

---

---

**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

**GENERATION BIO CO.**

(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 the appropriate box):

- 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.
- 
- 
-



**PRELIMINARY PROXY STATEMENT – SUBJECT TO COMPLETION, DATED APRIL 10, 2023**

**GENERATION BIO CO.  
301 Binney Street  
Cambridge, MA 02142**

**NOTICE OF 2023 ANNUAL MEETING OF STOCKHOLDERS  
To be held June 8, 2023**

You are cordially invited to attend the 2023 Annual Meeting of Stockholders, or the Annual Meeting, of Generation Bio Co., which is scheduled to be held on Thursday, June 8, 2023 at 9:00 a.m. Eastern time. We have determined that the Annual Meeting will be held in a virtual meeting format only, via the Internet, with no physical in-person meeting. At our virtual Annual Meeting, stockholders will be able to attend, vote and submit questions by visiting [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023). 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 12, 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 four Class III 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;
3. Approval of an amendment to our restated certificate of incorporation to reflect new Delaware law provisions regarding officer exculpation;
4. Approval, on an advisory (non-binding) basis, of the compensation of our named executive officers; and
5. 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 attached proxy statement. The board of directors recommends that you vote in favor of each of proposals one through four as outlined in the attached 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 26, 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 12, 2023, the record date for the Annual Meeting, and we will post our proxy materials on the websites referenced in the Notice. As more fully described in the Notice, stockholders may choose to access our proxy materials on the websites referenced in the Notice or may request to receive a printed set of our proxy materials. The Notice and websites 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.proxyvote.com](http://www.proxyvote.com) (have your Notice or proxy card in hand when you access the website);
- **Vote by Telephone**, by calling the toll-free number 1-800-690-6903 (have your Notice or proxy card in hand when you call);
- **Vote by Mail**, if you 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
- **Vote online during the Annual Meeting**. The Annual Meeting will be a virtual only meeting, which can be accessed at [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023). Stockholders will have the ability to attend the virtual meeting and vote online during the meeting.

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.

Beginning on May 26, 2023, a complete list of stockholders of record will be made available for examination by stockholders of record at our corporate headquarters at 301 Binney Street, Cambridge, MA 02142 and at [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023).

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/ Geoff McDonough, M.D.

Geoff McDonough, M.D.

*President and Chief Executive Officer*

Cambridge, MA  
April , 2023

**Generation Bio Co.  
Proxy Statement**

**Table of Contents**

<a href="#">PROXY STATEMENT</a>	6
<a href="#">IMPORTANT INFORMATION ABOUT THE ANNUAL MEETING AND VOTING</a>	7
<a href="#">Purpose of the Annual Meeting</a>	7
<a href="#">Board of Directors Recommendations</a>	7
<a href="#">Availability of Proxy Materials</a>	7
<a href="#">Who Can Vote at the Annual Meeting</a>	7
<a href="#">How to Vote</a>	8
<a href="#">Can I Vote My Shares by Filling Out and Returning the Notice of Internet Availability of Proxy Materials?</a>	8
<a href="#">How Do I Ask Questions at the Annual Meeting?</a>	8
<a href="#">What if I Experience Technical Difficulties during the Annual Meeting?</a>	9
<a href="#">Shares Held in “Street Name” and Broker Non-Votes</a>	9
<a href="#">Quorum</a>	9
<a href="#">Votes Required</a>	9
<a href="#">Method of Counting Votes</a>	10
<a href="#">Revoking a Proxy; Changing Your Vote</a>	10
<a href="#">Costs of Proxy Solicitation</a>	11
<a href="#">Voting Results</a>	11
<a href="#">Householding</a>	11
<a href="#">PROPOSAL NO. 1—ELECTION OF FOUR CLASS III DIRECTORS</a>	12
<a href="#">Nominees for Election as Class III Directors</a>	13
<a href="#">Directors Continuing in Office</a>	14
<a href="#">Class I Directors (Term Expires at 2024 Annual Meeting)</a>	14
<a href="#">Class II Directors (Term Expires at 2025 Annual Meeting)</a>	15
<a href="#">Executive Officers Who Are Not Directors</a>	16
<a href="#">PROPOSAL NO. 2—RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM</a>	17
<a href="#">Audit Committee Pre-Approval Policy and Procedures</a>	17
<a href="#">REPORT OF THE AUDIT COMMITTEE</a>	19
<a href="#">CORPORATE GOVERNANCE</a>	20
<a href="#">Director Nomination Process</a>	20
<a href="#">Director Independence</a>	21
<a href="#">Board Diversity Matrix</a>	22
<a href="#">Board Committees</a>	23
<a href="#">Audit Committee</a>	23
<a href="#">Talent Committee</a>	24
<a href="#">Nominating and Corporate Governance Committee</a>	26
<a href="#">Board and Committee Meetings Attendance</a>	26
<a href="#">Director Attendance at Annual Meeting of Stockholders</a>	26
<a href="#">Code of Business Conduct and Ethics</a>	26
<a href="#">Corporate Governance Guidelines</a>	27
<a href="#">Board Leadership Structure and Board’s Role in Risk Oversight</a>	27
<a href="#">Corporate Social Responsibility (CSR)</a>	28

[Table of Contents](#)

<a href="#">Communication with Our Directors</a>	29
<a href="#">DIRECTOR COMPENSATION</a>	30
<a href="#">Non-Employee Director Compensation Program</a>	30
<a href="#">EXECUTIVE COMPENSATION</a>	32
<a href="#">Compensation Discussion and Analysis</a>	32
<a href="#">Overview</a>	32
<a href="#">Company Background</a>	32
<a href="#">Business Environment and Performance</a>	32
<a href="#">Compensation Philosophy and Process</a>	33
<a href="#">Compensation Elements and Decisions</a>	35
<a href="#">Annual Base Salary</a>	36
<a href="#">Short-term Incentives</a>	36
<a href="#">Long-term Incentives</a>	38
<a href="#">Potential Payments Upon Termination or Change in Control</a>	39
<a href="#">Benefits</a>	39
<a href="#">Anti-Hedging Policy</a>	40
<a href="#">No Tax Gross-Ups</a>	40
<a href="#">Tax and Accounting Considerations</a>	41
<a href="#">Compensation Risk Assessment</a>	41
<a href="#">Talent Committee Report</a>	41
<a href="#">Summary Compensation Table</a>	42
<a href="#">Grants of Plan-Based Awards Table</a>	43
<a href="#">Outstanding Equity Awards at Fiscal Year-End</a>	44
<a href="#">Option Exercises and Stock Vested Table</a>	45
<a href="#">Employment, Severance and Change in Control Arrangements</a>	46
<a href="#">Securities Authorized for Issuance Under Equity Compensation Plans</a>	49
<a href="#">2017 Stock Incentive Plan</a>	49
<a href="#">2020 Stock Incentive Plan</a>	51
<a href="#">2020 Employee Stock Purchase Plan</a>	55
<a href="#">CEO Pay Ratio</a>	57
<a href="#">Pay Vs Performance</a>	58
<a href="#">PROPOSAL NO. 3—AMENDMENT TO OUR RESTATED CERTIFICATE OF INCORPORATION</a>	61
<a href="#">PROPOSAL NO. 4—ADVISORY VOTE ON EXECUTIVE COMPENSATION</a>	63
<a href="#">TRANSACTIONS WITH RELATED PERSONS</a>	64
<a href="#">Registration Right</a>	64
<a href="#">Indemnification agreements</a>	65
<a href="#">Policies and procedures for related person transactions</a>	65
<a href="#">SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</a>	67
<a href="#">STOCKHOLDER PROPOSALS</a>	69
<a href="#">OTHER MATTERS</a>	70



**GENERATION BIO CO.  
301 Binney Street  
Cambridge, MA 02142  
(617) 655-7500**

**PROXY STATEMENT  
FOR THE 2023 ANNUAL MEETING OF STOCKHOLDERS  
to be held June 8, 2023**

This proxy statement and the proxy card contain information about the Annual Meeting of Stockholders of Generation Bio Co., or the Annual Meeting, to be held on Thursday, June 8, 2023 at 9:00 a.m. Eastern time. We have determined that the Annual Meeting will be held in a virtual meeting format only, via the Internet, with no physical in-person meeting. At our virtual Annual Meeting, stockholders will be able to attend, vote and submit questions by visiting [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023). 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 Generation Bio Co. 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 "Generation Bio," "the company", "our," "we" or "us" refers to Generation Bio Co. and its wholly owned subsidiary. References to our website are inactive textual references only and the contents of our website are not incorporated by reference into this proxy statement.

**Important Notice Regarding the Availability of Proxy Materials for  
the Annual Meeting of Stockholders to be Held on June 8, 2023:**

**This proxy statement and our 2022 Annual Report to Stockholders are  
available for viewing, printing and downloading at <http://www.proxyvote.com>.  
You may also access this proxy statement and our 2022 Annual Report to Stockholders on the  
"Investor Center" section on our website, which is located at <http://www.generationbio.com>  
or on the SEC's website at <http://www.sec.gov>.**

**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 Generation Bio Co., 301 Binney Street, Cambridge, MA 02142. The 2022 Annual Report is also available on the SEC's website at <http://www.sec.gov>.**

On or about April 26, 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 to Stockholders, 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 four Class III 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;
3. Approval of an amendment to our restated certificate of incorporation to reflect new Delaware law provisions regarding officer exculpation;
4. Approval, on an advisory (non-binding) basis, of the compensation of our named executive officers; and
5. 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 four items noted above.

### Board of Directors Recommendations

Our board of directors unanimously recommends that you vote:

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

**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;

**FOR** the approval of an amendment to our restated certificate of incorporation to reflect new Delaware law provisions regarding officer exculpation; and

**FOR** the approval, on an advisory (non-binding) basis, of the compensation of our named executive officers.

### Availability of Proxy Materials

The Notice regarding our proxy materials, which include this proxy statement and our 2022 Annual Report to Stockholders, is being mailed to stockholders beginning on or about April 26, 2023. Our proxy materials are also available for viewing, printing and downloading on the Internet at <http://www.proxyvote.com> or on the SEC's website at <http://www.sec.gov>.

### 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 12, 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 \_\_\_\_\_ 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, 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 1-800-690-6903. 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 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.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023). Stockholders 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 voting by proxy will be available up until 11:59 p.m. Eastern time on June 7, 2023 and mailed proxy cards must be received by June 7, 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.

**Can I Vote My Shares by Filling Out and Returning the Notice of Internet Availability of Proxy Materials?**

No. The Notice contains instructions on how to vote via the Internet, by telephone, by requesting and returning a paper proxy card, or by voting online during the Annual Meeting.

**How Do I Ask Questions at the Annual Meeting?**

Stockholders of the company as of the Record Date may submit questions during the Annual Meeting. If you wish to submit a question, you may do so by logging into the virtual meeting platform, typing your question into the “Ask a



Question” field, and clicking “Submit.” Our Annual Meeting will be governed by our Rules of Conduct which will be posted at [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023) in advance of the meeting and which will include rules on permissible topics for stockholder questions and rules for how questions and comments will be recognized.

**What if I Experience Technical Difficulties during the Annual Meeting?**

If you encounter any difficulties accessing the Annual Meeting during the check-in or meeting, please call the technical support number that will be posted on [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023) for assistance.

**Shares Held in “Street Name” and Broker Non-Votes**

If your shares are held in “street name,” your bank, broker or other nominee or custodian may under certain circumstances vote your shares even if you do not return voting instructions. Stock exchange rules permit brokers to vote customers’ shares on certain proposals for which they have received no voting instructions. Stock exchange rules, however, prohibit brokers from voting uninstructed shares in the case of election of directors, executive compensation matters and certain other matters. Of the matters to be voted on at the Annual Meeting, we expect the only proposal on which brokers will have discretionary voting authority is the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for 2023 (Proposal No. 2).

Broker non-votes occur with respect to a matter when your broker submits a proxy for your shares but does not indicate a vote for a particular proposal because the broker either does not have the discretionary authority to vote on that proposal and has not received voting instructions from you.

**Quorum**

A quorum of stockholders is necessary to hold a valid meeting. Our 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 over the Internet, by telephone, by completing and submitting a proxy card by mail or that are represented in person at the Annual Meeting. Shares present virtually during the Annual Meeting will be considered shares 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**

***Proposal 1 – Election of Directors***

To be elected, a director must receive a plurality of the votes cast by stockholders entitled to vote at the meeting. This means that the four nominees receiving the highest number of “FOR” votes will be elected as Class III directors. Shares held in street name by a bank, broker or other nominee or custodian who indicate on their proxies that they do not have authority to vote the shares on Proposal 1 will not be counted as votes FOR or WITHHELD from any director nominee and will be treated as broker non-votes. Broker non-votes will have no effect on the voting on Proposal 1. Votes that are withheld will not be included in the vote tally for the election of directors and will not affect the vote results.

You may:

- vote FOR all nominees;
- vote FOR one or more nominees and WITHHOLD your vote from the other nominees; or
- WITHHOLD your vote from all nominees.

***Proposal 2 – Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023***

To approve Proposal 2, stockholders holding a majority of the votes cast on the matter must vote FOR the proposal. If your shares are held by a bank, broker or other nominee or custodian in “street name” and you do not timely provide voting instructions with respect to your shares, we expect that your bank, broker or other nominee or custodian will have the discretionary authority to vote your shares on Proposal 2. If you ABSTAIN from voting on Proposal 2, your shares will not be voted FOR or AGAINST the proposal and will not be counted as votes cast or shares voting on Proposal 2. As a result, voting to ABSTAIN will have no effect on the voting on Proposal 2.

***Proposal 3 - Approval of an amendment to our restated certificate of incorporation to reflect new Delaware law provisions regarding officer exculpation***

To approve Proposal 3, stockholders holding a majority of the outstanding shares of our common stock entitled to vote thereon must vote FOR the proposal. Shares held in street name by a bank, broker or other nominee or custodian who indicate on their proxies that they do not have authority to vote the shares on Proposal 3 will not be counted as votes FOR or AGAINST Proposal 3 and will be treated as broker non-votes. If you vote to ABSTAIN on Proposal 3, your shares will not be voted FOR or AGAINST the proposal and will not be counted as votes cast or shares voting on Proposal 3. Because Proposal 3 requires the affirmative vote of the holders of a majority of the outstanding shares of our common stock entitled to vote thereon, broker non-votes and voting to ABSTAIN will have the same effect as a vote AGAINST Proposal 3.

***Proposal 4 - Approval, on an advisory (non-binding) basis, of the compensation of our named executive officers***

To approve Proposal 4, stockholders holding a majority of the votes cast on the matter must vote FOR the proposal. Shares held in street name by a bank, broker or other nominee or custodian who indicate on their proxies that they do not have authority to vote the shares on Proposal 4 will not be counted as votes FOR or AGAINST Proposal 4 and will be treated as broker non-votes. If you vote to ABSTAIN on Proposal 4, your shares will not be voted FOR or AGAINST the proposal and will also not be counted as votes cast or shares voting on Proposal 4. As a result, broker non-votes and voting to ABSTAIN will have no effect on the voting on Proposal 4.

**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 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. We will promptly deliver a separate copy of any such document to you upon written or oral request prior to May 25, 2023 to Broadridge Financial Solutions, Inc. at (1) [www.proxyvote.com](http://www.proxyvote.com), (2) 1-800-579-1639 or (3) [sendmaterial@proxyvote.com](mailto:sendmaterial@proxyvote.com). 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 FOUR CLASS III DIRECTORS**

Our board of directors currently consists of ten members. In accordance with the terms of our restated certificate of incorporation and our 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 III directors are Dannielle Appelhans; Gustav Christensen, Charles Rowland, and Catherine Stehman-Breen, M.D., and their term expires at the Annual Meeting ;
- the Class I directors are Jeffrey Jonas, M.D., Geoff McDonough, M.D., and Donald Nicholson, Ph.D., and their term expires at the annual meeting of stockholders to be held in 2024; and
- the Class II directors are Ron Cooper, Anthony Quinn, M.B. Ch.B., Ph.D., and Jason Rhodes, 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 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 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 has nominated Dannielle Appelhans; Gustav Christensen, Charles Rowland, and Catherine Stehman-Breen for election as Class III 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.

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 III Directors

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

	Age
<p><b>Dannielle Appelhans</b> has served as a member of our board of directors since July 2022. Ms. Appelhans served as the chief executive officer of Rubius Therapeutics, Inc., a clinical-stage biopharmaceutical company, from November 2022 until its dissolution in March 2023 and previously as its chief operating officer from August 2021 to October 2022. Prior to that, Ms. Appelhans served as the senior vice president technical operations and chief technical officer of gene therapies at Novartis Pharmaceuticals Corporation, a pharmaceutical company, from January 2020 to August 2021, senior vice president, global head of supply chain management from June 2018 to January 2020, vice president, global head strategy and operational excellence from October 2017 to June 2018, and global head operations management and executive director from July 2016 to September 2017. Ms. Appelhans earned her B.S. in mechanical engineering from the University of Michigan, her M.Sc. in mechanical engineering from Massachusetts Institute of Technology's School of Engineering and her M.B.A. from Massachusetts Institute of Technology's Sloan School of Management. We believe that Ms. Appelhans is qualified to serve on our board of directors due to her extensive business experience in the life sciences industry, in corporate strategy and in pharmaceutical operations.</p>	40
<p><b>Gustav Christensen</b> has served as a member of our board of directors since December 2017. Mr. Christensen has served as the chairman of the board of directors of Morphic Holding, Inc., a biopharmaceutical company, since April 2016. Previously, Mr. Christensen served as the president and chief executive officer and director at Dyax Corp., a biopharmaceutical company, from April 2007 to February 2016. Mr. Christensen earned his M.Sc. in Economics from the University of Aarhus (Denmark) and his M.B.A. from Harvard Business School. We believe that Mr. Christensen is qualified to serve on our board of directors due to his extensive leadership and business experience in the life sciences industry and in the commercialization of pharmaceutical products.</p>	75
<p><b>Charles Rowland</b> has served as a member of our board of directors since July 2018. Mr. Rowland served as chief executive officer and director of Aurinia Pharmaceuticals Inc., a biopharmaceutical company, from January 2014 to February 2017. Mr. Rowland has served as a member of the boards of directors of Orchard Therapeutics plc, a gene therapy company, since June 2018, Viking Therapeutics, Inc., a clinical-stage biopharmaceutical company, since July 2016, and Nabriva Therapeutics plc, a commercial-stage biopharmaceutical company, since January 2015. Mr. Rowland previously served on the board of directors of Blueprint Medicines Corporation, a global precision therapy company, from March 2015 until April 2022. Mr. Rowland earned his B.S. from Saint Joseph's University and his M.B.A. from Rutgers University. We believe that Mr. Rowland is qualified to serve on our board of directors due to his extensive experience in pharmaceutical operations and in finance and accounting.</p>	64
<p><b>Catherine Stehman-Breen, M.D.</b> has served as a member of our board of directors since December 2017. Dr. Stehman-Breen has served as the chief executive officer and a member of the board of directors of Chroma Medicine, Inc., a biotechnology company, since December 2020. Previously, Dr. Stehman-Breen served as the chief development officer of Obsidian Therapeutics, Inc., a biotechnology company, from July 2019 to December 2020, and as an entrepreneur-in-residence at Atlas Ventures, serving as chief medical officer of both Dyne Therapeutics, Inc., a biotechnology company, from March 2018 to July 2019 and Disarm Therapeutics, Inc., a biotechnology company, from April 2018 to July 2019. Dr. Stehman-Breen also served as chief medical officer of Sarepta Therapeutics, Inc., a biopharmaceutical company, from April 2017 to December 2017. Prior to that, Dr. Stehman-Breen served as vice president, clinical development and regulatory affairs at Regeneron Pharmaceuticals, Inc., a biotechnology company, initially as head, pain therapeutic area, and subsequently as head, clinical project management and operations from January 2015 to March 2017. She has also served on the boards of directors of Dyne Therapeutics, Inc. since June 2019 and Tenaya Therapeutics, Inc., a biotechnology company, since June 2020. Dr. Stehman-Breen earned her B.A. in biology and psychology from Colby College, her M.Sc. degree in epidemiology from the University of Washington, where she also conducted her residency and fellowship training, and her M.D. from the University of Chicago. We believe Dr. Stehman-Breen is qualified to serve on our board of directors based on her extensive leadership experience and her experience with clinical development and regulatory matters, and in the life science industry.</p>	60

**The board of directors recommends voting “FOR” the election of Dannielle Appelhans, Gustav Christensen, Charles Rowland, and Catherine Stehman-Breen, M.D. as Class III 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.

#### **Directors Continuing in Office**

Biographical information, 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 I Directors (Term Expires at 2024 Annual Meeting)***

	<u>Age</u>
<p><b><i>Jeffrey Jonas, M.D.</i></b> has served as a member of our board of directors since May 2018. Dr. Jonas is currently the chief executive officer of ABio-X, a Boston-based biotechnology incubator, and has been a member of the board of directors of Sage Therapeutics, Inc., or Sage, a biopharmaceutical company, since August 2013. Previously, Dr. Jonas served as the chief innovation officer of Sage from December 2020 to July 2021 and as the chief executive officer and president of Sage from August 2013 to December 2020. Dr. Jonas has served on the board of directors of Karuna Pharmaceuticals, Inc., a biopharmaceutical company, since October 2018, and as non-executive chair of the board of directors at Noema Pharma AG, a private biotechnology company, since October 2021. Dr. Jonas earned his B.A. from Amherst College and M.D. from Harvard Medical School. He completed a residency in psychiatry at Harvard Medical School, and he served as chief resident in psychopharmacology at McLean Hospital, Harvard Medical School. We believe Dr. Jonas is qualified to serve on our board of directors based on his extensive leadership experience and his experience with clinical development and regulatory matters, and in the life science industry.</p>	70
<p><b><i>Geoff McDonough, M.D.</i></b> has served as our president and chief executive officer and as a member of our board of directors since October 2017. Previously, Dr. McDonough served as president and chief executive officer of Swedish Orphan Biovitrum AB, or Sobi, a biopharmaceutical company, from August 2011 until May 2017. Dr. McDonough previously served on the boards of directors of Surface Oncology, Inc., a biotechnology company, from May 2019 until February 2022, Zafgen, Inc., a biopharmaceutical company, from January 2018 until May 2020 and PTC Therapeutics, Inc., a biopharmaceutical company, from September 2012 until September 2017. Dr. McDonough earned his Bachelor of Science in biology and his Bachelor of Arts in philosophy, both summa cum laude, from University of North Carolina at Chapel Hill. Dr. McDonough earned his M.D. at Harvard Medical School and completed his residency training in internal medicine and pediatrics at Massachusetts General Hospital and Boston Children’s Hospital. We believe that Dr. McDonough’s extensive leadership experience in the life sciences industry and his extensive knowledge of our company based on his role as our president and chief executive officer qualify him to serve as a member of our board of directors.</p>	52
<p><b><i>Donald Nicholson, Ph.D.</i></b> has served as a member of our board of directors since December 2017. He has been a member of the board of directors of Disc Medicine, Inc. (f/k/a Gemini Therapeutics, Inc.), a clinical-stage biopharmaceutical company, since April 2019 and previously served as a member of the board of directors of Kymera Therapeutics, Inc., a biopharmaceutical company, from November 2017 to November 2022. Dr. Nicholson has also served as a member of the boards of several private companies, including Jnana Therapeutics Inc., a clinical-stage biopharmaceutical company, since February 2019, NodThera Inc., a clinical-stage biotechnology company, since April 2019, Muna Therapeutics, a biopharmaceutical company, since September 2021, and Matchpoint Therapeutics, Inc., a biopharmaceutical company, since November 2022. Dr. Nicholson served as chief executive officer of Nimbus Therapeutics, Inc., a biotechnology company, from August 2014 to October 2018. Prior to that, Dr. Nicholson spent 25 years at Merck &amp; Co., Inc., a pharmaceutical company, in various leadership, strategic and operational roles. Dr. Nicholson earned his B.S. with honors in biochemistry and his doctorate in biochemistry from the University of Western Ontario and trained as a Medical Research Council postdoctoral fellow at the University of Munich in Germany. We believe Dr. Nicholson’s extensive experience in both scientific and management roles in the life sciences industry qualifies him to serve on our board of directors.</p>	65

***Class II Directors (Term Expires at 2025 Annual Meeting)***

	<u>Age</u>
<p><b>Ron Cooper</b> joined our board of directors in March 2021. He served as the president and chief executive officer of Albireo Pharma, Inc., a clinical-stage pharmaceutical company, from July 2015 and a member of its board of directors from November 2016, both until its acquisition by Ipsen Biopharmaceuticals, Inc. in March 2023. Mr. Cooper also served on the board of directors of Genoece Biosciences, Inc., a biopharmaceutical company, from June 2016 to April 2021. Mr. Cooper earned his bachelor's degree in chemistry and business administration from St. Francis Xavier University in Canada. We believe Mr. Cooper is qualified to serve on our board of directors based on his over 25 years of leadership positions in biopharmaceutical companies in several countries and his extensive experience in regulatory and business management in the life sciences industry.</p>	60
<p><b>Anthony Quinn, M.B. Ch.B., Ph.D.</b> has served as a member of our board of directors since December 2017. He has served as an honorary professor of molecular and clinical medicine at the University of Dundee in the United Kingdom since December 2022. Previously, Dr. Quinn served as president and chief executive officer and as a director of Aeglea BioTherapeutics, Inc., a biotechnology company from July 2017 to December 2022. Prior to that, from October 2015 to July 2017 he worked as a private consultant for IDBioPharm Consulting LLC, a consulting firm. From August 2009 to June 2015, Dr. Quinn served as head of research and development and chief medical officer at Synageva BioPharma Corp., a biotechnology company from August 2009 until its acquisition by Alexion Pharmaceuticals, Inc., a pharmaceutical company, in June 2015. Prior to that, Dr. Quinn was vice president and global head of research and exploratory development for inflammation at F. Hoffmann-La Roche AG. Dr. Quinn previously served on the board of directors of Kaleido BioSciences, Inc., a clinical-stage healthcare company, from February 2016 to June 2022. Dr. Quinn received his Bachelor of Medical Sciences in general pathology, his M.B. Ch.B. (M.D.) from the University of Dundee, UK, and his Ph.D. in cancer research from the University of Newcastle in Tyne, UK. We believe Dr. Quinn is qualified to serve on our board of directors based on his extensive leadership experience in the life sciences industry and his expertise in clinical medicine and drug development, which includes the development of therapeutics for rare diseases.</p>	61
<p><b>Jason Rhodes</b> has served as the chairman of our board of directors since October 2017 and served as our founding chief executive officer from October 2016 to October 2017. Mr. Rhodes has been a partner at Atlas Venture, a venture capital firm, since 2014. Mr. Rhodes has been a member and chairman of the board of directors of Dyne Therapeutics, Inc., a biotechnology company, since December 2017 and November 2018, respectively, and previously served as a member of the boards of directors of Replimune Group, Inc., a biotechnology company, from September 2015 until May 2022 and of Gemini Therapeutics, Inc., a clinical-stage precision medicine company, from April 2016 until its acquisition by Disc Medicine, Inc. in December 2022 and Bicycle Therapeutics plc from January 2015 until May 2019. Mr. Rhodes also serves on the boards of several private companies, including Rectify Pharmaceuticals, Inc., a biotechnology company, Be Biopharma, Inc., a biopharmaceutical company, K36 Therapeutics, Inc., a biotechnology company, and Accent Therapeutics, Inc., a biotechnology company, where he is also chair, and previously served on the board of directors of Third Harmonic Bio, Inc., a clinical stage biopharmaceutical company. Mr. Rhodes earned a B.A. from Yale University and an M.B.A. from the Wharton School of the University of Pennsylvania. We believe Mr. Rhodes is qualified to serve on our board of directors based on his extensive knowledge of our company based on his role as the founding chief executive officer, as well as his extensive leadership experience, his biotechnology company board experience and his experience investing in life science companies.</p>	53

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 or executive officers 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.

	<u>Age</u>
<p><b>Yalonda Howze, J.D.</b> has served as our chief legal officer and corporate secretary since April 2023. Previously, Ms. Howze served as executive vice president, chief legal officer and compliance officer at Codiak Biosciences, Inc., a biotechnology company that filed for protection under Chapter 11 of the U.S. Bankruptcy Code in March 2023, from July 2020 to until April 2023. From November 2007 to July 2020, Ms. Howze served as a partner at Mintz Levin PC, where she managed transactional and litigation matters. Ms. Howze received a B.A. in French from the University of Michigan, an M. Div. from the Harvard University School of Divinity and a J.D. from the University of Virginia School of Law.</p>	51
<p><b>Douglas Kerr, M.D., Ph.D., M.B.A.</b> has served as our chief medical officer since November 2020. Previously, Dr. Kerr served as our chief development officer from May 2019 to November 2020 and as our chief scientific officer and executive vice president of research and development from August 2017 to May 2019. Dr. Kerr has served as a member of the board of directors of Triplet Therapeutics Inc., a biotechnology company, since July 2019 and of Faze Medicines, Inc., a biotechnology company, since May 2021. Prior to joining us, Dr. Kerr served as global development team lead and vice president for neurology at Shire plc, a biopharmaceutical company, from October 2015 to August 2017. Dr. Kerr earned his B.A. degree in biochemistry from Princeton University, his M.B.A. with a specialization in entrepreneurship and finance from Northeastern University and an M.D. from Jefferson Medical College, as well as a doctorate in biochemistry and molecular biology.</p>	56
<p><b>Matthew Norkunas, M.D., M.B.A.</b> has served as our chief financial officer since July 2020. Previously, Dr. Norkunas served as the chief financial officer at SomaLogic, Inc., a biotechnology company, from February 2016 to June 2020. From July 2012 to January 2016, Dr. Norkunas served as a senior equity analyst at Marsico Capital Management, where he served as the firm's primary health care investment specialist. Dr. Norkunas began his career as a practicing anesthesiologist. He received his B.A. from St. Mary's College of Maryland, his M.D. from University of Maryland School of Medicine, and his M.B.A. from Columbia Business School.</p>	45
<p><b>Antionette Paone, M.S., M.B.A.</b> has served as our chief operating officer since February 2020. Previously, Ms. Paone served as our senior vice president, regulatory and quality from February 2020 to February 2022 and our vice president, regulatory affairs from October 2018 to February 2020. Prior to joining us, Ms. Paone served at Vertex Pharmaceuticals, Inc., a biopharmaceutical company, as its vice president of global regulatory affairs from October 2013 to September 2017 and its head of regulatory affairs CMC from October 2011 to September 2013. Ms. Paone received her B.S. degree in chemistry at Fordham University, her M.S. degree in organic chemistry at Yale University and her M.B.A. from Bentley College.</p>	45
<p><b>Phillip Samayoa, Ph.D.</b> has served as our chief strategy officer since September 2022. Previously, Dr. Samayoa served as our senior vice president, head of corporate development, from April 2021 to September 2022, our vice president, strategy and portfolio development from December 2018 to April 2021 and our senior director, strategy and portfolio development from December 2017 to December 2018. Prior to joining us, Dr. Samayoa served as a principal at Atlas Ventures. Dr. Samayoa received dual B.S. degrees in biological engineering and physics from the Massachusetts Institute of Technology and his Ph.D. in bioinformatics and systems biology from the University of California, San Diego.</p>	36
<p><b>Matthew Stanton, Ph.D.</b> has served as our chief scientific officer since May 2019. Previously, Dr. Stanton served as our chief technology officer from October 2017 to May 2019. Prior to joining us, Dr. Stanton served as vice president, head of chemistry and platform immunology at Moderna, Inc., a biotechnology company, from April 2014 until September 2017. Dr. Stanton earned his B.S. degree in chemistry from Virginia Tech, his M.S. degree in chemistry and his doctorate in chemistry with a focus on physical organic chemistry and natural product synthesis from the University of North Carolina at Chapel Hill.</p>	50
<p><b>Tracy Zimmermann, Ph.D.</b> has served as our chief development officer since November 2020. Previously, Dr. Zimmermann served as our vice president, preclinical research and translational biology, from October 2018 to November 2020. From January 2012 until September 2018, Dr. Zimmermann was a research director at Alnylam Pharmaceuticals, Inc., a biopharmaceutical company. Dr. Zimmermann earned her B.S. degree in biochemistry from Lehigh University and her Ph.D. in biochemistry from the University of Colorado at Boulder.</p>	53



## 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.

	<u>2022</u>	<u>2021</u>
Audit fees (1)	\$ 731,897	\$ 876,772
Tax fees (2)	80,000	—
All other fees (3)	550	550
Total fees	<u>\$ 812,447</u>	<u>\$ 877,322</u>

- (1) Audit fees consist of fees for the audit of our annual financial statements, the review of interim financial statements included in our quarterly reports on Form 10-Q, and other professional services provided in connection with any registration statements filed with the SEC. Included in the 2022 and 2021 audit fees are fees billed in connection with our “at-the-market” offerings.
- (2) Tax fees consist of fees for procedures completed in connection with an ownership change study.
- (3) Consist of fees in connection with access to the Ernst & Young LLP online accounting research and disclosures database.

The aggregate fees included in audit fees, tax fees and all other fees are those fees billed for the 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 our 2022 and 2021 fiscal years, 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 Generation Bio Co.

Charles Rowland, Chairman  
Gustav Christensen  
Anthony Quinn, M.B. Ch.B., Ph.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 our management team, the 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. More information regarding the diversity of our current board of directors can be found in the "Board Diversity Matrix" section of this proxy statement.

The nominating and corporate governance committee has used, and may use, a third-party search firm in 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 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.

### **Director Independence**

Rule 5605 of the Nasdaq Listing Rules requires a majority of a listed company’s board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq Listing Rules require that, subject to specified exceptions, each member of a listed company’s audit, compensation and nominating and corporate governance committees be independent under the Securities Exchange Act of 1934, as amended, or the Exchange Act. Audit committee members must also satisfy 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 Rule 5605(a)(2), a director will only qualify as an “independent director” if, in the opinion of our 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: the source of compensation of the director, including any consulting, advisory or other compensatory fee paid by such company to the director; and whether the director is affiliated with the company or any of its subsidiaries or affiliates. In March 2023, our board of directors undertook a review of 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. McDonough, is an “independent director” as defined under Nasdaq Listing Rules. Dr. McDonough is not an independent director under these rules because he is our president and chief executive officer. 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 our board of directors deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

**Board Diversity Matrix**

Our board of directors has voluntarily provided the self-identified information below.

<b>Board Diversity Matrix (As of April , 2023)</b>				
<b>Total Number of Directors</b>	9			
	<b>Female</b>	<b>Male</b>	<b>Non-Binary</b>	<b>Did Not Disclose Gender</b>
<b>Part I: Gender Identity</b>				
<b>Directors</b>	2	7	—	1
<b>Part II: Demographic Background</b>				
<b>Asian</b>	—	1	—	—
<b>Hispanic or Latinx</b>	1	—	—	—
<b>White</b>	2	6	—	—
<b>Two or More Races or Ethnicities</b>	1	—	—	—
<b>Did Not Disclose Demographic Background</b>	1			

**Board Committees**

Our board of directors has established an audit committee, a talent committee, and a nominating and corporate governance committee. The talent committee serves as the compensation committee of our board. Each of the audit committee, talent committee, and nominating and corporate governance committee operates under a charter, and each such committee reviews its respective charter at least annually. A current copy of the charter for each of the audit committee, talent committee, and the nominating and corporate governance committee is posted under the heading of “Governance” in the “Investor Center” section on our website, which is located at <http://www.generationbio.com>.

The following table provides membership information for the current composition of our audit committee, talent committee and nominating and corporate governance committee:

<b>Name</b>	<b>Audit Committee</b>	<b>Talent Committee</b>	<b>Nominating and Corporate Governance Committee</b>
<b>Danielle Appelhans</b>			X
<b>Gustav Christensen</b>	X		
<b>Ron Cooper</b>			X (Chair)
<b>Jeff Jonas, M.D.</b>			X
<b>Donald Nicholson, Ph.D.</b>		X	
<b>Anthony Quinn, M.B. Ch.B., Ph.D.</b>	X		
<b>Jason Rhodes</b>		X (Chair)	*
<b>Charles Rowland</b>	X (Chair)		
<b>Catherine Stehman-Breen, M.D.</b>		X	
<i>Number of meetings held in 2022</i>	6	5	3

\* Jason Rhodes served as chair of our nominating and corporate governance committee until July 2022.

***Audit Committee***

The members of our audit committee are Charles Rowland, Gustav Christensen and Anthony Quinn, and Charles Rowland is the chair of the audit committee. Our board of directors has determined that each of Mr. Rowland, Mr. Christensen and Dr. Quinn is independent within the meaning of Rule 10A-3 under the Exchange Act. Our board of directors has determined that Mr. Rowland is an “audit committee financial expert” as defined in applicable SEC rules. Our board of directors believes that the composition of our audit committee meets the requirements for independence under current Nasdaq and SEC rules and regulations. 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. The audit committee met six times during the year ended December 31, 2022, including telephonic meetings. Our audit committee's responsibilities include:

- appointing, approving the compensation of, assessing the independence of and evaluating the performance of our registered public accounting firm;
- overseeing the work of our independent registered public accounting firm, including reviewing the scope of any prospective audits and 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;
- monitoring our procedures and controls over information technology, including privacy and cybersecurity;
- overseeing our internal audit function;
- overseeing our risk assessment and risk management policies;
- evaluating our financial management personnel;
- reviewing, at least annually, the capabilities and organization of our finance and information technology functions;
- 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 services to be provided to us and all non-audit services, other than *de minimis* non-audit services, to be provided to us by our registered public accounting firm must be approved in advance by our audit committee.

#### ***Talent Committee***

The members of our talent committee are Jason Rhodes, Donald Nicholson and Catherine Stehman-Breen, and Jason Rhodes is the chair of the talent committee. Our board of directors has determined that each of Mr. Rhodes, Dr. Nicholson and Dr. Stehman-Breen is independent within the meaning of Rule 10C-1 under the Exchange Act. Our talent committee assists our board of directors in the discharge of its responsibilities relating to the talent and compensation practices of the company, including compensation of our executive officers. The talent committee met five times during the year ended December 31, 2022, including telephonic meetings. Our talent committee's responsibilities include:

- reviewing and providing recommendations regarding our talent strategy to enable exceptional leadership, rich talent throughout the organization and a highly ethical learning culture;
- 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 an evaluation of our senior executives;
- 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 making recommendations to our board of directors with respect to management succession planning;
- reviewing and discussing annually with management our “Compensation Discussion and Analysis” disclosure if and to the extent then required by SEC rules; and
- preparing the compensation committee report if and to the extent then required by SEC rules.

The talent committee meets regularly in executive session. However, from time to time, various members of management and other employees, as well as outside advisors or consultants, may be invited by the talent committee to make presentations, to provide financial or other background information or advice, or to otherwise participate in talent committee meetings. No officer may participate in, or be present during, any deliberations or determinations of the talent committee regarding the compensation for such officer or any immediate family member of such officer. The charter of the talent committee grants the talent committee full access to all of our books, records, facilities, and personnel, as well as authority to obtain, at our expense, advice and assistance from internal and external legal, accounting, or other advisors and consultants, and other external resources that the talent committee considers necessary or appropriate in the performance of its duties. In particular, the talent committee may, in its sole discretion, retain compensation consultants to assist in its evaluation of executive and director compensation, including the authority to approve the consultant’s reasonable fees and other retention terms.

Aon’s Human Capital Solutions practice, a division of Aon plc (formerly known as Radford), acted as our talent committee’s compensation consultant until April 2022. With the advice of Aon, our talent committee completed its compensation benchmarking and review for the beginning of 2022. In April 2022, the talent committee engaged Compensia, Inc. as its compensation consultant for the remainder of 2022. Our talent committee evaluated Aon and Compensia’s relationships with the company, the members of our board of directors and our executive officers consistent with Nasdaq listing standards and based on the committee’s evaluation, the talent committee has determined that no conflicts of interest existed or exist between the company and either of Aon and Compensia.

Our talent committee reviews all compensation components including base salary, annual cash incentives, long-term incentive awards and other perquisites, as well as severance arrangements, change-in-control benefits and other forms of executive officer compensation. In addition, the talent committee considers matters related to individual compensation, such as compensation for new executive hires, as well as high-level strategic issues, such as the efficacy of our compensation strategy, potential modifications to that strategy, and new trends, plans, or approaches to compensation, at various meetings throughout the year. The talent committee also makes recommendations to our board of directors regarding the compensation of non-employee directors and has the authority to administer our equity-based plans.

Under its charter, the talent committee may form, and delegate authority to, subcommittees, consisting of independent directors, as it deems appropriate. As permitted by our 2020 Stock Incentive Plan, or the 2020 Plan, the talent committee has delegated to our Chief Executive Officer and our Chief Financial Officer the authority to approve grants of equity awards to new hire employees who are not members of the company’s leadership team and in connection with promotions or recognition grants for existing employees who are not members of the company’s leadership team, subject to certain limitations for each level of employment and an annual aggregate maximum amount of awards that can be granted pursuant to such delegated authority.

#### *Talent Committee Interlocks and Insider Participation*

During 2022, the members of our talent committee were Jason Rhodes, Donald Nicholson and Catherine Stehman-Breen and none of them was an officer or employee of our company. None of our executive officers has served as a director or member of the talent committee (or other committee serving an equivalent function) of any other entity whose executive officers served as one of our directors or a member of the compensation committee. Except as set forth under “Transactions with Related Persons”, none of the members of the talent committee (or his or her immediate family members) has a direct or indirect material interest in a transaction with the company involving more than \$120,000.

#### *Nominating and Corporate Governance Committee*

The members of our nominating and corporate governance committee are Ron Cooper, Dannielle Appelhans and Jeffrey Jonas, and Ron Cooper is the chair of the nominating and corporate governance committee. Jason Rhodes served as the chair of the nominating and corporate governance committee until July 2022, at which time Mr. Cooper became chair of, and Ms. Appelhans joined, 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;
- developing and recommending to our board of directors corporate governance principles; and
- overseeing a periodic evaluation of our board of directors.

#### **Board and Committee Meetings Attendance**

The full board of directors met four times during the year ended December 31, 2022, including telephonic meetings. During 2022, each member of the board of directors attended in person or participated in 75% or more of the aggregate of (i) the total number of meetings of the board of directors (held during the period for which such person has been a director) and (ii) the total number of meetings held by all committees of the board of directors on which such person served (during the periods that such person served).

#### **Director Attendance at Annual Meeting of Stockholders**

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. All members of our board of directors attended the 2022 annual meeting of stockholders.

#### **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. A copy of the code is posted under the heading “Governance” on the Investor Center section of our website, which is located at <http://www.generationbio.com>. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

### **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 annual 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 “Governance” on the Investor Center section of our website, which is located at <http://www.generationbio.com>.

### **Board Leadership Structure and Board’s Role in Risk Oversight**

Our corporate governance guidelines provide that the roles of chairman 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 chairman of the board of directors and chief executive officer should be separate. Separating the chairman and the chief executive officer positions allows our chief executive officer, Dr. McDonough, to focus on running the business, while allowing our chairman of the board of directors, Mr. Rhodes, to lead our board in its fundamental role of providing advice to and oversight of management. As our board of directors has determined that each of our directors other than Dr. McDonough 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 the committee’s considerations and actions, as well as through regular reports directly from officers responsible for oversight of particular risks within our company. Generally, every quarter, management reviews and updates detailed assessments of our enterprise risks, as well as the steps being taken or proposed to be taken in order to mitigate such risks, and such information is presented to our board of directors annually or more frequently if warranted. 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 reporting, accounting controls, internal audit functions, our independent accounting firm, related-party transactions, whistleblower reporting and information technology controls and legal and compliance risks, as well as cybersecurity risks. Our talent committee oversees risk management activities relating to our compensation policies and practices, executive performance, non-employee director compensation and management succession planning. Our nominating and corporate governance committee oversees risk management activities relating to board composition and effectiveness, and corporate governance policies and practices. 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.

### **Corporate Social Responsibility (CSR)**

We believe that we have a corporate social responsibility to foster a diverse, equitable, inclusive and just workplace environment and to have a positive impact on our employees and the communities in which we work and live. We believe our success largely depends on our ability to attract, motivate, engage, and retain highly skilled employees. We believe programs that cultivate our diverse, equitable, inclusive and just culture encourage leadership growth and development, and foster robust relationships among employees and management, which, combined with providing competitive compensation and benefits, may create a workplace that results in more creative thinking, more rapid discovery and better decision making.

#### *Justice, Equity and Belonging*

We have created a framework that embodies our holistic commitment to justice, equity and belonging to empower everyone at our company to practice and embed this commitment. As we continue to grow as an organization, we remain dedicated to cultivating a culture that respects the worth, dignity, and equality of every individual in our organization. We strive to ensure that our policies, processes, and programs are impartial, fair, and support equality for every individual at our company. We believe belonging requires diversity and inclusion, as well as actively enabling everyone to be visible, heard and engaged in our community.

We believe that a core strength of our company is the diverse mosaic of employees who bring their mix of backgrounds, skillsets, experiences, and ideas together in an open and supportive atmosphere, which fosters collaboration. We are committed to having a diverse slate of potential employees and we seek to increase representation from historically marginalized communities, particularly in leadership roles. As of March 31, 2023, approximately 61.5% of our leadership team is female and across our workforce, our employee population consists of 46.1% women, 53.2% men, and 0.7% undeclared. Additionally, we celebrate and educate about our diversity through virtual and in-person employee events, awareness campaigns and other programs. We also promote opportunities for all employees to join our acting for justice and women's forums, which support and promote certain mutual objectives of both our company and our employees, including inclusion and diversity.

#### *Growth and Development*

We believe it is important to invest in our employees' personal and career growth. Our leadership model provides a framework for employees and managers to reflect upon and support developing their capabilities and competencies. As part of our people practices, employees and their managers hold quarterly dialogues and development conversations to define development goals and corresponding action plans. We aim to provide employees with access to a wide range of development opportunities. For example, managers participate in a comprehensive, longitudinal, cohort learning experience to further build their capabilities and effectiveness as managers. We also offer internal leadership development sessions as well as provide our employees with reimbursement for external training programs that are related to their current work or career development. Our goal is to ensure that our employees have the skills necessary to meet their current responsibilities optimally, as well as develop new skills that they may need in the future.

### *Compensation and Benefits*

We offer a comprehensive compensation and benefits package, which includes a competitive salary, medical, dental, and vision insurance, medical and dependent flexible spending accounts, life and disability insurance, and a 401(k) match. In addition, employees receive equity in the company upon the start of their employment and on an annual basis, and can also participate in our employee stock purchase plan. To ensure that our employees are paid competitively and at a rate consistent with an employee's position, knowledge and skills, we perform a formal compensation benchmark analysis of our employees' base salary, annual cash incentive potential, and long-term incentive awards twice per year and link annual cash incentives to overall company performance. Additionally, we perform a gender pay gap analysis designed to ensure that women are paid equally to their male counterparts.

We also have a tuition reimbursement program, offer tutor assistance, and provide programs that focus on our employee's engagement and well-being, including access to our employee assistance program and company-sponsored, employee-led clubs and teams.

### *Our Community*

We take our responsibility as a member of our local community seriously. Our outreach team guides our strategy and approach for community engagement and partnering with various non-profit organizations. For example, we are involved with several non-profit organizations, such as Project Onramp, Biomedical Science Careers, and Life Science Cares, that seek to increase the representation of underrepresented minority and disadvantaged individuals in the scientific and medical community. Our involvement includes providing company donations, providing internship and mentorship opportunities, and encouraging our employees to volunteer at various events and activities. We also participate in Northeastern University's cooperative education program to provide full-time work to students so they may gain valuable industry skills and broaden their perspectives.

### **Communication with Our Directors**

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

c/o Generation Bio Co.  
301 Binney Street  
Cambridge, MA 02142  
United States

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 are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the chairman of the board (if one is appointed and is an independent director), the lead director (if one is appointed) or otherwise the chairman 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.

## 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)	Total (\$)
Dannielle Appelhans (2)	20,326	211,638	231,964
Gustav Christensen	47,500	91,150	138,650
Ron Cooper (3)	45,848	91,150	136,998
Jeffrey Jonas, M.D.	44,000	91,150	135,150
Donald Nicholson, Ph.D.	47,500	91,150	138,650
Anthony Quinn, M.B. Ch.B., Ph.D.	47,500	91,150	138,650
Jason Rhodes (4)	89,304	91,150	180,454
Charles Rowland	55,000	91,150	146,150
Catherine Stehman-Breen, M.D.	47,500	91,150	138,650

- (1) Amounts shown reflect the aggregate grant date fair value of stock options awarded in the applicable fiscal year, calculated in accordance with the provisions of the Financial Accounting Standard Board Accounting Standards Codification Topic 718. For information regarding assumptions underlying the value of equity awards, see Note 9 to our audited consolidated financial statements to our financial statements included 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 non-employee director upon vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options. As of December 31, 2022, the aggregate number of shares of our common stock subject to outstanding option awards for each non-employee director was as follows: Ms. Appelhans, 38,400 shares; Mr. Christensen, 86,200 shares; Mr. Cooper 49,200 shares; Dr. Jonas, 128,661 shares; Dr. Nicholson, 86,200 shares; Dr. Quinn, 86,200 shares; Mr. Rhodes, 86,200 shares; Mr. Rowland 128,661 shares; and Dr. Stehman-Breen, 86,200 shares.
- (2) Ms. Appelhans was appointed as a member of our board of directors and joined the nominating and corporate governance committee on July 15, 2022. Her fees were prorated for the number of days she served on our board and the nominating and corporate governance committee in 2022, and her option award reflects the option granted in connection with her initial appointment to our board of directors pursuant to our director compensation program.
- (3) Mr. Cooper became the chair of our nominating and corporate governance committee on July 15, 2022. His fees were prorated for the number of days he served as chair of the nominating and corporate governance committee in 2022.
- (4) Mr. Rhodes served as chair of our nominating and corporate governance committee until July 15, 2022. His fees were prorated for the number of days he served as chair of the nominating and corporate governance committee in 2022.

During 2022, we did not provide any compensation to Geoff McDonough, our President and Chief Executive Officer, for his service as a director. Dr. McDonough's compensation is set forth under "Executive Compensation—Summary Compensation Table."

### Non-Employee Director Compensation Program

Our non-employee directors receive annual equity grants pursuant to our director compensation program on or around the date of our Annual Meeting. In April 2022, our board of directors amended our director compensation program, effective April 18, 2022, to increase the equity compensation our directors receive. Under the 2022 amended program, each newly-elected non-employee director received, upon his or her initial election or appointment to our board of directors, an option to purchase 38,400 shares of our common stock under the 2020 Plan, which vests with respect to 1/36 of the shares at the end of each successive month following the grant date until the third anniversary of the grant date. Further, on the date of each annual meeting of stockholders, each non-employee director that served on our board of directors for at least six months received, under the 2020 Plan, an option to purchase 19,200 shares of our common stock under the 2020 Plan, which vests with respect to 100% of the shares on the earlier of the first anniversary of the grant date and the date of the

annual meeting of stockholders in the year immediately following the year in which the option was granted. All options issued to our non-employee directors under our amended director compensation program will be issued at exercise prices equal to the fair market value of our common stock on the date of grant and will have a term of ten years.

In March 2023, our board of directors further amended our director compensation program, effective as of April 1, 2023, to increase the number of options granted as initial or annual grants. Pursuant to this amended program, each newly-elected non-employee director will receive an option to purchase 50,000 shares of our common stock under the 2020 Plan and, on the date of each annual meeting of stockholders, each non-employee director that has served on our board of directors for at least six months will receive an option to purchase 25,000 shares of our common stock under the 2020 Plan. No change was made to the annual cash retainers.

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 are as follows:

	<b>Member Annual Fee (\$)</b>	<b>Additional Chair Annual Fee (\$)</b>
Board of Directors	40,000	30,000
Audit Committee	7,500	7,500
Talent Committee	7,500	7,500
Nominating and Corporate Governance Committee	4,000	4,000

The fees paid to non-employee directors are paid in arrears and are prorated for the number of days in which our non-employee directors serve on our board of directors or any committee of our board of directors. 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 he or she serves.

## EXECUTIVE COMPENSATION

### Compensation Discussion and Analysis

#### Overview

Our talent committee is responsible for reviewing and approving, or recommending for approval by the board of directors, the compensation of our executive officers, including our named executive officers, or NEOs, including salary, annual cash incentives and long-term incentive awards, severance arrangements, change in control benefits and other forms of compensation. At our 2022 annual meeting of stockholders, our stockholders approved an advisory (non-binding) vote on executive compensation by a significant majority. This section discusses the philosophy, programs, processes, decisions, and other relevant information with respect to the compensation of our NEOs.

Our NEOs for the year ended December 31, 2022 were:

<b>Name</b>	<b>Position(s)</b>
Geoff McDonough, M.D.	President, Chief Executive Officer and Director (Principal Executive Officer)
Matthew Norkunas, M.D., M.B.A.	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
Douglas Kerr, M.D., Ph.D., M.B.A.	Chief Medical Officer
Matthew Stanton, Ph.D.	Chief Scientific Officer
Tracy Zimmermann, Ph.D.	Chief Development Officer

#### Company Background

We are innovating genetic medicines to provide durable, redosable treatments for potentially hundreds of millions of patients living with rare and prevalent diseases. Our non-viral genetic medicine platform incorporates our high-capacity DNA construct called closed-ended DNA, or ceDNA; our cell-targeted lipid nanoparticle delivery system, or ctLNP; and our highly scalable capsid-free manufacturing process that uses our proprietary cell-free rapid enzymatic synthesis, or RES, to produce ceDNA. Using our approach, we are developing novel genetic medicines to provide targeted delivery of genetic payloads that include large and multiple genes to a range of cell types across a broad array of diseases. We are also engineering our genetic medicines to be redosable, which may enable individualized patient titration to reach the desired level of therapeutic expression and to maintain efficacy throughout a patient's life.

#### Business Environment and Performance

As a preclinical stage biotechnology company headquartered in Cambridge, Massachusetts, we operate in a highly competitive environment for talent. We recognize that, to be successful, we need to recruit, motivate and retain executives that have excellent scientific, business and functional expertise, broad experience in the biotechnology industry, and the capability to produce desired strategic and operational results. Accordingly, our executive officers' compensation accounts for the individual's expertise and experience, the company achieving its objectives for the year, and the need to incentivize long-term company success. This approach to executive compensation is aligned with the interests of our stockholders because it is designed to ensure that we attract, motivate and retain key leaders while incentivizing each individual to deliver optimal results for the company.



**Compensation Philosophy and Process**

The goals of our compensation programs are to pay for performance and ensure that the interests of our employees, including our NEOs, are aligned with the interests of our stockholders and our business goals, and that the total compensation paid to each of our NEOs is fair, reasonable, and competitive. Within this overarching principle, there are a number of key objectives that the compensation program is designed to achieve.

Overarching Philosophy:	Pay for Performance			
<b>Key Objectives:</b>	Attract and retain qualified executive talent to support our mission, vision, and business objectives	Motivate individuals to achieve our mission, vision, and business objectives	Foster a diverse, equitable, inclusive and just workplace	Align the interests of our NEOs with our stockholders

To attract, motivate, and retain qualified executives, we seek to pay our NEOs compensation that is competitive within our industry. To understand the competitive market for NEO compensation in our industry, the talent committee engages an independent compensation consultant to perform market assessment exercises and benchmarking biannually. We aim to target the 50th percentile of our peer group for each compensation element for our NEOs. In addition, the talent committee also considers other criteria when assessing NEO compensation, such as his or her experience, contributions, role, and potential.

*Role of the Talent Committee.* The talent committee is responsible for establishing and overseeing our executive compensation program. Our talent committee typically reviews and discusses with management, including our Chief Executive Officer (other than with respect to his compensation), proposed compensation for all NEOs and then, after further consideration of the information regarding market practices and trends provided by our compensation consultant, the talent committee may make a recommendation to our board of directors about the compensation of each NEO or approve such compensation as a committee.

*Role of our Chief Executive Officer.* Our Chief Executive Officer evaluates and reviews with the talent committee the individual performance and contributions of each of the other NEOs and makes recommendations to the talent committee regarding base salary, annual cash incentives and long-term incentive awards for each of the other NEOs. The talent committee reviews and considers such recommendations, but ultimately retains full discretion and authority over the final compensation decisions for the NEOs. Our Chief Executive Officer, in consultation with other members of our management team, also recommends the corporate performance objectives that are reviewed and approved by the talent committee and the board of directors and used to determine annual cash incentive amounts.

*Role of our Independent Compensation Consultant.* Pursuant to its charter, the talent committee has the sole authority to retain compensation consultants to assist in its evaluation of executive and director compensation. Our talent committee assessed our directors' and executives' compensation relative to comparable companies to determine base salaries and target bonus percentages for 2022 based on advice and information provided by Aon, who acted as the talent committee's independent compensation consultant until April 2022. Starting in April 2022, our talent committee terminated its engagement with Aon and engaged Compensia as its independent compensation consultant to take over this role and provide our talent committee with additional information regarding market compensation practices and trends. Our executive compensation benchmarking also included survey data provided by Aon, representing publicly-traded life science companies with market capitalization similar to us and that are in a stage of development comparable to ours.

*Factors in Setting Compensation.* The talent committee reviews NEO compensation biannually. As part of its biannual reviews, the talent committee evaluates our compensation program and arrangements for our NEOs based on a number of factors, including:

Internal Factors	External Factors
<ul style="list-style-type: none"> <li>· Compensation philosophy and objectives</li> <li>· Company goals and objectives</li> <li>· Historical company performance and company outlook</li> <li>· Individual NEO roles and profiles</li> <li>· Individual performance and contributions</li> <li>· Current pay data for NEOs</li> </ul>	<ul style="list-style-type: none"> <li>· Peer group information and data</li> <li>· Broader industry-specific information and data</li> <li>· Compensation committee experience</li> <li>· Market dynamics</li> </ul>

An important external factor in making compensation decisions is our compensation peer group, which is determined annually. The talent committee considers a select number of key inputs, summarized below, to determine the companies to be included in the peer group. The compensation data from the peer group provide a benchmark for market-competitive base salaries, short- and long-term incentive targets, and estimated total direct compensation.

The talent committee, with the advice of Aon , used the following screening criteria to determine the group of companies to be in the peer group that was used in setting 2022 compensation:

- companies operating in the biotechnology and biopharmaceutical industries, specifically those operating in a similar, though not necessarily identical, field to ours;
- companies whose number of employees, stage of development and market capitalization are similar, though not necessarily identical, to ours;
- companies with similar executive positions to ours;
- companies against which we believe we compete for executive talent; and
- public companies based in the United States whose compensation and financial data are available in proxy statements or through widely available compensation surveys.

Based on these criteria, in August 2021, the talent committee approved a peer group of 17 companies that was used in benchmarking compensation for the remainder of 2021 and until August 2022, as listed below.

Allogene Therapeutics, Inc.	AVROBIO, Inc.	Beam Therapeutics Inc.
CRISPR Therapeutics AG	Editas Medicine, Inc.	Graphite Bio, Inc.
Homology Medicines, Inc.	Intellia Therapeutics, Inc.	Magenta Therapeutics, Inc.
Passage Bio, Inc.	Rocket Pharmaceuticals, Inc.	Rubius Therapeutics, Inc.
Sana Biotechnology, Inc.	Sangamo Therapeutics, Inc.	Stoke Therapeutics, Inc.
Taysha Gene Therapies, Inc.	Verve Therapeutics, Inc.	

In conducting our annual review of our peer group, in August 2022, the talent committee, with the advice of Compensia, reviewed the companies included in the above-mentioned peer group for continued appropriateness using the criteria described above. Following the talent committee’s review, Compensia identified nine additional companies that more closely aligned with our criteria and suggested removing nine companies (Allogene Therapeutics, Inc., CRISPR Therapeutics AG, Homology Medicines, Inc., AVROBIO, Inc., Intellia Therapeutics, Inc., Beam Therapeutics Inc., Magenta Therapeutics, Inc., Rubius Therapeutics, Inc. and Stoke Therapeutics, Inc.) that no longer met our prescribed criteria due to acquisition or changes in their stages of development, business models and/or market capitalization. The talent committee approved a peer group of 17 companies to be used in benchmarking compensation for the remainder of 2022, as listed below.

4D Molecular Therapeutics, Inc.*	Adicet Bio, Inc.*	Akouos, Inc.*
Editas Medicine, Inc.	Graphite Bio, Inc.	MeiraGTx Holdings Plc *
Passage Bio, Inc.	Poseida Therapeutics, Inc.*	Precigen, Inc.*
Precision BioSciences, Inc.*	Rocket Pharmaceuticals, Inc.	Sana Biotechnology, Inc..
Sangamo Therapeutics, Inc.	Selecta Biosciences, Inc.*	Taysha Gene Therapies, Inc.
Verve Therapeutics, Inc.	Voyager Therapeutics, Inc.*	

\* New company for the peer group.

Our revised peer group was used in setting compensation for our employees, including our NEOs, for 2023.

We believe that the compensation practices of our peer groups provided us with appropriate compensation data for evaluating the competitiveness of the compensation of our NEOs during 2022. After approval of the peer group by the talent committee, management presented recommendations to the talent committee regarding proposed adjustments to NEO compensation, including compensation data from the peer group and Aon’s survey data, which the talent committee further reviewed and considered. Our talent committee generally targets both short- and long-term incentive compensation for our executive officers at approximately the 50th percentile of our peer group, while considering other criteria, including market factors, the experience level of the executive or NEO and the executive’s or NEO’s performance against established company goals, in determining variations from this general target range.

***Compensation Elements and Decisions***

The primary elements of our executive compensation program are:

<b>Element</b>	<b>Purpose</b>	<b>Timing</b>
Base Salary	Fixed amount to attract, motivate, and retain top talent.	Initial base salaries are set at the time of hire, and adjustments to base salaries are considered in conjunction with changes in job responsibility and changes in the markets.
Short-term Incentives	Performance-contingent cash compensation to motivate employees and reward company performance.	Generally measured and paid out on an annual basis, typically in the first quarter of the following fiscal year.
Long-term Incentives	Variable incentive equity compensation to promote performance, support retention, and create stockholder alignment.	Generally granted at the time of hire, and annually following the close of the previous fiscal year.
Severance and Change in Control Benefits	Competitive benefits consistent with industry practice.	Upon a change of control of our company or an NEO’s termination of employment.

**Annual Base Salary**

Base salaries are used to attract, motivate and retain top talent, recognizing the experience, skills, knowledge and responsibilities required of our NEOs. Base salaries for our NEOs are established at the time the NEO is hired, taking into account the position for which the NEO is being considered and the relevant market data (where available), as well as the NEO’s qualifications and prior experience. None of our NEOs is currently party to an employment agreement that provides for automatic or scheduled increases in base salary. However, on a biannual basis, our talent committee reviews and evaluates, with input from our Chief Executive Officer (other than with respect to himself), the need for adjustment of the base salaries of our NEOs based on changes and expected changes in the scope of a NEO’s responsibilities, including promotions, the individual contributions made by and performance of the NEO during the prior year, overall labor market conditions, the relative ease or difficulty of replacing the executive with a well-qualified person, our overall growth and development as a company and general salary trends in our industry and among our peer group and where the NEO’s salary falls in the salary range presented by relevant market data. In making decisions regarding salary increases, our talent committee may also draw upon the experience of members of the talent committee and of our full board of directors with other companies. No formulaic base salary increases are provided to our NEOs. After considering the preceding factors, in January 2022, the talent committee approved a four percent increase to each NEOs’ base salary. There was no adjustment to NEO compensation following the talent committee’s review in July 2022.

The following table presents the base salaries for each of our NEOs for the years 2021 and 2022, as approved by our talent committee. 2021 base salaries became effective on January 16, 2021, except as noted with respect to Dr. Zimmerman’s 2021 base salary, which reflects a mid-year salary increase, and 2022 base salaries became effective on January 16, 2022.

Named Executive Officer	2021 Base Salary (\$)	2022 Adjustment		2022 Base Salary (\$)
		% of Base Salary	Amount (\$)	
Geoff McDonough	583,495	4 %	23,340	606,835
Matthew Norkunas	412,000	4 %	16,480	428,480
Douglas Kerr	445,012	4 %	17,801	462,813
Matthew Stanton	442,076	4 %	17,683	459,759
Tracy Zimmermann (1)	420,000	4 %	16,800	436,800

(1) Effective January 16, 2021, Dr. Zimmermann’s base salary was increased to \$385,045. Effective July 1, 2021, her base salary was further increased to \$420,000.

**Short-term Incentives**

Our annual cash incentive program is designed to motivate and reward our NEOs for achievements relative to our corporate objectives and expectations for each fiscal year. Under our annual cash incentive program, each NEO has a target annual cash incentive opportunity, defined as a percentage of his or her base salary. The general design of our annual cash incentive program is as follows:

$$\boxed{\text{NEO Earned Salary}} \times \boxed{\text{NEO Target Cash Incentive Percentage}} \times \boxed{\text{Corporate Achievement Percentage}} = \boxed{\text{Short-term Incentive Earned}}$$

*Corporate Goals and Objectives*

At the end of each year, our board of directors, after reviewing management's proposal, establishes the annual corporate performance goals and objectives that it believes will be the most significant drivers of our short-term and long-term success. The corporate performance goals and objectives may include target achievement dates based on calendar quarters. Each executive, including each NEO, is eligible to receive an annual cash incentive based on achievement of corporate performance goals and objectives, as opposed to individual performance goals and objectives, as assessed by our talent committee and board of directors. Each executive officer, including each NEO, has a target annual cash incentive amount, expressed as a percentage of each NEO's annualized salary then in effect. After the fiscal year is completed, our board of directors reviews the company's performance and objectives against the stated goals and determines what it believes to be the appropriate level of cash incentive, if any, for our company.

In December 2021, our board of directors approved our 2022 corporate goals and objectives, which were to:

- improve the tolerability and expression of our liver ctLNP;
- establish proof of concept for our extra-hepatic programs;
- extend our scientific capabilities to other nucleic acids;
- cultivate our diverse learning culture;
- further integrate our strategy into all aspects of our organization;
- create a current Good Manufacturing Practice process for manufacturing ceDNA; and
- extend our cash runway.

Specific achievements that our talent committee and board of directors reviewed to support the 2022 annual cash incentive awards to our NEOs, as set forth below in "Final Calculation", included:

- continued development of our liver ctLNP in non-human primates;
- demonstrated a humoral immune response with our ctLNP vaccines in mice;
- demonstrated the capability to apply our platform to other nucleic acids.
- entered into an agreement with an external cleanroom facility to manufacture current Good Manufacturing Practice supply of ceDNA;
- expanded on programs geared towards employee growth and management development;
- managed and integrated cross functional, operations-enabling objectives to drive execution of our strategic priorities ; and
- ended 2022 with a strong cash position able to fund our operating expenses and capital expenditures into 2025.

### *Final Calculations*

In January 2023, our board of directors reviewed the performance of our NEOs against the 2022 annual cash incentive goals and determined that the corporate goals and objectives had been achieved at 100% of target level. The final calculations used to arrive at the 2022 annual cash incentive awards are as follows:

NEO	2022 Earned Salary (\$)	Target Cash Incentive %	Corporate Goals and Objectives Factor	Cash Incentive Award (\$)
Geoff McDonough	605,863	55 %	100 %	333,224
Matthew Norkunas	427,793	40 %	100 %	171,117
Douglas Kerr	462,071	40 %	100 %	184,828
Matthew Stanton	459,023	40 %	100 %	183,609
Tracy Zimmermann	436,100	40 %	100 %	174,440

### *Long-term Incentives*

Although we do not have a formal policy with respect to the grant of long-term incentive awards to our executive officers, or any formal equity ownership guidelines applicable to them, we believe that equity grants provide our executive officers with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executive officers 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 talent committee periodically reviews the long-term incentive compensation of our executive officers, including our NEOs, and from time to time may grant long-term incentive awards to them in the form of stock options or restricted stock units. Prior to our initial public offering, or IPO, our executive officers were eligible to participate in our 2017 Stock Incentive Plan, as amended, or the 2017 Plan. All stock options granted before our IPO were granted pursuant to the 2017 Plan. Since our IPO, our executive officers have been eligible to receive stock options and other equity awards pursuant to our 2020 Plan.

We have used stock options and, since January 2022, restricted stock units, or RSUs, to compensate our executive officers in the form of initial grants in connection with the commencement of employment, promotion grants in connection with a promotion, and annual grants. In January 2022, after a review of the value of our employees' stock options, due to the volatility of our stock prices and in consideration of our goal of providing competitive compensation, we issued a one-time grant of RSUs to all employees, including our NEOs. For our 2022 annual grants, employees, including our NEOs, were given the option to elect whether to receive options or options and RSUs at a two-to-one ratio. Since January 2023, our annual grants and new hire grants include both stock options and RSUs.

In determining long-term incentive grants for new hires, the board of directors and/or talent committee evaluate (where available):

- market data for annual and new hire long-term incentive grant values;
- potential lost long-term incentive opportunity from the candidate's current employer, where available; and
- candidate background, experience, and potential.

In determining annual long-term incentive grants for existing NEOs, the talent committee evaluates:

- market data for annual long-term incentive grant values (where available);
- time the NEO has been employed with us;
- overall corporate performance and outlook; and

- NEO current outstanding equity, including the current and potential value of outstanding unvested awards.

All stock options granted by us, including those made to our NEOs, have exercise prices equal to the closing market price on the Nasdaq Global Select Market of our common stock on the date of grant, so that the recipient will not recognize any value from his or her stock options unless our share price increases above the exercise price. Accordingly, this portion of our executive officers' compensation is at risk and thus our approach emphasizes the pay-for-performance link, and is directly aligned with stockholder value creation. In addition, stock options granted to our executive officers, including our NEOs, generally have a ten-year term and vest over four years, with 25% of the shares vesting on the first anniversary of the grant or vesting commencement date, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. 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.

Generally, RSUs granted by us, including those made to our NEOs, vest over four years, with 25% of the shares vesting on the fifteenth day of month of the first anniversary of the grant date, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. In January 2022, we made a one-time grant of RSUs to all employees that vest over two years, with 25% of the shares vesting on July 15, 2022, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. Prior to the vesting of an RSU, the holder has no rights as a stockholder with respect to the shares subject to such award, including no voting rights and no right to receive dividends or dividend equivalents.

The following table sets forth the number of shares of common stock issuable upon exercise of the stock options and RSUs granted to our NEOs in 2022 as part of our annual grants and the January 2022 one-time RSU grants:

NEO	Grant Date	Number of Stock Options	Number of Stock Awards
Geoff McDonough	01/21/2022	375,000	187,500
Matthew Norkunas	01/21/2022	119,000	59,500
Douglas Kerr	01/21/2022	119,000	59,500
Matthew Stanton	01/21/2022	119,000	59,500
Tracy Zimmermann	01/21/2022	119,000	59,500

#### ***Potential Payments Upon Termination or Change in Control***

Certain employees, including our NEOs, are entitled to severance and change in control benefits pursuant to their employment arrangements and under the terms of our severance plan benefits agreements, which benefits are in addition to the benefits generally available to salaried employees and are summarized below under the heading "Employment, Severance and Change in Control Arrangements." Upon certain terminations of employment in connection with a change of control, vesting of the stock options and/or restricted stock that we have granted to our NEOs is fully accelerated; upon other involuntary terminations, 25% of the unvested portion of each grant will vest as of the date of the termination. Our goal in providing severance and change in control benefits is to offer sufficient cash continuity protection such that our employees will focus their full time and attention on the requirements of the business rather than the potential implications for their respective position. We prefer to have certainty regarding the potential severance amounts payable to the NEOs, rather than negotiating severance at the time that an NEOs' employment terminates.

#### ***Benefits***

We evaluate the competitiveness of our arrangements periodically and have found that our NEO benefits are competitive with our peers. For more information on our employment arrangements, please see "Employment, Severance and Change in Control Arrangements." We believe that these are typical benefits offered by comparable companies.

We maintain a defined contribution employee retirement plan for our employees, including our NEOs. 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). Our talent committee has approved a matching program of up to 4% of an employee's annual salary, subject to maximums established under the Code, beginning in the year ending December 31, 2021. Under the 401(k) plan, each employee is fully vested in his or her deferred salary contributions and our employer match. Employee contributions are held and invested by the plan's trustee as directed by participants.

Our NEOs are eligible to participate in all of our employee benefit plans, including our medical, dental, vision, long-term disability and term life insurance plans, flexible spending accounts, fitness benefits, employee stock purchase plan, and 401(k) matching contributions, in each case on the same basis as other employees. We typically do not provide additional perquisites or personal benefits to our NEOs, although on a case-by-case basis we may periodically do so, subject to any required approvals. We do not sponsor any qualified or non-qualified defined benefit plans for any of our employees, including NEOs.

***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.

Our Insider Trading Policy also generally prohibits purchasing our securities on margin, borrowing against our securities held in a margin account, or pledging our securities as collateral for a loan.

***No Tax Gross-Ups***

We do not provide for any tax gross-up payments to our NEOs.



### ***Tax and Accounting Considerations***

Under Section 162(m) of the U.S. Internal Revenue Code of 1986, as amended, or the Code, a company will generally not be entitled to a tax deduction for individual compensation over \$1 million that is paid to certain executive officers. As in effect prior to its recent amendment by the Tax Cuts and Jobs Act of 2017, Section 162(m) provided an exception to the deductibility limitations for performance-based compensation that met certain requirements. While considering the impact of Section 162(m) and awarding certain elements of compensation that, at the time, were intended to qualify as performance-based compensation, the talent committee did not adopt a policy requiring all compensation to be fully deductible under Section 162(m). As Section 162(m) has been amended, effective for taxable years beginning after December 31, 2017, the “performance-based” compensation exception was eliminated from Section 162(m), except for certain grandfathered arrangements under the transition rules. In light of this amendment, the talent committee and board of directors will continue to consider the potential impact of the application of Section 162(m) on compensation for our executive officers and reserves the right to provide compensation to executive officers that may not be tax-deductible, as well as the right to modify compensation that was initially intended to qualify as “performance-based” compensation if it believes that taking any such action is in the best interests of our company and our stockholders.

### ***Compensation Risk Assessment***

Our management and the talent committee review our compensation practices and policies with regard to risk management. We have reviewed our programs and we believe that there are no practices or policies that are likely to lead to excessive risk-taking or have a material adverse effect on us. Further, we identified the following practices that we believe serve to mitigate risk:

- our short-term incentive plan is based on a number of challenging objectives;
- our long-term incentive grants vest over time, generally four years;
- we have an independent talent committee;
- we engage with independent compensation advisors;
- we have proper administrative and oversight controls; and
- we have an established talent committee calendar for governance purpose.

### **Talent Committee Report**

The talent committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with our management. Based on this review and discussion, the talent committee recommended to the board of directors that the Compensation Discussion and Analysis be included in this proxy statement and in our Annual Report for the fiscal year ended December 31, 2022.

By the talent committee of the board of directors of Generation Bio Co.

Jason Rhodes, Chairman  
Donald Nicholson, Ph.D.  
Catherine Stehman-Breen, M.D.

**Summary Compensation Table**

The following table sets forth information regarding compensation awarded to, earned by or paid to our NEOs during the fiscal years ended December 31, 2022, 2021 and 2020.

<u>Name and Principal Position</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Bonus (\$)</u>	<u>Option Awards (\$)(1)</u>	<u>Stock Awards (\$)(2)</u>	<u>Non-equity incentive plan compensation (\$)(3)</u>	<u>All Other Compensation (\$)(4)</u>	<u>Total (\$)</u>
Geoff McDonough <i>President and Chief Executive Officer</i>	2022	605,863	—	1,810,800	1,216,875	333,224	—	3,966,762
	2021	582,787	—	4,950,122	—	352,586	—	5,885,495
	2020	515,834	—	1,379,905	—	341,051	—	2,236,790
Matthew Norkunas (5) <i>Chief Financial Officer</i>	2022	427,793	—	574,627	386,155	171,117	12,200	1,571,892
	2021	411,500	—	769,709	—	181,060	11,600	1,373,869
	2020	194,355 (5)	70,000 (6)	4,636,466	—	93,291	—	4,994,112
Douglas Kerr <i>Chief Medical Officer</i>	2022	462,071	—	574,627	386,155	184,828	12,200	1,619,881
	2021	444,472	—	1,449,538	—	195,568	11,600	2,101,178
	2020	410,901	—	390,474	—	197,451	—	998,826
Matthew Stanton <i>Chief Scientific Officer</i>	2022	459,023	—	574,627	386,155	183,609	12,200	1,615,614
	2021	441,540	—	2,051,440	—	194,277	11,600	2,698,857
	2020	406,108	—	341,807	—	195,147	—	943,062
Tracy Zimmermann <i>Chief Development Officer</i>	2022	436,100	—	574,627	386,155	174,440	12,200	1,583,522
	2021	402,055	—	581,353	—	176,904	11,600	1,171,912
	2020	342,963	—	1,841,359	—	164,958	—	2,349,280

- (1) The amounts reported in the “Option awards” column reflect the aggregate grant-date fair value of stock options awarded in the applicable fiscal year, calculated in accordance with the provisions of the Financial Accounting Standard Board Accounting Standards Codification Topic 718. For information regarding assumptions underlying the value of equity awards, see Note 9 to our audited consolidated financial statements included 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 NEO 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 fair value of stock awards is based on the closing price of our common stock on the Nasdaq Global Select Market on the date of grant.
- (3) The amounts reported in the “Non-equity incentive plan compensation” column represents awards to our NEOs under our annual cash incentive program.
- (4) The amounts reported in the “All Other Compensation” include \$12,200 and \$11,600 in matching contributions made by the company pursuant to our 401(k) Plan in 2022 and 2021, respectively.
- (5) Dr. Norkunas’ salary includes \$15,380 paid under a consulting agreement before the commencement of his employment with us on July 22, 2020.
- (6) Represents a one-time signing bonus of \$70,000 paid to Dr. Norkunas pursuant to his offer letter.

**Grants of Plan-Based Awards Table**

The following table sets forth information concerning each grant of an award made to our NEOs during the fiscal year ended December 31, 2022 under any plan, contract, authorization or arrangement pursuant to which cash, securities, similar instruments or other property may be received:

Name	Grant Date	Estimated Future Payouts under Non-Equity Incentive Plan Awards Target (\$) (1)	All other stock awards: Number of shares of stock or units (#) (2)	All other option awards: Number of securities underlying options (#) (3)	Exercise or base price of option awards (\$) (4)	Grant date fair value of stock and option awards (\$) (5)
Geoff McDonough	1/21/2022			375,000	6.49	1,810,800
	1/21/2022		187,500			1,216,875
Matthew Norkunas		333,224				
	1/21/2022		59,500	119,000	6.49	574,627
Douglas Kerr	1/21/2022	171,117				386,155
	1/21/2022		59,500	119,000	6.49	574,627
Matthew Stanton		184,828				386,155
	1/21/2022		59,500	119,000	6.49	574,627
Tracy Zimmermann	1/21/2022	183,828				386,155
	1/21/2022		59,500	119,000	6.49	574,627
		174,440				386,155

- (1) The amounts reported in the “Estimated Future Payouts under Non-Equity Incentive Plan Awards” column represent the target amount of each NEO’s annual cash incentive amount. For further information about our annual cash incentive program, see “Compensation Discussion and Analysis—Short-term Incentives”. Actual payments made for 2022 are provided in the “Summary Compensation Table.” Annual cash incentive payments are not subject to threshold or maximum payout levels and, accordingly, those columns have been omitted.
- (2) The amounts reported in the “All other stock awards: Number of shares of stock or units” column represent RSUs subject to time-based vesting criteria established by our talent committee and described in the footnotes to the “Outstanding Equity Awards at Fiscal Year-End” table below.
- (3) The amounts reported in the “All other option awards: Number of securities underlying options” column represent options subject to time-based vesting criteria established by our talent committee and described in the footnotes to the “Outstanding Equity Awards at Fiscal Year-End” table below.
- (4) The exercise prices of these stock options are equal to the closing market price on the Nasdaq Global Select Market of our common stock on the date of grant.
- (5) The amounts shown in the “Grant date fair value of stock and option awards” column reflect the aggregate grant date fair value of stock options and stock awards granted in the applicable fiscal year, calculated in accordance with the provisions of the Financial Accounting Standard Board Accounting Standards Codification Topic 718.

**Outstanding Equity Awards at Fiscal Year-End**

The following table sets forth information regarding all outstanding equity awards for each of our NEOs as of December 31, 2022:

Name	Option awards				Stock awards	
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price (\$)	Option expiration date	Number of shares of stock that have not vested (#)	Market value of shares of stock that have not vested (\$)(1)
Geoff McDonough	136,839	62,199 (2)	5.16	3/4/2030	—	—
	—	199,038 (3)	5.16	3/4/2030	—	—
	109,815	141,185 (4)	30.25	1/21/2031	—	—
	—	375,000 (5)	6.49	1/20/2032	—	—
	—	—	—	—	117,186 (8)	460,541
Matthew Norkunas	185,625	144,375 (6)	21.41	7/21/2030	—	—
	14,362	18,461 (4)	30.25	1/21/2031	—	—
	2,671	3,429 (4)	30.73	2/2/2031	—	—
	—	119,000 (5)	6.49	1/20/2032	—	—
	—	—	—	—	37,186 (8)	146,141
Douglas Kerr	89,959	— (7)	4.59	4/1/2028	—	—
	21,108	17,591 (2)	5.16	3/4/2030	—	—
	—	56,289 (3)	5.16	3/4/2030	—	—
	32,158	41,342 (4)	30.25	1/21/2031	—	—
	—	119,000 (5)	6.49	1/20/2032	—	—
—	—	—	—	37,186 (8)	146,141	
Matthew Stanton	16,422	— (9)	0.60	1/4/2028	—	—
	85,577	— (7)	4.59	4/1/2028	—	—
	33,863	15,392 (2)	5.16	3/4/2030	—	—
	—	49,255 (3)	5.16	3/4/2030	—	—
	32,158	41,342 (4)	30.25	1/21/2031	—	—
	13,125	16,875 (4)	30.73	2/2/2031	—	—
	—	119,000 (5)	6.49	1/20/2032	—	—
—	—	—	—	37,186 (8)	146,141	
Tracy Zimmermann	86,407	— (10)	4.59	12/5/2028	—	—
	8,270	3,759 (2)	5.16	3/4/2030	—	—
	—	12,030 (3)	5.16	3/4/2030	—	—
	48,752	48,748 (11)	27.68	11/8/2030	—	—
	12,899	16,579 (4)	30.25	1/21/2031	—	—
	—	119,000 (5)	6.49	1/20/2032	—	—
—	—	—	—	37,186 (8)	146,141	

- (1) The market value of our common stock is based on the closing price of our common stock on the Nasdaq Global Select Market on December 30, 2022.
- (2) These option awards vest over four years, with 25% of the shares vesting on March 5, 2021, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of these option awards will accelerate upon a qualifying termination of employment.
- (3) These option awards will vest in full upon the date on which our board of directors determines that we have dosed the initial patient in our first clinical trial, provided it occurs on or prior to July 1, 2023. The vesting of these option awards will accelerate upon a qualifying termination of employment.

- (4) These option awards vest over four years, with 25% of the shares vesting on January 22, 2022, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of these option awards will accelerate upon a qualifying termination of employment.
- (5) These option awards vest over four years, with 25% of the shares vesting on January 21, 2023, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of these option awards will accelerate upon a qualifying termination of employment.
- (6) This option award vests over four years, with 25% of the shares vesting on July 22, 2021, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of this option award will accelerate upon a qualifying termination of employment.
- (7) These option awards vest over four years, with 25% of the shares vesting on April 2, 2019, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of these option awards will accelerate upon a qualifying termination of employment.
- (8) This RSU award vests over two years, with 25% of the shares vesting on July 15, 2022, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of these RSUs will accelerate upon a qualifying termination of employment.
- (9) This option award vests over four years, with 25% of the shares vesting on January 5, 2019, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of this option award will accelerate upon a qualifying termination of employment.
- (10) This option award vests over four years, with 25% of the shares vesting on October 1, 2020, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of this option award will accelerate upon a qualifying termination of employment.
- (11) This option award vests over four years, with 25% of the shares vesting on November 9, 2021, and the remainder vesting in equal quarterly installments thereafter, subject to continuous service. The vesting of this option award will accelerate upon a qualifying termination of employment.

#### Option Exercises and Stock Vested Table

The following table sets forth information concerning option exercises and stock vested for each of our NEOs during the fiscal year ended December 31, 2022:

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$) (1)
Geoff McDonough	—	—	70,314	468,057
Matthew Norkunas	—	—	22,314	148,537
Douglas Kerr	—	—	28,570	192,704
Matthew Stanton	—	—	22,314	148,537
Tracy Zimmermann	—	—	22,314	148,537

- (1) The value realized on vesting is computed by multiplying the closing market price per share of our common stock on the Nasdaq Global Select Market on the vesting date by the number of shares of common stock issued upon vesting of RSUs.

## **Employment, Severance and Change in Control Arrangements**

### *Geoff McDonough*

In October 2017, in connection with our appointment of Dr. McDonough as our chief executive officer, we entered into an offer letter with Dr. McDonough. The offer letter established Dr. McDonough's title, base salary, eligibility for an annual cash incentive, and eligibility for benefits generally made available to employees and also provided for certain benefits upon termination of his employment under specified conditions. Dr. McDonough's employment is at will. Pursuant to the offer letter, we granted Dr. McDonough a restricted stock award for 1,592,311 shares of our common stock, which is subject to service-based vesting, and agreed to grant to him additional restricted stock awards or stock options to maintain his ownership percentage in the company until such time as we had sold equity having an aggregate purchase price of \$50,000,000. Dr. McDonough is also entitled to severance benefits under our severance plan benefits agreement described below. Dr. McDonough's base salary is currently set at \$631,109 and his target annual cash incentive percentage is 55%.

### *Matthew Norkunas*

In June 2020, in connection with our appointment of Dr. Norkunas as our Chief Financial Officer, we entered into an offer letter with Dr. Norkunas. The offer letter established Dr. Norkunas' title, base salary, eligibility for an annual cash incentive, and eligibility for benefits made available to employees generally and also provided for certain benefits upon termination of his employment under specified conditions. Dr. Norkunas' offer letter includes certain severance benefits as described below. Dr. Norkunas' employment is at will. Pursuant to the offer letter, we granted Dr. Norkunas options to purchase 330,000 shares of our common stock, which are subject to service-based vesting. Dr. Norkunas' base salary is currently set at \$ 455,000 and his target annual cash incentive percentage is 40%. Dr. Norkunas was also paid a one-time signing bonus of \$70,000 in accordance with the terms of the offer letter.

### *Douglas Kerr*

In June 2017, in connection with our appointment of Dr. Kerr as our Chief Scientific Officer, we entered into an offer letter with Dr. Kerr. The offer letter established Dr. Kerr's title, his base salary, his eligibility for an annual cash incentive, and his eligibility for benefits made available to employees generally. Pursuant to the offer letter, we granted Dr. Kerr a restricted stock award for 226,462 shares of our common stock, which is subject to service-based vesting, and agreed to grant to him additional restricted stock awards or stock options to maintain his ownership percentage in the company until such time as we had sold equity having an aggregate purchase price of \$10,000,000. Dr. Kerr is also entitled to severance benefits under our severance plan benefits agreement described below. Dr. Kerr's employment is at will. In November 2020, in connection with our promotion of Dr. Kerr to Chief Medical Officer, we entered into a promotion letter agreement with Dr. Kerr that established Dr. Kerr's new title, increased his base salary and increased his target annual cash incentive percentage. Dr. Kerr's base salary is currently set at \$481,325 and his target annual cash incentive percentage is 40%.

### *Matthew Stanton*

In September 2017, in connection with our appointment of Dr. Stanton as our Chief Technology Officer, we entered into an offer letter with Dr. Stanton that established his title, base salary, eligibility for an annual cash incentive and eligibility for benefits made available to employees generally. Pursuant to the offer letter, we granted Dr. Stanton a restricted stock award for 198,154 shares of our common stock, which is subject to service-based vesting, and agreed to grant to him additional restricted stock awards or stock options to maintain his ownership percentage in the company until such time as we had sold equity having an aggregate purchase price of \$10,000,000. In May 2019, in connection with our promotion of Dr. Stanton to Chief Scientific Officer, we entered into a promotion letter agreement with Dr. Stanton that established Dr. Stanton's new title and increased his base salary. Dr. Stanton is also entitled to severance benefits under our severance plan benefits agreement described below. Dr. Stanton's employment is at will. In May 2019, Dr. Stanton was promoted to be our Chief Scientific Officer. Dr. Stanton's base salary is currently set at \$500,000 and his target annual cash incentive percentage is 40%.

*Tracy Zimmermann*

In August 2018, we entered into an offer letter with Dr. Zimmermann that established her title, base salary, eligibility for an annual cash incentive and eligibility for benefits made available to employees generally. In November 2020, in connection with our promotion of Dr. Zimmermann to Chief Development Officer, we entered into a promotion letter agreement with Dr. Zimmermann that established Dr. Zimmermann's new title, increased her base salary and increased her target annual cash incentive percentage, and also provided that Dr. Zimmermann would be entitled to increased severance benefits under our severance plan benefits agreement described below. Effective July 2021, following the company's benchmarking analysis, Dr. Zimmermann's base salary was increased to align her compensation more closely with then-current market trends. Dr. Zimmermann's employment is at will. Pursuant to the promotion letter, we granted Dr. Zimmermann options to purchase 97,500 shares of our common stock, which are subject to service-based vesting. Dr. Zimmermann's base salary is currently set at \$454,272 and her target annual cash incentive percentage is 40%.

***Severance upon Termination of Employment; Change in Control***

Certain of our NEOs are eligible for severance benefits in specified circumstances, as set forth in their respective severance plan benefits agreements entered into by each of our NEOs. The separation benefits provided in each severance benefits plan agreement supersedes the separation benefits provided to such executive officer. Under the terms of the severance benefits agreement, if the executive officer's employment is terminated by us without cause or by the executive officer for good reason prior to or more than 12 months following a change in control, each as defined in the agreement, and subject to the executive officer's execution of a general release of potential claims against us, we have agreed to continue to pay his or her then-current base salary for a period of 12 months, in the case of our chief executive officer, or nine months, in the case of our other executive officers, and to pay premiums for continuation of health coverage under COBRA for up to 12 months, in the case of our chief executive officer, or nine months, in the case of our other executive officers. In addition, we have agreed that we may pay such executive officer a cash incentive for the year in which his or her employment is terminated determined by reference to the officer's target annual cash incentive for the year in which his or her termination of employment occurs and based on our and the executive officer's performance for such year, as determined by our board of directors in its sole discretion, and prorated based on the number of days the executive officer was actually employed by us for the year in which his or her termination occurs, and that we will accelerate the vesting of any then-outstanding equity grants held by the executive officer by 25% of the then unvested portion of those grants. Alternatively, if the executive officer's employment is terminated by us without cause or by the executive officer for good reason within one year following a change in control, and subject to the executive officer's execution of a general release of potential claims against us, we have agreed, in the case of our chief executive officer, to continue to pay his then-current base salary for a period of 18 months and, in the case of our other executive officers, to pay the executive officer a lump sum amount equal to 12 months of his or her then-current base salary; to pay premiums for continuation of health coverage under COBRA for up to 18 months, in the case of our chief executive officer, or 12 months, in the case of our other executive officers; and to pay a lump sum cash incentive equal to 150%, in the case of our chief executive officer, or 100%, in the case of our other executive officers, of the executive officer's target annual incentive cash incentive for the year in which his or her employment is terminated and accelerate the vesting of any outstanding equity grants in full.

Dr. Norkunas' offer letter includes certain severance benefits that are substantially similar to the terms of the severance benefits described above, except that if Dr. Norkunas' employment is terminated by us without cause or by him for good reason prior to or more than 12 months following a change in control, each as defined in the letter, there is no provision for the acceleration of the vesting of any then-outstanding and unvested equity grants.

We have also entered into employee confidentiality, inventions, non-solicitation and non-competition agreements with each of our NEOs. Under the employee confidentiality, inventions, non-solicitation and non-competition agreements, each NEO has agreed (1) not to compete with us during his or her employment and for a period of one year after the termination of his employment, (2) not to solicit our employees during his or her employment and for a period of one year after the termination of his or her employment, (3) to protect our confidential and proprietary information and (4) to assign to us related intellectual property developed during the course of his or her employment.

[Table of Contents](#)

The following table presents our estimate of the amount of severance benefits to which each of our NEOs would be entitled if a termination occurred on December 31, 2022 under the circumstances set forth in the column headings.

Name	Executive Payments and Benefits upon Termination	Termination by the Company without Cause or by Executive for Good Reason (No Change in Control) \$	Termination by the Company without Cause or by Executive for Good Reason (Change in Control) \$
Geoff McDonough	Cash Severance	606,835	910,253
	Non-Equity Incentive Plan Compensation	367,135	500,639
	Equity		
	Options	— (1)	— (2)
	RSUs	115,135 (1)	460,541 (2)
	Other Benefits	—	—
	<b>Total</b>	1,089,105	1,871,433
Matthew Norkunas	Cash Severance	321,360	428,480
	Non-Equity Incentive Plan Compensation	188,531	171,392
	Equity		
	Options	—	—
	RSUs	—	146,141 (2)
	Other Benefits	10,422 (3)	13,897 (4)
	<b>Total</b>	520,313	759,910
Douglas Kerr	Cash Severance	347,110	462,813
	Non-Equity Incentive Plan Compensation	203,638	185,125
	Equity		
	Options	— (1)	— (2)
	RSUs	36,535 (1)	146,141 (2)
	Other Benefits	—	—
	<b>Total</b>	587,283	794,079
Matthew Stanton	Cash Severance	344,819	459,759
	Non-Equity Incentive Plan Compensation	202,294	183,904
	Equity		
	Options	— (1)	— (2)
	RSUs	36,535 (1)	146,141 (2)
	Other Benefits	29,807 (3)	39,742 (4)
	<b>Total</b>	613,455	829,546
Tracy Zimmermann	Cash Severance	327,600	436,800
	Non-Equity Incentive Plan Compensation	192,192	174,720
	Equity		
	Options	— (1)	— (2)
	RSUs	36,535 (1)	146,141 (2)
	Other Benefits	29,807 (3)	39,742 (4)
	<b>Total</b>	586,134	797,403

(1) The amounts reported represent the acceleration of 25% of all outstanding, unvested options and RSUs based on the market price of our common stock on December 31, 2022.

(2) The amounts reported represent the acceleration of 100% of all outstanding, unvested options and RSUs based on the market price of our common stock on December 31, 2022.



- (3) The amounts reported represent 9 months of premiums for continuation of health coverage under COBRA.
- (4) The amounts reported represent 12 months of premiums for continuation of health coverage under COBRA.

**Securities Authorized for Issuance Under Equity Compensation Plans**

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 2017 Plan, our 2020 Plan and our 2020 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 (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column(a)) (c)
Equity compensation plans approved by security holders (1)	8,827,322	\$ 13.15	2,035,039
Equity compensation plans not approved by security holders	—	—	—
Total	8,827,322	\$ 13.15	2,035,039

- (1) Consists of the 2017 Plan, the 2020 Plan, and the 2020 ESPP. The 2020 Plan provides for annual increases, to be added as of the first day of each fiscal year until, and including, January 1, 2030, equal to the lesser of 4% 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 2020 ESPP provides for annual increases, to be added as of the first day of each fiscal year until, and including, January 1, 2030, in an amount equal to the lowest of 1,302,157 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. This table does not include the additional 2,380,217 shares available for issuance under the 2020 Plan, or the additional 595,054 additional shares available for issuance under the 2020 ESPP, each as of January 1, 2023.

**2017 Stock Incentive Plan**

The 2017 Plan was initially approved by our board of directors and our stockholders in October 2017, and was subsequently amended in October 2017, November 2017, February 2018, December 2018 and January 2020, in each case solely to increase the total number of shares reserved for issuance under the 2017 Plan. The 2017 Plan provided 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. Our employees, officers, directors, consultants and advisors were eligible to receive awards under the 2017 Plan; however, incentive stock options could only be granted to our employees. The type of award granted under the 2017 Plan and the terms of such award are set forth in the applicable award agreement. Pursuant to the terms of the 2017 Plan, our board of directors (or a committee delegated by our board of directors) administers the 2017 Plan and, subject to any limitations in the plan, selected the recipients of awards and determined:

- 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; 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 or cancellation, measurement price, issue price and repurchase price, if any (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 may amend, suspend or terminate the 2017 Plan at any time, except that stockholder approval may be required to comply with applicable law.

*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 2017 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 2017 Plan;
- the number and class of securities and exercise price per share of each outstanding option;
- the share and per-share provisions and 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 other stock-based award.

*Effect of Certain Corporate Transactions*

Upon the occurrence of a merger or other reorganization event (as defined in the 2017 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 2017 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 unexercised and/or unvested 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 (I) the cash payment for each share surrendered in the reorganization event over (II) 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 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.

In taking any of the foregoing actions, our board of directors is not obligated by the 2017 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 was 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, or provide for forfeiture of such restricted stock if issued at no cost. Upon the occurrence of a reorganization event involving our liquidation or dissolution, except to the extent specifically provided to the contrary in the restricted stock award agreement or any other agreement between the participant and us, all restrictions and conditions on all outstanding restricted stock awards will automatically be deemed terminated or satisfied.

Our board of directors may at any time provide that any award under the 2017 Plan shall 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.

We no longer grant awards under the 2017 Plan; however, awards outstanding under the 2017 Plan will continue to be governed by their existing terms.

### ***2020 Stock Incentive Plan***

Our 2020 Plan, which became effective on June 11, 2020, was adopted by our board of directors in May 2020, and approved by our stockholders in June 2020. The 2020 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock units and other stock-based awards. Upon effectiveness of the 2020 Plan, the number of shares of our common stock reserved for issuance under the 2020 Plan was the sum of (1) 9,720,712 shares; plus (2) the number of shares of our common stock subject to outstanding awards granted under the 2017 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, beginning with the fiscal year ending December 31, 2021 and continuing until, and including, the fiscal year ending December 31, 2030, equal to the lesser of (i) 4% of the number of shares of our common stock outstanding on such date, and (ii) an amount determined by our board of directors. On January 1, 2022 and 2023, 2,279,228 and 2,380,217 shares, respectively, were added to the shares reserved for issuance under the 2020 Plan. Up to 16,040,298 of the shares of Common Stock available for issuance under the 2020 Plan may be issued as incentive stock options.

Our employees, officers, directors, consultants and advisors are eligible to receive awards under the 2020 Plan; however, incentive stock options may only be granted to our employees.

Pursuant to the terms of the 2020 Plan, our board of directors (or a committee delegated by our board of directors) administers the 2020 Plan and, subject to any limitations set forth in the 2020 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 exercise price of options, which price must be at least equal to the fair market value of our common stock on the date of grant;
- the duration of options, which may not be in excess of ten years;
- 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, if any (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 talent committee has delegated authority to our chief executive officer, Geoff McDonough, and our Chief Financial Officer, Matthew Norkunas, to grant options, RSUs, or both under the 2020 Plan. Dr. McDonough and Dr. Norkunas have the power to make awards to newly hired employees who are not members of the company's leadership team and in connection with promotions or recognition grants for existing employees who are not members of the company's leadership team, subject to certain limitations for each level of employment and an annual aggregate maximum amount of awards that can be granted pursuant to such delegated authority. Our talent committee has fixed the terms of the awards to be granted by Dr. McDonough and Dr. Norkunas, the maximum number of shares subject to awards that either such officer may grant, and the time period in which such awards may be granted.

The 2020 Plan contains limits on the compensation that may be paid to our non-employee directors. The maximum amount of cash and value (calculated based on grant-date fair value for financial reporting purposes) of awards granted under the plan 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 in the case of a new director during his or her first year of service, \$1,000,000; provided, however, that 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 shall not count against the foregoing limit. However, our board of directors may make additional exceptions to this limit for individual non-employee directors in extraordinary circumstances, as the board of directors may determine in its discretion, provided that the non-employee director receiving such additional compensation may not participate in the decision to award such compensation. For the avoidance of doubt, the maximum amount set forth above will not apply to cash or awards granted under the 2020 Plan to a non-employee director in his or her capacity as a consultant or advisor.

*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 2020 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 2020 Plan;
- the share counting rules of the 2020 Plan;
- the number and class of securities and exercise price per share of each outstanding option;
- the share and per-share provisions and 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 other stock-based award.

*Effect of Certain Corporate Transactions*

Upon the occurrence of a merger or other reorganization event (as defined in the 2020 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 2020 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 vested awards will be forfeited immediately prior to the consummation of the reorganization event and/or 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, (I) of the cash payment for each share surrendered in the reorganization event over (II) 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 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.

In taking any of the foregoing actions, our board of directors is not obligated by the 2020 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 each outstanding award 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 in 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, except to the extent specifically provided to the contrary in the restricted stock award agreement or any other agreement between the participant and us, all restrictions and conditions on each outstanding restricted stock award will automatically be deemed terminated or satisfied.

Our board of directors may, at any time, provide that any award under the 2020 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 Stock Market rules, our board of directors may amend, modify or terminate any outstanding award under the 2020 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 2020 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 2020 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 2020 Plan) and grant a new award under the 2020 Plan in substitution for the cancelled 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 cancelled 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 Stock Market rules or rules of any other exchange or marketplace on which our common stock is listed or traded.

No award may be granted under the 2020 Plan on or after June 11, 2030. Our board of directors may amend, suspend or terminate the 2020 Plan at any time, except that stockholder approval may be required to comply with applicable law or stock market requirements.

### **2020 Employee Stock Purchase Plan**

Our 2020 ESPP, which became effective on June 11, 2020, was adopted by our board of directors in May 2020 and approved by our stockholders in June 2020. Pursuant to the terms of the 2020 ESPP, our board of directors (or a committee delegated by our board of directors) administers the 2020 ESPP. The 2020 ESPP initially provided participating employees with the opportunity to purchase up to an aggregate of 481,231 shares of our common stock. The number of shares of our common stock reserved for issuance under the 2020 ESPP will automatically increase on the first day of each fiscal year, beginning with the fiscal year commencing on January 1, 2021 and continuing for each fiscal year until, and including the fiscal year commencing on, January 1, 2030, in an amount equal to the lowest of (1) 1,302,157 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, 2022 and 2023, 569,807 and 595,054 shares, respectively, were added to the shares reserved for issuance under the 2020 ESPP.

All of our employees and employees of any designated subsidiary, as defined in the 2020 ESPP, are eligible to participate in the 2020 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 three months prior to enrolling in the 2020 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 2020 ESPP.

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

We make offerings to our eligible employees to purchase stock under the 2020 ESPP beginning on January 1<sup>st</sup> and July 1<sup>st</sup> of each year. Each offering consists 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 or a committee designated by the 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 the closing price of our common stock on the first day of the offering period. No employee may be granted an option under the 2020 ESPP that permits the employee's rights to purchase shares under the 2020 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. In addition, no employee may purchase shares of our common stock under the 2020 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.

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 2020 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 2020 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 (or such other number of days as is determined by us) prior to the end of the offering period, and for any reason, permanently withdraw from participating in the 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, 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 2020 ESPP, the share limitations under the 2020 ESPP, and the purchase price for an offering period under the 2020 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 2020 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 2020 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 the 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;
- upon written notice to employees, provide that all outstanding options will be cancelled 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 2020 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 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 2020 ESPP or any portion of the 2020 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 2020 ESPP to fail to comply with Section 423 of the Code. The 2020 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.



### **CEO Pay Ratio**

We are providing the following information about the relationship of the median annual total compensation of our employees and the annual total compensation of our Chief Executive Officer, Dr. McDonough, as outlined by the Dodd-Frank Wall Street and Consumer Protection Act and SEC rules.

We are required to identify the median employee by use of a “consistently applied compensation measure,” or CACM. Our CACM selected included: (i) base salary or wages actually paid for salaried employees (or wages based on an annual work schedule for employees paid on an hourly basis) in 2022, (ii) the annual cash incentive amount earned for 2022, (iii) sign-on bonuses paid in 2022 pursuant to employee offer letters, (iv) the grant-date fair value for stock-based awards (calculated in accordance with requirements for the “Summary Compensation Table”), and (v) matching contributions made by the company pursuant to our 401(k) plan in 2022. For salaried and hourly employees hired during 2022, we annualized the base salary or wages, the annual cash incentive amount earned for 2022, and the matching contributions made by the company pursuant to our 401(k) plan in 2022. We believe our CACM reasonably reflects the annual compensation of our employees. Our median employee was identified using the entire population of our employees as of December 31, 2022, excluding Dr. McDonough, which totaled 153 employees, all of whom are based in the United States.

Based on the CACM methodology described above, we identified the median employee and calculated the fiscal 2022 compensation for this selected employee in the same manner we determine the annual total compensation of our NEOs for purposes of the “Summary Compensation Table”. The median of the annual total compensation of all our employees was \$235,454. Dr. McDonough’s fiscal 2022 annual total compensation as disclosed in the “Summary Compensation Table” was \$3,966,762. As a result, our chief executive officer to median employee pay ratio for fiscal 2021 is 17:1.

This pay ratio is a reasonable estimate calculated by a method consistent with the SEC requirements, described above, based on our payroll and employment records. As a result of a variety of factors, including employee populations, potential differences in the components used for the CACM, compensation philosophies and certain assumptions, pay ratios reported by other companies may not be comparable to our pay ratio. The pay ratio is not utilized by our management or our compensation committee for compensation-related decisions.

**Pay versus Performance**

The following tables and related disclosures provide information about (i) the “total compensation” of our CEO, and our other named executive officers, or Non-CEO NEOs, as presented in the Summary Compensation Table on page 25 of this proxy statement, (ii) the “compensation actually paid” to our CEO and our Non-CEO NEOs, as calculated pursuant to the SEC’s pay-versus-performance rules, (iii) certain financial performance measures, and (iv) the relationship of the “compensation actually paid” to those financial performance measures.

This disclosure has been prepared in accordance with SEC rules and does not necessarily reflect value actually realized by the NEOs or how our talent committee evaluates compensation decisions in light of company or individual performance. For a discussion of how our talent committee seeks to align pay with performance when making compensation decisions, please review Compensation Discussion and Analysis beginning on page [ ] of this proxy statement.

Year	Summary Compensation Table Total for CEO (\$) (1)	Compensation Actually Paid to CEO (\$) (1) (2)	Average Summary Compensation Table Total for Non-CEO Named Executive Officers (\$) (1)	Average Compensation Actually Paid to Non-CEO Named Executive Officers (\$) (1) (2)	Value of Initial Fixed \$100 Investment Based on (3)			Net Income (Loss)
					Total Shareholder Return	Nasdaq Composite (IXIC) Total Shareholder Return	Nasdaq Biotechnology (NBI) Total Shareholder Return	
2022	3,966,762	2,370,563	1,597,727	1,041,929	14	81	89	(136,639,466)
2021	5,885,495	(1,327,347)	1,836,454	(862,863)	25	121	99	(119,150,679)
2020								

- (1) The CEO for 2022, 2021, and 2020 is Dr. Geoff McDonough. The Non-CEO NEOs for whom the average compensation is presented in this table for 2022 and 2021 are Dr. Matthew Norkunas, Dr. Douglas Kerr, Dr. Matthew Stanton and Dr. Tracy Zimmerman, and for 2020 are Dr. Matthew Norkunas and Dr. Tracy Zimmermann.
- (2) The amounts shown as Compensation Actually Paid have been calculated in accordance with SEC rules and do not reflect compensation actually realized or received by our NEOs. These amounts reflect total compensation as set forth in the Summary Compensation Table for each year, adjusted as described below.
- (3) The peer group Total Shareholder Return utilizes the Nasdaq Composite Index and the Nasdaq Biotechnology Index. Total Shareholder Return illustrates the value, as of the last day of the indicated fiscal year, of an investment of \$100 in the company’s common stock on June 11, 2020 (the effective date of our Registration Statement on Form S-1 filed with the SEC in connection with our initial public offering).

Adjustments	2022		2021		2020	
	CEO (\$)	Non-CEO NEOs* (\$)	CEO (\$)	Non-CEO NEOs* (\$)	CEO (\$)	Non-CEO NEOs* (\$)
Total Compensation from Summary Compensation Table	3,966,762	1,597,727	5,885,495	1,836,454		
Adjustments for stock and option awards:						
(Subtraction): Aggregate value for stock awards and option awards included in Summary Compensation Table for the covered fiscal year	(3,027,675)	(960,782)	(4,950,122)	(1,213,010)		
Addition: Fair value at year end of awards granted during the covered fiscal year that were outstanding and unvested at the covered fiscal year end	1,525,800	484,183	936,844	228,821		
Addition (Subtraction): Change as of the end of the covered fiscal year (from the end of the prior fiscal year) in fair value of awards granted in any prior fiscal year that were outstanding and unvested at the covered fiscal year end	(427,413)	(192,681)	(2,155,228)	(1,512,235)		
Addition: Vesting date fair value of awards granted and vested during the covered fiscal year	468,057	148,537	—	—		
Addition (Subtraction): Change as of the vesting date (from the end of the prior fiscal year) in fair value of awards granted in any prior fiscal year for which vesting conditions were satisfied during the covered fiscal year	(134,968)	(35,054)	(1,044,336)	(202,893)		
Compensation Actually Paid (as calculated)	<u>2,370,563</u>	<u>1,041,930</u>	<u>(1,327,347)</u>	<u>(862,863)</u>		

\*Amounts presented are averages for the entire group of Non-CEO NEOs.

For the equity values included in the above tables, the valuation assumptions used to calculate fair values of stock options were materially different from those disclosed at the time of the grant of the stock options due to the volatility of our stock prices. The assumptions used in determining fair value of the stock options that vested during 2022, 2021, and 2020, or that were outstanding as of December 31, 2022, 2021, and 2020, as applicable, are as follows:

Stock Options Vested During Year or Outstanding on December 31:	2022	2021	2020
	Risk-free interest rate	1.35% - 4.26%	0.50% - 1.35%
Expected volatility	90.2% - 95.2%	74.6% - 91.1%	
Expected dividend yield	—	—	
Expected term (in years)	5 - 6	5 - 6	

**Description of Relationship Between NEO Compensation Actually Paid and Company Total Shareholder Return, or TSR**

The following chart sets forth the relationship between Compensation Actually Paid to our CEO, the average of Compensation Actually Paid to our Non-CEO NEOs, and our TSR over the fiscal three-year period from 2020 through 2022.

As set forth and illustrated above, the Compensation Actually Paid for 2021, as calculated in accordance with the SEC Rules, appears negative as a result of significant decreases in fair value of stock options granted to our NEOs at the measurement dates required in the SEC rules as compared to the fair value of such stock options at the grant date. In the fiscal three-year period covered by this disclosure, our stock price has been volatile and valuations have varied greatly throughout each year.

As a preclinical, non-revenue-generating company, we do not consider net income (loss) or stockholder return as factors when establishing or benchmarking our executive compensation. For a discussion of our performance metrics and compensation philosophy, see “Compensation Discussion and Analysis” above.

**PROPOSAL NO. 3—AMENDMENT TO OUR RESTATED CERTIFICATE OF INCORPORATION TO REFLECT NEW DELAWARE LAW PROVISIONS REGARDING OFFICER EXCULPATION**

Our stockholders are being asked to approve an amendment to our restated certificate of incorporation, or the Charter, to update our existing director exculation provision to include certain of our senior corporate officers. We are incorporated in the State of Delaware and are therefore subject to the Delaware General Corporation Law, or DGCL. Article Seventh of our Charter currently provides for exculation of directors in certain circumstances pursuant to and consistent with Section 102(b)(7) of the DGCL. Effective August 1, 2022, that provision of the DGCL was amended to permit eliminating or limiting monetary liability for certain senior corporate officers in limited circumstances.

Our board of directors has unanimously approved, subject to stockholder approval, an amendment to our Charter to update the exculation provision as described below. If our stockholders approve the proposed amendment, subject to the discretion of our board of directors, we intend to file a Certificate of Amendment of our Restated Certificate of Incorporation adding the new language below with the Secretary of State of the State of Delaware as soon as practicable after the Annual Meeting.

*Overview of the Proposed Amendment*

Consistent with Delaware law, the proposed amendment to our Charter relating to officers is more limited in scope than the existing director exculation provision and only permits exculation of officers for certain direct claims. Further, the proposed amendment does not permit officers to be exculated for liability arising out of:

- claims brought by the company itself;
- claims brought by stockholders in the name of the company (derivative claims);
- breaches of the duty of loyalty to the company or its stockholders;
- acts or omissions not in good faith;
- acts or omissions that involve intentional misconduct;
- acts or omissions that involve a knowing violation of law; or
- any transaction in which the officer derived an improper personal benefit.

In accordance with the recent amendment to Delaware law, the officers who will be covered by the expanded exculation provision include any officer who is or was the president, chief executive officer, chief operating officer, chief financial officer, chief legal officer, controller, treasurer, or chief accounting officer of the corporation; any officer who is or was identified in the company's public filings with the SEC as one of the most highly compensated executive officers; and any officers who consent to being identified as an officer for purposes of service of process, at any time during the course of conduct alleged in the action or proceeding to be wrongful.

*Rationale for the Proposed Amendment*

The State of Delaware, which is our state of incorporation, recently enacted legislation that authorizes Delaware corporations to limit the liability of certain of their officers in the limited circumstances described above. As a result of this development, we propose expanding our existing director exculation provision to cover officers to the extent now permitted by Delaware law.

The rationale of our board of directors for recommending this amendment is to balance stockholders' interest in accountability with their interest in the company being able to attract and retain the highest quality officers and avoiding litigation abuse resulting from the current disparity that exists in the treatment of directors, who oversee and are ultimately accountable for corporate actions, and the officers who execute those actions on behalf of our board of directors.

Our board of directors considered that the role of directors and officers requires them to make decisions on crucial matters in response to time-sensitive opportunities and challenges, which can create substantial risk of investigations, claims, actions, suits or proceedings seeking to impose liability on the basis of hindsight, especially in the current litigious environment and regardless of the absence of any underlying merit. This amendment will better align the protections available to our officers with those currently available to our directors and avoid an emerging practice among plaintiff's lawyers of adding officers to direct claims relating to the duty of care in mergers and acquisition-related and other litigation so that claims against the officers continue even when identical claims against directors are dismissed. Our board of directors believes that limiting concern about personal liability will empower officers to best exercise their business judgment in furtherance of stockholder interests without the distraction of potentially being subject to claims following actions taken in good faith.

In addition, we expect other companies with which we compete for employees to adopt exculpation clauses that limit the personal liability of officers as now permitted by the DGCL. Our board of directors believes that failing to adopt the proposed amendment will impact recruitment and retention of exceptional officer candidates who conclude that the potential exposure to liabilities, costs of defense and other risks of proceedings exceeds the benefits of serving as an officer of the company as compared to serving as an officer at another company that does exculpate officers.

Further, our board of directors noted that the proposed provision would not eliminate stockholders' right to pursue derivative claims relating to alleged breaches of the duty of care or limit the ability of the company itself to bring claims against officers. Therefore, taking into account the narrow class and type of claims for which officers' liability would be exculpated, our board of directors believes the proposed amendment would enhance the ability to attract and retain talented officers, potentially reduce litigation costs associated with frivolous lawsuits, and more generally align the protections available to our officers with those currently available to our directors.

Based on the above, our board of directors has determined that it is in the best interests of the company and our stockholders to amend the Charter as described in this proposal.

*Text of Proposed Amendment*

Accordingly, we ask our stockholders to vote on the following resolution:

“RESOLVED, that the Company's stockholders approve an amendment to the Company's Amended and Restated Certificate of Incorporation to replace the existing Article Seventh with the following (which is marked to show changes from the current director exculpation provision):

SEVENTH: Except to the fullest extent that permitted by the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty, no director or officer of the Corporation shall be personally liable to the Corporation (in the case of directors) or its stockholders (in the case of directors and officers) for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability or officer. No amendment to or, repeal or elimination of this provision shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or its application with respect to any acts or omissions of such act or omission of a director or officer occurring prior to before such amendment or, repeal or elimination. If the General Corporation Law of the State of Delaware is amended to permit further elimination or limitation of the personal liability of directors or officers, then the liability of a director or officer of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware as so amended.

**The board of directors recommends voting “FOR” Proposal No. 3 to approve an amendment to our Charter to reflect new Delaware law provisions regarding officer exculpation.**

Any properly submitted proxy will be voted in favor of the approval of the amendment to our Charter unless a contrary specification is made in the proxy.

#### PROPOSAL NO. 4—ADVISORY VOTE ON EXECUTIVE COMPENSATION

We are providing our stockholders the opportunity to vote to approve, on an advisory, non-binding basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with the SEC’s rules. This proposal, which is commonly referred to as “say-on-pay,” is required by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, which added Section 14A to the Exchange Act. Consistent with the preference expressed by our stockholders at our 2022 annual meeting of stockholders, we have determined to hold an advisory vote on executive compensation annually.

Our executive compensations programs are designed to attract, motivate and retain qualified executive talent to support our mission, vision, and business objectives. These programs embody a pay-for-performance philosophy and reward named executive officers for the achievement of our near-term and longer-term financial and strategic goals and for driving corporate financial performance and stability. The programs contain elements of cash and equity-based compensation and are designed to align the interests of our executives with those of our stockholders. We believe our compensation policy strikes an appropriate balance between the implementation of responsible, measured compensation practices and the effective provision of incentives for our named executive officers to exert their best efforts for our success. At the same time, we believe our program does not encourage excessive risk-taking by management.

The “Executive Compensation” section of this proxy statement, including “Compensation Discussion and Analysis,” describes in detail our executive compensation programs and the decisions made by the talent committee and the board of directors with respect to the year ended December 31, 2022.

Our board of directors is asking stockholders to approve a non-binding advisory vote on the following resolution:

RESOLVED, that the compensation paid to the company’s named executive officers, as disclosed pursuant to Item 402 of Regulation S-K, including the compensation discussion and analysis, the compensation tables and any related material disclosed in this proxy statement, is hereby approved.

As an advisory vote, this proposal is not binding. The outcome of this advisory vote will not overrule any decision by the company or the board of directors (or any committee thereof), create or imply any change to the fiduciary duties of the company or the board of directors (or any committee thereof), or create or imply any additional fiduciary duties for the company or the board of directors (or any committee thereof). However, our talent committee and board of directors value the opinions expressed by our stockholders in their vote on this proposal and will consider the outcome of the vote when making future compensation decisions for named executive officers.

**The board of directors recommends that stockholders vote to approve the compensation of our named executive officers by voting “FOR” Proposal No. 4.**

## TRANSACTIONS WITH RELATED PERSONS

Since January 1, 2021, we have engaged in the following transactions in which the amounts involved exceeded \$120,000 and any of 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 the transactions described below were made on terms no less favorable to us than could have been obtained from unrelated third parties.

### Participation in our January 2021 offering

In January 2021, we completed a public offering in which we issued and sold an aggregate of 9,200,000 shares of our common stock at a price to the public of \$24.50 per share, including 1,200,000 shares issued pursuant to the underwriters' full exercise of their option to purchase additional shares. Certain of our directors purchased an aggregate of 24,489 shares of our common stock in the public offering. Each of those purchases was made through the underwriters at the public offering price. The following table sets forth the number of shares of our common stock purchased by our directors and the aggregate purchase price paid for such shares.

Name	Shares of common stock	Cash purchase price (\$)
Donald Nicholson	4,081	99,985
Charles Rowland	20,408	499,996

### Collaboration and License Agreement with Moderna

In March 2023, we entered into a collaboration and license agreement with ModernaTX, Inc., or Moderna, to collaborate on three preclinical research programs relating to lipid nanoparticle delivery systems and nucleic acid payloads, with the company and Moderna obtaining certain rights to intellectual property used in and arising out of such research programs. In accordance with this agreement, we received an upfront payment of \$40 million from Moderna, as well as an upfront payment of certain research costs. In addition, we are eligible to receive up to an aggregate of \$1.8 billion in milestone payments upon the achievement of specified development, regulatory, commercial and sales milestone events.

We are entitled to receive tiered royalties ranging from high-single-digits to low-double-digits, and in the single digits on sales of certain products directed at certain targets specified under the collaboration and license agreement, in each case subject to reductions in specified circumstances. In addition, we are required to pay Moderna tiered royalties in the single digits on sales of certain products specified under the collaboration and license agreement, subject to reductions in specified circumstances. Any payments made in accordance with these arrangements are pursuant to the terms of the collaboration and license agreement and subject to specified exceptions.

In connection with our entry into the collaboration and license agreement, we also entered a share purchase agreement with Moderna pursuant to which we issued and sold 5,859,375 shares of our common stock to Moderna, for an aggregate purchase price of \$36.0 million. As a result, Moderna became the beneficial owner of more than 5% of our voting securities.

### Registration right

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 of our directors and officers. This investors' rights agreement provides these stockholders the right to require us to register these shares under the Securities Act upon demand and in connection with any registration statement that we plan to file.

In addition, in connection with our entry into the share purchase agreement with Moderna described above, we have granted certain resale registration rights to Moderna with respect to the 5,859,375 shares of our common stock issued and



sold to Moderna under the share purchase agreement that Moderna may exercise beginning six months following the date of the share purchase agreement, subject to certain restrictions.

#### **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 Legal 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 chair of the audit committee to review and, if deemed appropriate, approve proposed related person transactions that arise between audit committee meetings, subject to ratification by the audit 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 of, 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 talent committee in the manner specified in the talent committee's charter.

**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 and nominees for director;
- 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 \_\_\_\_\_ 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 Generation Bio Co., 301 Binney Street, Cambridge, MA 02142.

Name of beneficial owner	Number of shares beneficially owned	Percentage of shares beneficially owned (%)
<i>5% Stockholders</i>		
(1)		%
(2)		%
(3)		%
(4)		%
(5)		%
(6)		%
(7)		%
<i>Named Executive Officers and Directors</i>		
Jason Rhodes (3) (8)		%
Geoff McDonough, M.D. (9)		%
Matthew Norkunas, M.D., M.B.A. (10)		*%
Douglas Kerr, M.D., Ph.D., M.B.A. (11)		*%
Matthew Stanton, Ph.D. (12)		*%
Tracy Zimmermann, Ph.D. (13)		*%
Gustav Christensen (14)		*%
Dannielle Appelhans		*%
Ron Cooper (15)		*%
Jeffrey Jonas, M.D. (16)		*%
Donald Nicholson, Ph.D. (17)		*%
Anthony Quinn, M.B. Ch.B., Ph.D. (18)		*%
Charles Rowland (19)		*%
Catherine Stehman-Breen, M.D. (20)		*%
All current executive officers and directors as a group (16 persons) (21)		%

\*Less than one percent.

---

- (1)
- (2)
- (3)
- (4)
- (5)
- (6)
- (7)
- (8)
- (9)
- (10)
- (11)
- (12)
- (13)
- (14)
- (15)
- (16)
- (17)
- (18)
- (19)
- (20)
- (21)

## 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 27, 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 Generation Bio Co., 301 Binney Street, Cambridge, MA 02142, 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 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 required notice must be in writing and received by our corporate secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year's annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year's annual meeting, a stockholder's notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. For stockholder proposals to be brought before the 2024 annual meeting of stockholders, the required notice must be received by our corporate secretary at our principal executive offices no earlier than February 8, 2024 and no later than March 10, 2024. Stockholders are advised to review our amended and restated bylaws, which specify requirements as to form and content of a stockholders' notice, including the information required by Rule 14a-9 under the Exchange Act.

**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/ Geoff McDonough, M.D.

Geoff McDonough, M.D.

*President and Chief Executive Officer*

GENERATION BIO CO.  
301 BINNEY STREET  
CAMBRIDGE, MA 02142



**SCAN TO  
VIEW MATERIALS & VOTE**



**VOTE BY INTERNET**

*Before The Meeting* - Go to [www.proxyvote.com](http://www.proxyvote.com) or scan the QR Barcode above

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

*During The Meeting* - Go to [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023)

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

**VOTE BY PHONE - 1-800-690-6903**

Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

**VOTE BY MAIL**

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

V00030-P90060

KEEP THIS PORTION FOR YOUR RECORDS

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

DETACH AND RETURN THIS PORTION ONLY

GENERATION BIO CO.

The board of directors recommends voting "FOR" the following proposals:

- 1. Election of four Class III directors to our board of directors, each to serve until the 2026 Annual Meeting of Stockholders.

<b>For All</b>	<b>Withhold All</b>	<b>For All Except</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.

\_\_\_\_\_

**Nominees:**

- 01) Dannielle Appelhans
- 02) Gustav Christensen
- 03) Charles Rowland
- 04) Catherine Stehman-Breen

- 2. Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2023.
- 3. Approval of an amendment to our restated certificate of incorporation to reflect new Delaware law provisions regarding officer exculpation.
- 4. Approval, on an advisory (non-binding) basis, of the compensation of our named executive officers.

	<b>For</b>	<b>Against</b>	<b>Abstain</b>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**NOTE:** In their discretion, the proxyholders are authorized to vote upon such other business as may properly come before the meeting and any adjournment or postponement thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

\_\_\_\_\_  
Signature [PLEASE SIGN WITHIN BOX]      Date

\_\_\_\_\_  
Signature (Joint Owners)      Date

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

The Notice and Proxy Statement and Annual Report are available at [www.proxyvote.com](http://www.proxyvote.com).

V00031-P90060

**GENERATION BIO CO.  
Annual Meeting of Stockholders  
June 8, 2023 9:00 AM, ET  
This proxy is solicited by the Board of Directors**

The stockholder(s) hereby appoint(s) Geoff McDonough, M.D., Matthew Norkunas, M.D., MBA and Shawna-Gay White, J.D., or any of them, as proxies, each with the power to appoint his or her substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of GENERATION BIO CO. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 9:00 AM, ET on June 8, 2023, virtually at [www.virtualshareholdermeeting.com/GBIO2023](http://www.virtualshareholdermeeting.com/GBIO2023), and any continuation, adjournment or postponement thereof.

**This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations. In their discretion, the proxies of the undersigned are authorized to vote upon any and all other business as may properly be brought before the Annual Meeting or any continuation, adjournment or postponement thereof.**

Continued and to be signed on reverse side