months in the case of Dr. Kathiresan and 12 months in the case of each of Dr. Bellinger and Mr. Ashe of his then-current base salary, and 150% in the case of Dr. Kathiresan and 100% in the case of each of Dr. Bellinger and Mr. Ashe of his target bonus for the year in which the termination occurs or, if higher, his target bonus immediately prior to a change in control, (2) provided he is eligible for and timely elects to continue receiving group medical insurance under COBRA and the payments would not result in the violation of nondiscrimination requirements of applicable law, payment by us of the portion of health coverage premiums we pay for similarly situated, active employees who receive the same type of coverage, for a period of up to 18 months in the case of Dr. Kathiresan and 12 months in the case of each of Dr. Bellinger and Mr. Ashe following his date of termination, and (3) full vesting acceleration of his then-unvested equity awards, such that all such then-unvested equity awards immediately vest and become fully exercisable or non-forfeitable as of the later of the date of the change in control and his termination date. Any shares underlying then-unvested equity awards granted or issued to the named executive officer prior to the effective date of his employment agreement shall become immediately vested, exercisable and non-forfeitable, as the case may be, upon a change in control. In addition, Dr. Kathiresan shall have until the earlier of 24 months following his termination date and the expiration of the applicable option grant to exercise all vested options then held by him (after giving effect to any vesting acceleration to which he is entitled).

If the named executive officer's employment is terminated for any other reason, including as a result of his death or disability, for cause, or voluntarily by the named executive officer without good reason, our obligations under the employment agreement cease immediately, and the named executive officer will only be entitled to the accrued obligations.

Employee non-competition, non-solicitation, confidentiality and assignment of inventions agreements

Each of our named executive officers has entered into a standard form agreement with respect to non-competition, non-solicitation, confidential information and assignment of inventions. Under this agreement, each of our named executive officers has agreed not to compete with us during his employment and for a period of one year after the termination of his employment, not to solicit our employees, consultants, customers, business or prospective customers during his employment and for a period of one year after the termination of his employment, and to protect our confidential and proprietary information indefinitely. In addition, under this agreement, each named executive officer has agreed that we own all inventions that are developed by such executive officer during his employment with us that (i) are related to our business or our customers or suppliers or any of our products or services being researched, developed, manufactured or sold by us or which may be used

with such products or services, (ii) result from tasks assigned to the executive officer by us or (iii) result from the use of our premises or personal property (whether tangible or intangible) owned, leased or contracted for by us.

Stock option and other compensation plans

In this section we describe our 2018 Plan, our 2021 Plan and our Amended and Restated 2021 Employee Stock Purchase Plan, or the 2021 ESPP. Prior to our IPO, we granted awards to eligible participants under the 2018 Plan. Following the effectiveness of the registration statement for our IPO and the effectiveness of the 2021 Plan, we ceased granting awards under the 2018 Plan and started granting awards to eligible participants from time to time only under the 2021 Plan.

2018 equity incentive plan

Our 2018 Plan was initially approved by our board of directors and stockholders on August 6, 2018 and subsequently amended on April 10, 2020, July 22, 2020 and January 13, 2021, solely to increase the number of shares available for issuance under the 2018 Plan. Our 2018 Plan allowed us to provide incentive stock options, within the meaning of Section 422 of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, nonstatutory stock options, stock appreciation rights, restricted stock awards and restricted stock units, each of which we refer to as an award and the recipient of such award, a participant. Eligible employees, directors and consultants, including employees and consultants of any of our parent or subsidiary companies, were eligible to receive awards under the 2018 Plan; however, incentive stock options could only be granted to our or our subsidiaries' employees.

Subject to adjustment in the event of certain changes in our capitalization (as described below), the maximum number of shares of common stock authorized for issuance under our 2018 Plan was 6,885,653 shares. We no longer grant awards under the 2018 Plan; however, awards outstanding under the 2018 Plan will continue to be governed by their existing terms.

Different committees may administer our 2018 Plan with respect to different groups of service providers. Otherwise, the 2018 Plan is administered by our board of directors or by a committee of our board of directors or of other individuals satisfying applicable laws appointed by the board or by a duly authorized compensation committee of the board. Subject to the provisions of the 2018 Plan, and in the case of a committee, subject to the specific duties delegated by our board of directors to the committee, the administrator of the 2018 Plan has the authority to construe and interpret the terms of our 2018 Plan and the awards granted under our 2018 Plan, prescribe, amend and rescind rules and regulations relating to our 2018 Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable foreign laws or for qualifying for favorable tax treatment under applicable foreign laws, and make all other determinations deemed necessary or advisable for administering the 2018 Plan. The administrator's decisions, determinations and interpretations are final and binding on all participants and any other persons holding awards.

The administrator of the 2018 Plan selects the recipients of awards and, among other things, determines:

- the number of shares of our common stock covered by each award granted under the 2018 Plan;
- the terms and conditions, not inconsistent with the terms of the 2018 Plan, of any award granted under the 2018 Plan, which terms and conditions include, but are not limited to, the exercise price, which, in the case of options, may not be less than the fair market value of a share of common stock on the date of grant, the time or times when awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding an award or the shares of common stock relating to the award, based in each case on the factors the administrator determines;
- the duration of options, which may not be in excess of ten years; and
- the forms of consideration for exercising options, including the method of payment.

Unless determined otherwise by the administrator, awards may not be sold, pledged, assigned, hypothecated or otherwise transferred in any manner other than by will or by the laws of descent and distribution. In addition, during an applicable participant's lifetime, only that participant may exercise his or her award. If the administrator makes an award transferable, such award may only be transferred (i) by will, (ii) by the laws of descent and distribution or (iii) as permitted by Rule 701 of the Securities Act of 1933, as amended, or the Securities Act.

Certain adjustments

If there is a dividend or other distribution (whether in the form of cash, shares of our common stock, other securities or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, exchange of shares of common stock or our other securities or other change in our corporate structure affecting the shares of our common stock, the administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the 2018 Plan will adjust the number and class of shares that may be delivered under our 2018 Plan and/or the number, class and price of shares of stock covered by each outstanding award.

Dissolution or liquidation

In the event of our proposed dissolution or liquidation, the administrator will notify each participant as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, an award will terminate immediately prior to the consummation of such proposed action.

Merger and change in control

In the event of our merger with or into another corporation or entity or a “change in control” (as defined in our 2018 Plan), each outstanding award will be treated as the administrator determines without a participant’s consent, including, without limitation, that (i) awards will be assumed, or substantially equivalent awards will be substituted, by the acquiring or succeeding corporation (or its affiliate) with appropriate adjustments as to the number and kind of shares and prices; (ii) upon written notice to a participant, the participant’s awards will terminate upon or immediately prior to the consummation of such merger or change in control; (iii) outstanding awards will vest and become exercisable, realizable or payable, or restrictions applicable to an award will lapse, in whole or in part, prior to or upon consummation of such merger or change in control, and, to the extent the administrator determines, terminate upon or immediately prior to the effectiveness of such merger or change in control; (iv) (1) the termination of an award in exchange for an amount of cash and/or property, if any, equal to the amount that would have been attained upon the exercise of such award or realization of the participant’s rights as of the date of the occurrence of the transaction (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the administrator determines in good faith that no amount would have been attained upon the exercise of such award or realization of the participant’s rights, then such award may be terminated by us without payment) or (2) the replacement of such award with other rights or property selected by the administrator in its sole discretion; or (v) any combination of the foregoing. The administrator is not obligated to treat all awards, all awards a participant holds or all awards of the same type, similarly. Notwithstanding the foregoing, if a payment under an award agreement is subject to Section 409A of the Code and if the definition of change in control contained in the applicable award agreement does not comply with the definition of “change of control” for purposes of a distribution under Section 409A of the Code, then any payment of an amount that is otherwise accelerated pursuant to this paragraph will be delayed until the earliest time that payment would be permissible under Section 409A of the Code without triggering any penalties applicable under Section 409A of the Code.

Amendment and termination

The administrator has the authority to modify or amend any award, subject to obtaining the participant’s agreement to such modification or amendment if the modification or amendment would impair the rights of the participant. Our board of directors may, at any time, amend, alter, suspend or terminate our 2018 Plan. To the extent necessary and desirable to comply with applicable laws (including any applicable stock exchange rules), we will obtain stockholder approval of any amendment to our 2018 Plan. No amendment, alteration, suspension or termination of our 2018 Plan will impair the rights of a participant, unless mutually agreed otherwise between the participant and the administrator in writing.

2021 stock incentive plan

In June 2021, our board of directors adopted and our stockholders approved the 2021 Plan, which became effective on June 16, 2021. The 2021 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, awards of restricted stock, restricted stock units and other stock-based awards. Upon effectiveness of the 2021 Plan, the number of shares of our common stock reserved for issuance under the 2021 Plan was the sum of: (1) 3,466,530 shares; plus (2) the number of shares as is equal to the sum of (x) the number of shares of our common stock reserved for issuance under the 2018 Plan that remained available for grant under the 2018 Plan immediately prior to the effectiveness of the registration statement for our IPO and (y) the number of shares of our common stock subject to outstanding awards granted under the 2018 Plan that expire, terminate or are otherwise surrendered, cancelled, forfeited or repurchased by us at their original issuance price pursuant to a contractual repurchase right; plus (3) an annual increase, to be added on the first day of each fiscal year, commencing on January 1, 2022 and continuing until, and including, January 1, 2031, equal to the lesser of (i) 5% of the number of shares of our common stock outstanding on such date and (ii) the number of shares of our common stock determined by our board of directors. On January 1, 2023, 3,086,541 shares were added to the shares reserved for issuance under the 2021 Plan as a result of this most recent annual increase. Subject to adjustment in the event of certain changes in our capitalization, as of December 31, 2022, up to 5,691,743 of the shares of our common stock available for issuance under the 2021 Plan may be issued as incentive stock options.

Our employees, officers, directors, consultants and advisors are eligible to receive awards under the 2021 Plan; however, incentive stock options may only be granted to our employees.

Pursuant to the terms of the 2021 Plan, our board of directors (or a committee delegated by our board of directors) administers the 2021 Plan and, subject to any limitations set forth in the 2021 Plan, selects the recipients of awards and determines:

- the number of shares of our common stock covered by options and the dates upon which the options become exercisable;
- the type of options to be granted;
- the duration of options, which may not be in excess of ten years;
- the exercise price of options, which must be at least equal to the fair market value of our common stock on the date of grant;
- the methods of payment of the exercise price of options; and
- the number of shares of our common stock subject to and the terms and conditions of any stock appreciation rights, awards of restricted stock, restricted stock units or other stock-based awards, including conditions for repurchase, measurement price, issue price and repurchase price (though the measurement price of stock appreciation rights must be at least equal

to the fair market value of our common stock on the date of grant and the duration of such awards may not be in excess of ten years) and any performance conditions.

Our board of directors has delegated authority to our chief executive officer, chief financial officer, and chief operating officer to grant awards under the 2021 Plan; such officers have the power to make awards to all of our employees, except executive officers (as such terms are defined in the 2021 Plan). Our board of directors has fixed the terms of the awards to be granted by such officers, the maximum number of shares subject to awards that such officers may grant in the aggregate and to any employee, and the time period in which such awards may be granted.

The 2021 Plan contains limits on compensation that may be paid to our non-employee directors. The maximum aggregate amount of cash and value (calculated based on grant date fair value for financial reporting purposes) of awards under the 2021 Plan granted in any calendar year to any individual non-employee director in his or her capacity as a non-employee director may not exceed \$750,000, or \$1,000,000 in the case of a non-employee director during his or her first year of service. Fees paid by us on behalf of any non-employee director in connection with regulatory compliance and any amounts paid to a non-employee director as reimbursement of an expense will not count against this limit. Our board of directors may make additional exceptions to this limit for individual non-employee directors in extraordinary circumstances, provided that the non-employee director receiving such additional compensation may not participate in the decision to award such compensation. The limitation does not apply to cash or awards granted to a non-employee director in his or her capacity as a consultant or advisor to us.

Effect of certain changes in capitalization

In the event of any stock split, reverse stock split, stock dividend, recapitalization, combination of shares, reclassification of shares, spin-off or other similar change in capitalization or event, or any dividend or distribution to holders of our common stock other than an ordinary cash dividend, we are required by the 2021 Plan to make equitable adjustments (or make substitute awards, if applicable), in the manner determined by our board of directors, to:

- the number and class of securities available under the 2021 Plan, and the number and class of securities available for issuance under the 2021 Plan that may be issued as incentive stock options;
- the share counting rules of the 2021 Plan;
- the number and class of securities and exercise price per share of each outstanding option;
- the share and per-share provisions and the measurement price of each outstanding stock appreciation right;
- the number of shares and the repurchase price per share subject to each outstanding award of restricted stock; and
- the share and per-share related provisions and purchase price, if any, of each outstanding restricted stock unit award and each outstanding other stock-based award.

Effect of certain corporate transactions

Upon the occurrence of a merger or other reorganization event (as defined in the 2021 Plan), our board of directors may, on such terms as our board of directors determines (except to the extent specifically provided otherwise in an applicable award agreement or other agreement between the participant and us), take any one or more of the following actions pursuant to the 2021 Plan as to all or any (or any portion of) outstanding awards, other than awards of restricted stock:

- provide that outstanding awards will be assumed, or substantially equivalent awards will be substituted, by the acquiring or succeeding corporation (or an affiliate of the acquiring or succeeding corporation);
- upon written notice to a participant, provide that all of the participant's unvested awards will be forfeited immediately prior to the consummation of the reorganization event and/or that all of the participant's vested but unexercised awards will terminate immediately prior to the consummation of such transaction unless exercised, to the extent exercisable, by the participant within a specified period following the date of such notice;
- provide that outstanding awards will become exercisable, realizable or deliverable, or restrictions applicable to an award will lapse, in whole or in part, prior to or upon the reorganization event;
- in the event of a reorganization event pursuant to which holders of our common stock will receive a cash payment for each share surrendered in the reorganization event, make or provide for a cash payment to participants with respect to each award held by a participant equal to (1) the number of shares of our common stock subject to the vested portion of the award (after giving effect to any acceleration of vesting that occurs upon or immediately prior to such reorganization event) multiplied by (2) the excess, if any, of the cash payment for each share surrendered in the reorganization event over the exercise, measurement or purchase price of such award and any applicable tax withholdings, in exchange for the termination of such award;
- provide that, in connection with our liquidation or dissolution, awards will convert into the right to receive liquidation proceeds (if applicable, net of the exercise, measurement or purchase price thereof and any applicable tax withholdings); or
- any combination of the foregoing.

Our board of directors is not obligated by the 2021 Plan to treat all awards, all awards held by a participant, or all awards of the same type, identically.

In the case of certain restricted stock units, no assumption or substitution is permitted, and the restricted stock units will instead be settled in accordance with the terms of the applicable restricted stock unit agreement.

Upon the occurrence of a reorganization event other than our liquidation or dissolution, our repurchase and other rights with respect to outstanding awards of restricted stock will continue for the benefit of the succeeding company and will, unless our board of directors determines otherwise, apply to the cash, securities or other property which our common stock is converted into or exchanged for pursuant to the reorganization event in the same manner and to the same extent as they applied to the common stock subject to the restricted stock award. However, our board of directors may provide for the termination or deemed satisfaction of such repurchase or other rights under the restricted stock award agreement or any other agreement between a participant and us, either initially or by amendment. Upon the occurrence of a reorganization event involving our liquidation or dissolution, all restrictions and conditions on each outstanding restricted stock award will automatically be deemed terminated or satisfied, unless otherwise provided in the agreement evidencing the restricted stock award or in any other agreement between the participant and us.

Our board of directors may, at any time, provide that any award under the 2021 Plan will become immediately exercisable in whole or in part, free of some or all restrictions or conditions, or otherwise realizable in whole or in part, as the case may be.

Except with respect to certain actions requiring stockholder approval under the Code, or Nasdaq rules, our board of directors may amend, modify or terminate any outstanding award under the 2021 Plan, including but not limited to, substituting for the award another award of the same or a different type, changing the date of exercise or realization, and converting an incentive stock option to a nonstatutory stock option, subject to certain participant consent requirements. However, unless our stockholders approve such action, the 2021 Plan provides that we may not (except as otherwise permitted in connection with a change in capitalization or reorganization event):

- amend any outstanding stock option or stock appreciation right granted under the 2021 Plan to provide an exercise or measurement price per share that is lower than the then-current exercise or measurement price per share of such outstanding award;
- cancel any outstanding stock option or stock appreciation right (whether or not granted under the 2021 Plan) and grant a new award under the 2021 Plan in substitution for the canceled award (other than substitute awards permitted in connection with a merger or consolidation of an entity with us or our acquisition of property or stock of another entity) covering the same or a different number of shares of our common stock and having an exercise or measurement price per share lower than the then-current exercise or measurement price per share of the canceled award;
- cancel in exchange for a cash payment any outstanding option or stock appreciation right with an exercise or measurement price per share above the then-current fair market value of our common stock (valued in the manner determined by (or in the manner approved by) our board of directors); or
- take any other action that constitutes a “repricing” within the meaning of Nasdaq rules or the rules of any other exchange or marketplace on which our common stock is listed or traded.

No award may be granted under the 2021 Plan on or after June 16, 2031. Our board of directors may amend, suspend or terminate the 2021 Plan at any time, except that stockholder approval will be required to comply with applicable law or stock market requirements.

As of December 31, 2022, there were options to purchase an aggregate of 3,423,247 shares of common stock outstanding under the 2021 Plan at a weighted-average exercise price of \$30.07 per share and 677,825 restricted stock units outstanding under the 2021 Plan.

Amended and restated 2021 employee stock purchase plan

In June 2021, our board of directors adopted and our stockholders approved the 2021 employee stock purchase plan. The 2021 employee stock purchase plan was subsequently amended and restated by our board of directors to permit the board, or a committee appointed by our board of directors, to establish a maximum number of shares that may be purchased by a participant in any offering period. We refer to the amended and restated 2021 employee stock purchase plan as the 2021 ESPP. The 2021 ESPP became effective in June 2021. The 2021 ESPP is administered by our board of directors or by a committee appointed by our board of directors. The 2021 ESPP initially provided participating employees with the opportunity to purchase up to an aggregate of 433,316 shares of our common stock. The number of shares of our common stock reserved for issuance under the 2021 ESPP will automatically increase on the first day of each fiscal year, which commenced on January 1, 2022 and will continue for each fiscal year until, and including, January 1, 2031, in an amount equal to the lowest of (1) 1,083,290 shares of our common stock, (2) 1% of the number of shares of our common stock outstanding on such date and (3) an amount determined by our board of directors. On January 1, 2023, 617,308 shares were added to the shares reserved for issuance under the 2021 ESPP as a result of this most recent annual increase.

All of our employees and employees of any designated subsidiary, as defined in the 2021 ESPP, are eligible to participate in the 2021 ESPP, provided that:

- such person is customarily employed by us or a designated subsidiary for more than 20 hours a week and for more than five months in a calendar year;
- such person has been employed by us or by a designated subsidiary for at least one month prior to enrolling in the 2021 ESPP; and
- such person was our employee or an employee of a designated subsidiary on the first day of the applicable offering period under the 2021 ESPP.

We retain the discretion to determine which eligible employees may participate in an offering under applicable regulations.

The first offering to our eligible employees to purchase stock under the 2021 ESPP, which we refer to as the first offering period, began on June 16, 2021 and ended on December 13, 2021. The second offering to our eligible employees to purchase stock under the 2021 ESPP, which we refer to as the second offering period, began on December 14, 2021 and ended on May 31, 2022. Thereafter, we expect to begin offerings to our eligible employees to purchase stock under the 2021 ESPP on each June 1 and December 1 (or the next following business day), including our third and fourth offerings which began on June 1, 2022 and December 1, 2022, respectively. Each offering, other than the second offering period, is expected to consist of a six-month offering period during which payroll deductions will be made and held for the purchase of our common stock at the end of the offering period. Our board of directors may, at its discretion, choose a different period of not more than 12 months for offerings.

On each offering commencement date, each participant will be granted an option to purchase, on the last business day of the offering period, up to a number of shares of our common stock determined by multiplying \$2,083 by the number of full months in the offering period and dividing that product by our initial public offering price, in the case of the first offering period, and by the closing price of our common stock on the first day of the offering period, in the case of all other offering periods. No employee may be granted an option under the 2021 ESPP that permits the employee's rights to purchase shares under the 2021 ESPP and any other employee stock purchase plan of ours or of any of our subsidiaries to accrue at a rate that exceeds \$25,000 of the fair market value of our common stock (determined as of the first day of each offering period) for each calendar year in which the option is outstanding. Our board of directors, or a committee appointed by our board of directors, may in its discretion, set a fixed maximum number of shares of common stock that each eligible employee may purchase in any offering period, instead of the number of shares of common stock determined using the formula described above, provided that such fixed maximum number is subject to the \$25,000 limitation described above. In addition, no employee may purchase shares of our common stock under the 2021 ESPP that would result in the employee owning 5% or more of the total combined voting power or value of our stock or the stock of any of our subsidiaries.

Except with respect to the first offering period, on the commencement date of each offering period, each eligible employee may authorize up to a maximum of 15% of his or her compensation to be deducted by us during the offering period. Each employee who continues to be a participant in the 2021 ESPP on the last business day of the offering period will be deemed to have exercised an option to purchase from us the number of whole shares of our common stock that his or her accumulated payroll deductions on such date will pay for, not in excess of the maximum numbers set forth above. Under the terms of the 2021 ESPP, the purchase price will be determined by our board of directors or the committee for each offering period and will be at least 85% of the applicable closing price of our common stock. If our board of directors or the committee does not make a determination of the purchase price, the purchase price will be 85% of the lesser of the closing price of our common stock on the first business day of the offering period or on the last business day of the offering period.

An employee may at any time prior to the close of business on the fifteenth business day prior to the end of an offering period (or such other number of days as is determined by us), and for any reason, permanently withdraw from participating in an offering and permanently withdraw the balance accumulated in the employee's account. Partial withdrawals are not permitted. If an employee elects to discontinue his or her payroll deductions during an offering period but does not elect to withdraw his or her funds, funds previously deducted will be applied to the purchase of common stock at the end of the offering period. If a participating employee's employment ends before the last business day of an offering period such that the employee is no longer employed by us or any designated subsidiary of ours, no additional payroll deductions will be taken and the balance in the employee's account will be paid to the employee.

We will be required to make equitable adjustments to the extent determined by our board of directors or a committee thereof to the number and class of securities available under the 2021 ESPP, the share limitations under the 2021 ESPP, and the purchase price for an offering period under the 2021 ESPP to reflect stock splits, reverse stock splits, stock dividends, recapitalizations, combinations of shares, reclassifications of shares, spin-offs and other similar changes in capitalization or events or any dividends or distributions to holders of our common stock other than ordinary cash dividends.

In connection with a merger or other reorganization event, as defined in the 2021 ESPP, our board of directors or a committee of our board of directors may take any one or more of the following actions as to outstanding options to purchase shares of our common stock under the 2021 ESPP on such terms as our board of directors or committee thereof determines:

- provide that options will be assumed, or substantially equivalent options will be substituted, by the acquiring or succeeding corporation (or an affiliate of the acquiring or succeeding corporation);
- upon written notice to employees, provide that all outstanding options will be terminated immediately prior to the consummation of such reorganization event and that all such outstanding options will become exercisable to the extent of accumulated payroll deductions as of a date specified by our board of directors or committee thereof in such notice, which date will not be less than ten days preceding the effective date of the reorganization event (or such other number of days as is determined by our board of directors or a committee of our board of directors);
- upon written notice to employees, provide that all outstanding options will be canceled as of a date prior to the effective date of the reorganization event and that all accumulated payroll deductions will be returned to participating employees on such date;
- in the event of a reorganization event under the terms of which holders of our common stock will receive upon consummation thereof a cash payment for each share surrendered in the reorganization event, change the last day of the offering period to be the date of the consummation of the reorganization event and make or provide for a cash payment to each employee equal to (1) the cash payment for each share surrendered in the reorganization event times the number of shares of our common stock that the employee's accumulated payroll deductions as of immediately prior to the

reorganization event could purchase at the applicable purchase price, where the cash payment for each share surrendered in the reorganization event is treated as the fair market value of our common stock on the last day of the applicable offering period for purposes of determining the purchase price and where the number of shares that could be purchased is subject to the applicable limitations under the 2021 ESPP minus (2) the result of multiplying such number of shares by the purchase price; and/or

- provide that, in connection with our liquidation or dissolution, options will convert into the right to receive liquidation proceeds (net of the purchase price thereof).

Our board of directors may at any time, and from time to time, amend or suspend the 2021 ESPP or any portion of the 2021 ESPP. We will obtain stockholder approval for any amendment if such approval is required by Section 423 of the Code. Further, our board of directors may not make any amendment that would cause the 2021 ESPP to fail to comply with Section 423 of the Code. The 2021 ESPP may be terminated at any time by our board of directors. Upon termination, we will refund all amounts in the accounts of participating employees.

Health/ welfare plans

All of our full-time employees, including our named executive officers, are eligible to participate in our health and welfare plans, including medical and dental benefits, short-term and long-term disability insurance, and life insurance. We believe these benefits are necessary and appropriate to provide a competitive compensation package to our named executive officers.

401(k) plan

We maintain a defined contribution employee retirement plan for our employees, including our named executive officers. The plan is intended to qualify as a tax-qualified 401(k) plan so that contributions to the 401(k) plan, and income earned on such contributions, are not taxable to participants until withdrawn or distributed from the 401(k) plan (except in the case of contributions under the 401(k) plan designated as Roth contributions). Under the 401(k) plan, each employee is fully vested in his or her deferred salary contributions and our discretionary match. Employee contributions are held and invested by the plan's trustee as directed by participants. The 401(k) plan provides us with the discretion to match employee contributions. We match 100% of each participant's annual contribution to the 401(k) plan up to three percent of the participant's salary and then 50% of each participant's contribution up to two percent of the participant's salary.

Limitation of liability and indemnification

Our restated certificate of incorporation limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the Delaware General Corporation Law, or the DGCL, and provides that no director will have personal liability to us or to our stockholders for monetary damages for breach of fiduciary duty as a director. However, these provisions do not eliminate or limit the liability of any of our directors:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- for voting for or assenting to unlawful payments of dividends, stock repurchases or other distributions; or
- for any transaction from which the director derived an improper personal benefit.

Any amendment to or repeal of these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to such amendment or repeal. If the DGCL is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the DGCL.

In addition, our restated certificate of incorporation provides that we must indemnify our directors and officers and we must advance expenses, including attorneys' fees, to our directors and officers in connection with legal proceedings, subject to very limited exceptions.

We maintain a general liability insurance policy that covers specified liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers. In addition, we have entered into indemnification agreements with all of our executive officers and directors. These indemnification agreements require us, among other things, to indemnify each such executive officer or director for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by him or her in any action or proceeding arising out of his or her service as one of our executive officers or directors.

Some of our non-employee directors may, through their relationships with their employers, be insured or indemnified against specified liabilities incurred in their capacities as members of our board of directors.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, executive officers or persons controlling us, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Rule 10b5-1 sales plans

Our directors and executive officers have adopted or may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from the director or officer. It also is possible that the director or officer could terminate the plan, or amend or terminate the plan in some circumstances. In addition, our directors and executive officers may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material, nonpublic information.

Non-employee director compensation

The table below shows all compensation to our non-employee directors during the year ended December 31, 2022.

Name	Fees earned or paid in cash (\$)	Option awards (\$)(1)(2)	Total (\$)
Burt Adelman, M.D.	87,545	148,907	236,452
Lonnell Coats(3)	16,862	577,437	594,299
Alexander Cumbo(4)	22,417	297,813	320,230
John Evans(5)	22,912	148,907	171,819
Michael MacLean	50,000	148,907	198,907
Sheila Mikhail, J.D.	46,500	148,907	195,407
Krishna Yeshwant, M.D.	44,000	148,907	192,907

(1) The amounts reported represent the aggregate grant date fair value of stock options awarded in 2022, calculated in accordance with FASB ASC Topic 718. The assumptions used in calculating the grant date fair value are set forth in Note 11 to our consolidated financial statements in our 2022 Annual Report. These amounts reflect the accounting cost for these stock options and do not reflect the actual economic value that may be realized by the directors upon the vesting of the stock options, the exercise of the stock options or the sale of the common stock underlying such stock options.

(2) As of December 31, 2022, the aggregate number of stock options held by non-employee directors was as follows:

Director	Aggregate number of option awards
Burt Adelman, M.D.	58,698
Lonnell Coats	31,000
Alexander Cumbo	31,000
Michael MacLean	54,279
Sheila Mikhail, J.D.	58,698
Krishna Yeshwant, M.D.	15,500
John Evans	—

(3) Mr. Coats was elected to our board of directors in August 2022.

(4) Mr. Cumbo was elected to our board of directors in June 2022.

(5) Mr. Evans resigned from our board of directors in August 2022.

Prior to our IPO, we paid cash fees and granted equity awards to certain of our non-employee directors for their service on our board of directors pursuant to a non-employee director compensation policy adopted in April 2021. Each non-employee director not affiliated with GV received an annual fee of \$50,000 relating to such director's service on the board of directors, and the chairperson of the board received an additional annual fee of \$10,000. In connection with his or her initial election to the board of directors and upon approval of the board, each such director also received an option under our 2018 Plan to purchase 43,198 shares of common stock, which option vests quarterly over four years in equal installments, subject to continued service.

Dr. Kathiresan, one of our directors who also serves as our chief executive officer, does not receive any additional compensation for his service as a director. Dr. Kathiresan is one of our named executive officers and, accordingly, the compensation that we pay to Dr. Kathiresan is discussed above under "—Summary compensation table" and "—Narrative to summary compensation table."

In June 2021, our board of directors approved a director compensation program that became effective on June 16, 2021. Under this director compensation program, we pay our non-employee directors a cash retainer for service on the board of directors and for service on each committee on which the director is a member. The chairperson of the board and of each committee receives additional retainers for such service. These fees are payable in arrears in four equal quarterly installments on the last day of each quarter, provided that the amount of such payment is prorated for any portion of such quarter that the director is not serving on our board of directors. During 2022, the fees paid to non-employee directors for service on the board of directors and for service on each committee of the board of directors on which the director is a member were as follows:

	Member annual fee (\$)	Chairperson incremental annual fee (\$)
Board of Directors	35,000	30,000
Audit Committee	7,500	7,500
Compensation Committee	5,000	5,000
Nominating and Corporate Governance Committee	4,000	4,000

In January 2023, our board of directors reviewed our non-employee director compensation program and determined to amend certain of the cash retainers for service on our board of directors and committees effective as of January 1, 2023, as follows:

	Member annual fee (\$)	Chairperson incremental annual fee (\$)
Board of Directors	40,000	30,000
Audit Committee	7,500	7,500
Compensation Committee	6,000	6,000
Nominating and Corporate Governance Committee	5,000	5,000

We also reimburse our non-employee directors for reasonable travel and other expenses incurred in connection with attending meetings of our board of directors and any committee of our board of directors on which they serve.

Pursuant to our amended director compensation program, each non-employee director who was initially elected or appointed to our board of directors in 2022 received an option to purchase 31,000 shares of our common stock under the 2021 Plan. Effective as of January 1, 2023, each non-employee director will receive, upon his or her initial election or appointment to our board of directors, an option to purchase the number of shares of our common stock under the 2021 Plan that has a Black Scholes value as of the date of the grant equal to \$719,754 (as calculated using the same methodology that we use when calculating the value of stock awards for purposes of our financial statements). Each of these options will vest as to 2.7778% of the shares of our common stock underlying such option at the end of each successive one-month period following the grant date until the third anniversary of the grant date, subject to the non-employee director's continued service as a director. On the date of the first board meeting held after our 2022 annual meeting of stockholders, each non-employee director who had served on our board of directors for at least six months received, under the 2021 Plan, an option to purchase 15,500 shares of our common stock. Effective as of January 1, 2023, on the date of the first board meeting held after each annual meeting of stockholders, each non-employee director that has served on our board of directors for at least six months will receive, under the 2021 Plan, an option to purchase the number of shares of our common stock under the 2021 Plan that has a Black Scholes value as of the date of the grant equal to \$359,877 (as calculated using the same methodology that we use when calculating the value of stock awards for purposes of our financial statements). Each of these options vests with respect to all of the shares underlying such option on the first anniversary of the grant date or, if earlier, immediately prior to the first annual meeting of stockholders occurring after the grant date, subject to the non-employee director's continued service as a director. All options issued to our non-employee directors under our director compensation program are issued at exercise prices equal to the closing price of our common stock on the date of grant and will become exercisable in full upon specified change in control events.

Securities authorized for issuance under equity compensation plans

Equity compensation plan information

The following table contains information about our equity compensation plans as of December 31, 2022. As of December 31, 2022, we had three equity compensation plans, our 2018 Plan, our 2021 Plan and our 2021 ESPP, each of which was approved by our stockholders.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights(1)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column(a))
Equity compensation plans approved by security holders(2)	8,290,651	\$ 16.10	3,810,133 (3)(4)
Equity compensation plans not approved by security holders	-	-	-
Total	8,290,651	\$ 16.10	3,810,133

(1) The weighted average exercise price is calculated based solely on outstanding stock options. It does not take into account the shares of our common stock underlying restricted stock units, which have no exercise price.

(2) Consists of the 2018 Plan, the 2021 Plan, and the 2021 ESPP.

(3) As of December 31, 2022, 3,025,807 shares of our common stock were available for issuance under the 2021 Plan. The 2021 Plan provides for annual increases, to be added as of the first day of each fiscal year until, and including, January 1, 2031, equal to the lesser of 5% of the number of shares of our common stock outstanding on such first day of the fiscal year in question and an amount determined by our board of directors. The shares of common stock underlying any awards that are expired, forfeited, canceled, repurchased or are otherwise terminated by us under the 2021 Plan or the 2018 Plan are added back to the shares of common stock available for issuance under the 2021 Plan. On January 1, 2023, the number of shares under the 2021 Plan were increased by 3,086,541 shares pursuant to the annual increase described above.

(4) As of December 31, 2022, 784,326 shares of our common stock were reserved for issuance under the 2021 ESPP. The 2021 ESPP provides for annual increases, to be added as of the first day of each fiscal year until, and including, January 1, 2031, in an amount equal to the lowest of 1,083,290 shares of our common stock, 1% of the total number of shares of our common stock outstanding on the first day of the applicable year, and an amount determined by our board of directors. On January 1, 2023, the number of shares under the 2021 ESPP were increased by 617,308 shares pursuant to the annual increase described above.

TRANSACTIONS WITH RELATED PERSONS

Since January 1, 2022, we have engaged in the following transactions in which the amounts involved exceeded \$120,000 and our directors, executive officers or holders of more than 5% of our voting securities, or any member of the immediate family of, or person sharing the household with, the foregoing persons, had or will have a direct or indirect material interest. We believe that all of these transactions were on terms as favorable as could have been obtained from unrelated third parties.

Collaboration and license agreement with Beam Therapeutics

In April 2019, we entered into a collaboration and license agreement, or the Original Beam Agreement, with Beam Therapeutics Inc., or Beam. John Evans, a former member of our board of directors, who resigned in August 2022, is the chief executive officer and a member of the board of directors of Beam. Under the terms of the Original Beam Agreement, we received an exclusive, worldwide, sublicensable license under certain of Beam's base editing technology, as well as gene editing and delivery technologies for human therapeutic applications against certain cardiovascular targets.

In connection with the Beam Agreement, we issued 276,075 shares of our common stock to Beam in April 2019.

Under the terms of the Original Beam Agreement, we were required to pay milestone payments for certain clinical and regulatory events. Due to the submission of our clinical trial application in New Zealand, a milestone payment of \$0.3 million was triggered under the Original Beam Agreement in 2022 and subsequently paid by us to Beam. Additionally, due to the first patient dosing with VERVE-101 in a clinical trial, a milestone payment of \$0.2 million was triggered under the Original Beam Agreement and paid by us to Beam.

In July 2022, we entered into an amended and restated collaboration and license agreement with Beam, or the Amended Beam Agreement.

Pursuant to the Amended Beam Agreement, Beam granted us an exclusive, worldwide, sublicensable license under certain of Beam's base editing technology to develop and commercialize products directed towards a third liver-mediated, cardiovascular disease target, in addition to two of the targets licensed under the Original Beam Agreement. We are responsible for the development and commercialization of products targeting the licensed gene targets, in each case subject to Beam's opt-in right. For two gene targets, following the dosing of the final patient in a Phase 1 clinical trial of a licensed product for such gene targets, Beam has the right to opt-in to share 33% of worldwide expenses of the development of such licensed product, as well as jointly commercialize and share profits and expenses of commercializing such licensed products in the United States on a 50/50 basis. For the third gene target, following the dosing of the final patient in a Phase 1 clinical trial of a

licensed product for such additional gene target, Beam has the right to opt-in to share 35% of worldwide expenses of the development of such licensed product, as well as jointly commercialize and share 35% of the profits and expenses of commercializing such licensed product worldwide.

If Beam exercises its opt-in right for a given licensed product, which we refer to following such opt-in as a collaboration product, it will be obligated to pay for a specified percentage of the development and commercialization costs of such collaboration product and will have the right to receive a specified percentage of the profits from any sales of such collaboration product. With respect to each collaboration product, we and Beam will enter into a subsequent co-promotion agreement prior to the anticipated sale of such collaboration product in the United States, pursuant to which we and Beam will each provide 50% of the promotional effort required to promote the collaboration product. For collaboration products, on a product-by-product basis outside of the United States, we are obligated to pay clinical and regulatory milestones of up to an aggregate of \$5.6 million and sales-based milestones of up to an aggregate of \$7.5 million.

We refer to any licensed products for which Beam has either (i) not elected to exercise its opt-in right or (ii) if Beam has exercised its opt-in right, either we or Beam subsequently elect to opt-out of the payment of shared development and commercialization costs and participating in the commercialization of such licensed product, as a non-collaboration product. For such non-collaboration products, on a product-by-product basis worldwide, we are obligated to pay clinical and regulatory milestones of up to an aggregate of \$11.3 million and sales-based milestones of up to an aggregate of \$15.0 million.

To the extent there are sales of a collaboration product outside of the United States or a non-collaboration product worldwide, we will be required to pay tiered royalties to Beam at rates ranging from the low-to-mid single digit percentage of net sales, subject to specified reductions.

We granted to Beam an exclusive, worldwide, sublicensable, fully paid-up license under our intellectual property, including under our GalNAc-LNP delivery technology, relating to a preclinical program developed by us.

Registration rights

We are a party to an investors' rights agreement with certain holders of our common stock, including certain of our 5% stockholders and their affiliates and certain entities affiliated with some of our directors. This investors' rights agreement provides these holders the right, subject to certain conditions, to demand that we file a registration statement or to request that their shares be covered by a registration statement that we are otherwise filing.

Indemnification agreements

Our restated certificate of incorporation provides that we will indemnify our directors and officers to the fullest extent permitted by Delaware law. In addition, we have entered into indemnification agreements with all of our directors and executive officers.

These indemnification agreements require us, among other things, to indemnify each such director or executive officer for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by him or her in any action or proceeding arising out of his or her service as one of our directors or executive officers.

Policies and procedures for related person transactions

Our board of directors has adopted written policies and procedures for the review of any transaction, arrangement or relationship in which our company is a participant, the amount involved exceeds \$120,000, and one of our executive officers, directors, director nominees or 5% stockholders, or their immediate family members, each of whom we refer to as a "related person," has a direct or indirect material interest.

If a related person proposes to enter into such a transaction, arrangement or relationship, which we refer to as a "related person transaction," the related person must report the proposed related person transaction to our chief executive officer. The policy calls for the proposed related person transaction to be reviewed and, if deemed appropriate, approved by our audit committee. Whenever practicable, the reporting, review and approval will occur prior to entry into the transaction. If advance review and approval is not practicable, the audit committee will review, and, in its discretion, may ratify the related person transaction. The policy also permits the chairperson of the audit committee to review and, if deemed appropriate, approve proposed related person transactions that arise between committee meetings, subject to ratification by the committee at its next meeting. Any related person transactions that are ongoing in nature will be reviewed annually.

A related person transaction reviewed under the policy will be considered approved or ratified if it is authorized by the audit committee after full disclosure of the related person's interest in the transaction. As appropriate for the circumstances, the audit committee will review and consider:

- the related person's interest in the related person transaction;
- the approximate dollar value of the amount involved in the related person transaction;
- the approximate dollar value of the amount of the related person's interest in the transaction without regard to the amount of any profit or loss;
- whether the transaction was undertaken in the ordinary course of our business;
- whether the terms of the transaction are no less favorable to us than terms that could have been reached with an unrelated third party;

- the purpose, and the potential benefits to us, of the transaction; and
- any other information regarding the related person transaction or the related person in the context of the proposed transaction that would be material to investors in light of the circumstances of the particular transaction.

Our audit committee may approve or ratify the transaction only if it determines that, under all of the circumstances, the transaction is in, or is not inconsistent with, our best interests. Our audit committee may impose any conditions on the related person transaction that it deems appropriate.

In addition to the transactions that are excluded by the instructions to the SEC's related person transaction disclosure rule, our board of directors has determined that the following transactions do not create a material direct or indirect interest on behalf of related persons and, therefore, are not related person transactions for purposes of this policy:

- interests arising solely from the related person's position as an executive officer of another entity, whether or not the person is also a director of such entity, that is a participant in the transaction where the related person and all other related persons own in the aggregate less than a 10% equity interest in such entity, the related person and his or her immediate family members are not involved in the negotiation of the terms of the transaction and do not receive any special benefits as a result of the transaction and the amount involved in the transaction is less than the greater of \$200,000 or 5% of the annual gross revenues of the company receiving payment under the transaction; and
- a transaction that is specifically contemplated by provisions of our certificate of incorporation or bylaws.

The policy provides that transactions involving compensation of executive officers shall be reviewed and approved by our compensation committee in the manner specified in the compensation committee's charter.

We did not have a written policy regarding the review and approval of related person transactions prior to our IPO in June 2021. Nevertheless, with respect to such transactions, it was the practice of our board of directors to consider the nature of and business reasons for such transactions, how the terms of such transactions compared to those which might be obtained from unaffiliated third parties and whether such transactions were otherwise fair to and in the best interests of, or not contrary to, our best interests.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information with respect to the beneficial ownership of our common stock, as of the Record Date by:

- each of our directors;
- each of our named executive officers;
- all of our executive officers and directors as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock.

The column entitled "Percentage of shares beneficially owned" is based on a total of 61,917,884 shares of our common stock outstanding as of the Record Date.

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 that an individual has a right to acquire within 60 days after the Record Date are considered outstanding and beneficially owned by the person holding such right 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 with respect to the percentage ownership of all directors and executive officers. 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. Unless otherwise indicated, the address of each beneficial owner is c/o Verve Therapeutics, Inc., 201 Brookline Avenue, Boston, MA 02215.

Name of beneficial owner	Number of shares beneficially owned	Percentage of shares beneficially owned
5% Stockholders		
Entities affiliated with GV(1)	10,549,086	17.0 %
FMR LLC(2)	6,905,422	11.2 %
James R. Singer(3)	5,000,000	8.1 %
State Street Corporation(4)	4,471,049	7.2 %
ARK Investment Management LLC(5)	4,365,830	7.1 %
The Vanguard Group(6)	3,812,024	6.2 %
Blackrock, Inc.(7)	3,594,074	5.8 %
Directors and named executive officers		
Sekar Kathiresan, M.D.(8)	1,670,658	2.7 %
Andrew Ashe, J.D.(9)	506,466	*
Andrew Bellinger, M.D., Ph.D.(10)	385,903	*
Burt Adelman, M.D.(11)	465,425	*
Alexander Cumbo(12)	10,333	*
Michael MacLean(13)	35,914	*
Sheila Mikhail, J.D.(14)	37,099	*
Lonnel Coats (15)	8,611	*
Krishna Yeshwant, M.D.(16)	10,383,989	16.8 %
All current executive officers and directors as a group (11 persons)(17)	13,658,221	21.4 %

*Less than one percent.

- (1) Consists of (i) 6,108,442 shares of common stock held by GV 2017, L.P., (ii) 4,260,047 shares of common stock held by GV 2019, L.P., and (iii) 180,597 shares of common stock held by Verily Life Sciences LLC. GV 2017 GP, L.P. (the general partner of GV 2017, L.P.), GV 2017 GP, L.L.C. (the general partner of GV 2017 GP, L.P.), Alphabet Holdings LLC (the sole member of GV 2017 GP, L.L.C.), XXVI Holdings Inc. (the sole member of Alphabet Holdings LLC) and Alphabet Inc. (the controlling stockholder of XXVI Holdings Inc.) may each be deemed to have sole power to vote or dispose of the shares held directly by GV 2017, L.P. GV 2019 GP, L.P. (the general partner of GV 2019, L.P.), GV 2019 GP, L.L.C. (the general partner of GV 2019 GP, L.P.), Alphabet Holdings LLC (the sole member of GV 2019 GP, L.L.C.), XXVI Holdings Inc. (the sole member of Alphabet Holdings LLC) and Alphabet Inc. (the controlling stockholder of XXVI Holdings Inc.) may each be deemed to have sole power to vote or dispose of the shares held directly by GV 2019, L.P. XXVI Holdings Inc. (the managing member of Verily Life Sciences LLC) and Alphabet Inc. (the controlling stockholder of XXVI Holdings Inc.) may be deemed to have sole power to vote the shares held directly by Verily Life Sciences LLC. The principal business address of GV 2017, L.P., GV 2017 GP, L.P., GV 2017 GP, L.L.C., GV 2019, L.P., GV 2019 GP, L.P., GV 2019 GP, L.L.C., Verily Life Sciences LLC, Alphabet Holdings LLC, XXVI Holdings Inc. and Alphabet Inc. is 1600 Amphitheatre Parkway, Mountain View, CA 94043. The foregoing information is based solely upon a Schedule 13G/A filed by GV 2017, L.P. with the SEC on February 10, 2023.
- (2) Consists of 6,905,422 shares of common stock held by FMR LLC. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. 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 principal business address of FMR LLC is 245 Summer Street, Boston, MA 02210. The foregoing information is based solely upon a Schedule 13G/A filed by FMR LLC with the SEC on February 9, 2023.
- (3) Consists of 5,000,000 shares of common stock held by James R. Singer. The principal business address of Mr. Singer is PO Box 1395, Yarmouth, ME 04096. The foregoing information is based solely upon a Schedule 13G filed by Mr. Singer with the SEC on February 14, 2023.
- (4) Consists of 4,471,049 shares of common stock beneficially owned by State Street Corporation, or State Street, over which State Street has shared voting power over 4,393,661 shares and shared dispositive power over 4,471,049 shares. Of the 4,471,049 shares of common stock beneficially owned by State Street, SSGA Funds Management, Inc., a subsidiary of State Street, has shared voting power with respect to 3,618,546 shares and shared dispositive power over 3,628,546 shares. The principal business address of State Street Corporation is 1 Lincoln Street, Boston, MA 02111. The foregoing information is based solely upon a Schedule 13G filed by State Street Corporation on February 7, 2023.

- (5) Consists of 4,365,830 shares of common stock beneficially owned by ARK Investment Management LLC, of which ARK Investment Management LLC is deemed to have sole voting power with respect to 4,270,828 shares, shared voting power with respect to 50,694 shares and sole dispositive power over 4,365,830 shares. The principal business address of ARK Investment Management LLC is 200 Central Avenue, St. Petersburg, FL, 33701. The foregoing information is based solely upon a Schedule 13G filed by ARK Investment Management LLC with the SEC on February 10, 2023.
- (6) Consists of 3,812,024 shares of common stock owned of record by clients of The Vanguard Group, or Vanguard, over which Vanguard is deemed to have shared voting power with respect to 38,131 shares, sole dispositive power with respect to 3,743,405 shares and shared dispositive power with respect to 68,619 shares. The principal business address of The Vanguard Group is 100 Vanguard Blvd, Malvern, PA 19355. The foregoing information is based upon a Schedule 13G filed by The Vanguard Group on February 9, 2023.
- (7) Consists of 3,594,074 shares of common stock beneficially owned by BlackRock, Inc, of which BlackRock is deemed to have sole voting power over 3,491,867 shares and sole dispositive power over 3,594,074 shares. The principal business address of BlackRock, Inc is 55 East 52nd Street, New York, NY 10055. The foregoing information is based solely upon a Schedule 13G filed by BlackRock, Inc. with the SEC on February 10, 2023.
- (8) Consists of (i) 317,839 shares of common stock held by Dr. Kathiresan, (ii) 240,997 shares of common stock held by Kathiresan Family 2021 Irrevocable Trust, (iii) 80,997 shares of common stock held by Sekar Kathiresan 2021 Irrevocable Trust, (iv) 730,825 shares of common stock underlying options held by Dr. Kathiresan that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date and (v) 300,000 shares of common stock underlying options held by Sekar Kathiresan 2022 Annuity Trust, a grantor retained annuity trust of which Mr. Kathiresan is a trustee, that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (9) Consists of (i) 266,509 shares of common stock held by Mr. Ashe and (ii) 239,957 shares of common stock underlying options held by Dr. Bellinger that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (10) Consists of (i) 42,629 shares of common stock held by Dr. Bellinger and (ii) 343,274 shares of common stock underlying options held by Dr. Bellinger that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (11) Consists of (i) 409,626 shares held by The Burt A. Adelman 2021 GRAT, (ii) 18,700 shares held by the Burt A. Adelman 2002 Trust, and (iii) 37,099 shares of common stock underlying options held by Dr. Adelman that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (12) Consists of 10,333 shares of common stock underlying an option held by Mr. Cumbo that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (13) Consists of 35,914 shares of common stock underlying options held by Mr. MacLean that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (14) Consists of 37,099 shares of common stock underlying options held by Ms. Mikhail that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (15) Consists of 8,611 shares of common stock underlying an option held by Mr. Coats that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.
- (16) Consists of (i) 15,500 shares of common stock underlying an option held by Dr. Yeshwant that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date and (ii) the shares held by GV 2017, L.P. and GV 2019, L.P. set forth in footnote (1) above. Dr. Yeshwant does not have voting or dispositive power over any of the shares directly held by GV 2017, L.P. or GV 2019, L.P. referenced in footnote (1) above.
- (17) Consists of (i) 11,753,466 shares of common stock and (ii) 1,904,755 shares of common stock underlying options that are exercisable as of April 20, 2023 or will become exercisable within 60 days after such date.

STOCKHOLDER PROPOSALS

A stockholder who would like to have a proposal considered for inclusion in our 2024 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, 2023. However, if the date of the 2024 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 2024 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 Verve Therapeutics, Inc., 201 Brookline Avenue, Boston, MA 02215, Attention: Investor Relations.

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 second amended and restated 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 notice must meet the requirements set forth in our second amended and restated bylaws (including providing the information required by Rule 14a-19 under the Exchange Act). 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 given or public disclosure of the date of such annual meeting was made, whichever first occurs. For stockholder proposals to be brought before the 2024 annual meeting of stockholders, the required notice must be received by our corporate secretary at our principal executive offices no earlier than February 16, 2024 and no later than March 17, 2024.

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.

By Order of the Board of Directors,

/s/ Sekar Kathiresan, M.D.

Sekar Kathiresan, M.D.

Chief Executive Officer



P.O. BOX 8016, CARY, NC 27512-6903

YOUR VOTE IS IMPORTANT! PLEASE VOTE BY:

	<p>INTERNET</p> <p>Go To: www.proxypush.com/VERV</p> <ul style="list-style-type: none"> • Cast your vote online • Have your Proxy Card ready • Follow the simple instructions to record your vote
	<p>PHONE Call 1-866-853-1541</p> <ul style="list-style-type: none"> • Use any touch-tone telephone • Have your Proxy Card ready • Follow the simple recorded instructions
	<p>MAIL</p> <ul style="list-style-type: none"> • Mark, sign and date your Proxy Card • Fold and return your Proxy Card in the postage-paid envelope provided
	<p>VIRTUALLY AT THE MEETING</p> <p>You must register to attend the meeting online and/or participate at www.proxydocs.com/VERV</p>

Verve Therapeutics, Inc.
Annual Meeting of Stockholders



For Stockholders of record as of April 20, 2023

TIME: Thursday, June 15, 2023 10:00 AM, Eastern Time
PLACE: Annual Meeting to be held live via the Internet
please visit www.proxydocs.com/VERV for more details

This proxy is being solicited on behalf of the Board of Directors

The undersigned hereby appoints Allison Dorval and Andrew Ashe (the "Named Proxies"), and each or either of them, as the true and lawful attorneys of the undersigned, with full power of substitution and revocation, and authorizes them, and each of them, to vote all the shares of capital stock of Verve Therapeutics, Inc. which the undersigned is entitled to vote at said meeting and any adjournment thereof upon the matters specified and upon such other matters as may be properly brought before the meeting or any adjournment thereof, conferring authority upon such true and lawful attorneys to vote in their discretion on such other matters as may properly come before the meeting and revoking any proxy heretofore given.

THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, SHARES WILL BE VOTED IDENTICAL TO THE BOARD OF DIRECTORS RECOMMENDATION. This proxy, when properly executed, will be voted in the manner directed herein. In their discretion, the Named Proxies are authorized to vote upon such other matters that may properly come before the meeting or any adjournment or postponement thereof.

You are encouraged to specify your choice by marking the appropriate box (SEE REVERSE SIDE) but you need not mark any box if you wish to vote in accordance with the Board of Directors' recommendation. The Named Proxies cannot vote your shares unless you sign (on the reverse side) and return this card.

PLEASE BE SURE TO SIGN AND DATE THIS PROXY CARD AND MARK ON THE REVERSE SIDE

Verve Therapeutics, Inc.
Annual Meeting of Stockholders

Please make your marks like this:

THE BOARD OF DIRECTORS RECOMMENDS A VOTE
FOR ON EACH OF THE NOMINEES IN PROPOSAL 1 AND FOR PROPOSAL 2.

PROPOSAL	YOUR VOTE			BOARD OF DIRECTORS RECOMMENDS
1. Election of three Class II directors to our board of directors, each to serve until the 2026 annual meeting of stockholders;	FOR	WITHHOLD		↓
1.01 Alexander Cumbo	<input type="checkbox"/>	<input type="checkbox"/>		FOR
1.02 Michael MacLean	<input type="checkbox"/>	<input type="checkbox"/>		FOR
1.03 Sheila Mikhail, J.D.	<input type="checkbox"/>	<input type="checkbox"/>		FOR
2. Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023.	FOR	AGAINST	ABSTAIN	FOR
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Note: To consider and act upon other such business as may properly come before the meeting or any adjournment thereof.

Authorized Signatures - Must be completed for your instructions to be executed.
Please sign exactly as your name(s) appears on your account. If held in joint tenancy, all persons should sign. Trustees, administrators, etc., should include title and authority. Corporations should provide full name of corporation and title of authorized officer signing the Proxy Card.

