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**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 Pursuant to § 240.14a-12

**Bionano Genomics, Inc.**

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(Name of Registrant as Specified In Its Charter)

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(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.
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BIONANO GENOMICS, INC.

9540 Towne Centre Drive, Suite 100  
San Diego, CA 92121



**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

**To Be Held On June 9, 2022**

Dear Stockholders:

You are cordially invited to attend the 2022 Annual Meeting of Stockholders (the "Annual Meeting") of Bionano Genomics, Inc., a Delaware corporation (the "Company"), to be held on Thursday, June 9, 2022, at 10:00 a.m. Pacific Time. In light of the COVID-19 pandemic, to support the health and well-being of our stockholders, employees and directors, and taking into account recent federal, state and local guidance, the Annual Meeting will be held in a virtual meeting format only, via live webcast on the Internet, with no physical in-person meeting. You will be able to attend and participate in the Annual Meeting online by visiting [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022), where you will be able to listen to the meeting live, submit questions and vote. You will need to have the 16-digit control number included in the Notice of Internet Availability of Proxy Materials, on your proxy card or on the instructions that accompanied your proxy materials to join the virtual Annual Meeting. **As always, we encourage you to vote your shares prior to the Annual Meeting.**

You are being asked to vote on the following matters:

1. To elect the three nominees for Class I director named in the accompanying proxy statement, each to hold office until the 2025 Annual Meeting of Stockholders or until a successor is duly elected and qualified or until the director's earlier death, resignation or removal. We refer to this proposal as the "Director Election Proposal" or "Proposal 1."
2. To approve, on an advisory basis, the compensation of the Company's named executive officers, as disclosed in this proxy statement. We refer to this proposal as the "Say-On-Pay Proposal" or "Proposal 2."
3. To indicate, on an advisory basis, the preferred frequency of stockholder advisory votes on the compensation of the Company's named executive officers. We refer to this proposal as the "Say-On-Frequency Proposal" or "Proposal 3."
4. To ratify the selection of BDO USA, LLP by the Audit Committee of the Board of Directors to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022. We refer to this proposal as the "Auditor Ratification Proposal" or "Proposal 4."
5. To conduct any other business properly brought before the meeting.

These items of business are more fully described in the Proxy Statement accompanying this Notice.

The Annual Meeting will be a completely virtual meeting of stockholders. To participate, vote or submit questions during the Annual Meeting via live webcast, please visit [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022). **You will not be able to attend the Annual Meeting in person.**

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The record date for the Annual Meeting is April 12, 2022. Only stockholders of record at the close of business on that date may vote at the meeting or any adjournment thereof.

**Important Notice Regarding the Availability of Proxy Materials for the Stockholders' Meeting to Be Held on Thursday, June 9, 2022 at 10:00 a.m., Pacific Time via live webcast at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022).**

The proxy statement and annual report to stockholders are available at [www.proxyvote.com](http://www.proxyvote.com).

By Order of the Board of Directors,

/s/ R. Erik Holmlin, Ph.D.

R. Erik Holmlin, Ph.D.

Secretary

San Diego, California  
April 27, 2022

**You are cordially invited to attend the virtual Annual Meeting. Whether or not you expect to attend the Annual Meeting, PLEASE VOTE YOUR SHARES. As an alternative to voting online at the Annual Meeting, you may vote via the Internet, by telephone or, if you receive a paper proxy card, by mailing the completed proxy card. Voting instructions are provided in the Notice of Internet Availability of Proxy Materials, or, if you receive a paper proxy card by mail, the instructions are printed on your proxy card.**

**Even if you have voted by proxy, you may still vote online at the Annual Meeting. Please note, however, that if your shares are held of record by a broker, bank, dealer or other agent and you wish to vote at the Annual Meeting, you must follow the instructions from such organization and will need to obtain a proxy issued in your name from that record holder.**

**BIONANO GENOMICS, INC.**  
**9540 Towne Centre Drive, Suite 100**  
**San Diego, CA 92121**

**PROXY STATEMENT**  
**FOR THE 2022 ANNUAL MEETING OF STOCKHOLDERS**

**To Be Held on June 9, 2022**

Our Board of Directors (sometimes referred to as the “Board”) is soliciting your proxy to vote at the 2022 Annual Meeting of Stockholders (the “Annual Meeting”) of Bionano Genomics, Inc., a Delaware corporation (sometimes referred to as “we,” “us,” the “Company” or “Bionano”) to be held virtually, via live webcast at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022), on Thursday, June 9, 2022, at 10:00 a.m. Pacific Time, and any adjournment or postponement thereof. Stockholders attending the virtual meeting will be afforded the same rights and opportunities to participate as they would at an in-person meeting.

For the Annual Meeting, we have elected to furnish our proxy materials, including this proxy statement and our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 (the “Annual Report”), to our stockholders primarily via the Internet. On or about April 27, 2022, we expect to mail to our stockholders a *Notice of Internet Availability of Proxy Materials* (the “Notice”) that contains notice of the Annual Meeting and instructions on how to access our proxy materials on the Internet, how to vote at the Annual Meeting and how to request printed copies of the proxy materials.

Only stockholders of record at the close of business on April 12, 2022 (the “Record Date”) will be entitled to vote at the Annual Meeting. On the Record Date, there were 289,455,337 shares of common stock outstanding and entitled to vote. A list of stockholders entitled to vote at the Annual Meeting will be available for examination by stockholders for any purpose germane to the Annual Meeting for ten days before the Annual Meeting during normal business hours at our address above. Additionally, the stockholder list will also be available online during the Annual Meeting at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022).

The Annual Report, which contains consolidated financial statements as of and for the fiscal year ended December 31, 2021, accompanies this proxy statement. You also may obtain a copy of the Annual Report that was filed with the Securities and Exchange Commission (the “SEC”), without charge, by writing to our Secretary at 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121, Attention: Secretary.

## QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

### **Why did I receive a notice regarding the availability of proxy materials on the Internet?**

Pursuant to rules adopted by the SEC, we have elected to provide access to our proxy materials over the Internet. Accordingly, we have sent you the Notice because the Board is soliciting your proxy to vote at the Annual Meeting, including at any adjournments or postponements of the Annual Meeting. All stockholders will have the ability to access the proxy materials on the website referred to in the Notice or request to receive a printed set of the proxy materials. Instructions on how to access the proxy materials over the Internet or to request a printed copy may be found in the Notice.

We intend to mail the Notice on or about April 27, 2022 to all stockholders of record entitled to vote at the Annual Meeting.

### **Will I receive any other proxy materials by mail?**

We may send you a proxy card, along with a second Notice, on or after May 10, 2022.

### **Where and when is the Annual Meeting?**

The Annual Meeting will be held on Thursday, June 9, 2022, at 10:00 a.m. Pacific Time. In light of the COVID-19 pandemic, to support the health and well-being of our stockholders, employees and directors, and taking into account recent federal, state and local guidance, the Annual Meeting will be held in a virtual meeting format only, via live webcast on the Internet, with no physical in-person meeting. A summary of the information you need to attend the Annual Meeting online is provided below:

- Any stockholder may listen to the Annual Meeting and participate live via webcast at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022). The webcast will begin at 10:00 a.m. Pacific Time.
- Stockholders may vote and submit questions during the Annual Meeting via live webcast.
- Stockholders may also submit questions no earlier than 15 minutes prior to the beginning of the webcast for the Annual Meeting by logging in to [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022) and entering the 16-digit control number included on the Notice or proxy card.
- To enter the meeting, please have your 16-digit control number, which is available on your proxy card.
- If you do not have your 16-digit control number, you will be able to listen to the meeting only and you will not be able to vote or submit questions during the meeting.
- Instructions on how to connect to and participate in the Annual Meeting via the Internet, including how to demonstrate proof of stock ownership, are posted at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022).

We recommend that you log in a few minutes before 10:00 a.m. Pacific Time to ensure you are logged in when the Annual Meeting starts. The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2021.

If you plan to vote during the Annual Meeting, you may still do so even if you have already returned your proxy.

### **What do I need in order to be able to participate in the Annual Meeting online?**

You will need the 16-digit control number included on your Notice or your proxy card in order to be able to vote your shares or submit questions during the Annual Meeting. If you do not have your 16-digit control number, you will be able to listen to the meeting only—you will not be able to vote or submit questions during the meeting. Instructions on how to connect and participate in the Annual Meeting via the Internet, including how to demonstrate proof of stock ownership, are posted at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022).

### **What if during the Annual Meeting I have technical difficulties or trouble accessing the live webcast of the Annual Meeting?**

On the day of the Annual Meeting, if you encounter any difficulties accessing the live webcast of the Annual Meeting or during the Annual Meeting, please call the technical support number that will be posted on the log-in page for our virtual Annual Meeting for assistance.

### **Who can vote at the Annual Meeting?**

Only stockholders of record at the close of business on April 12, 2022 will be entitled to vote at the Annual Meeting. On this record date, there were 289,455,337 shares of common stock outstanding and entitled to vote.

#### *Stockholder of Record: Shares Registered in Your Name*

If on April 12, 2022 your shares were registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, LLC, then you are a stockholder of record. As a stockholder of record, you may vote at the Annual Meeting or vote by proxy. Whether or not you plan to attend the Annual Meeting virtually, we urge you to fill out and return the proxy card that may be mailed to you, or vote by proxy over the telephone or on the Internet as instructed below to ensure your vote is counted.

#### *Beneficial Owner: Shares Registered in the Name of a Broker or Bank*

If on April 12, 2022 your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in “street name” and the Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your broker, bank, dealer or other agent regarding how to vote the shares in your account. You are also invited to attend the Annual Meeting virtually. However, since you are not the stockholder of record, you may not vote your shares online during the Annual Meeting unless you request and obtain a valid proxy issued in your name from your broker, bank, dealer or other agent.

### **What am I voting on?**

There are four matters scheduled for a vote:

- Proposal 1: Election of the three Class I directors named herein, each to hold office until the 2025 annual meeting of stockholders or until a successor is duly elected and qualified or until the director’s earlier death, resignation or removal;
- Proposal 2: Advisory approval of the compensation of the Company’s named executive officers, as disclosed in this proxy statement in accordance with SEC rules;
- Proposal 3: Advisory indication of the preferred frequency of stockholder advisory votes on the compensation of the Company’s named executive officers; and
- Proposal 4: Ratification of the selection of BDO USA, LLP by the Audit Committee of the Board of Directors (the “Audit Committee”) to serve as the Company’s independent registered public accounting firm for the fiscal year ending December 31, 2022.

### **What if another matter is properly brought before the Annual Meeting?**

The Board knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the Annual Meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

### **How do I vote?**

The procedures for voting are as follows:

#### *Stockholder of Record: Shares Registered in Your Name*

If you are a stockholder of record, you may vote at the Annual Meeting, vote by proxy over the telephone, vote by proxy through the Internet or vote by proxy using a proxy card that you may request or that we may elect to deliver at a later time. Whether or not you plan to attend the Annual Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Annual Meeting and vote online during the meeting even if you have already voted by proxy.

- **VOTE BY INTERNET:** To vote through the Internet, go to [www.proxyvote.com](http://www.proxyvote.com) to complete an electronic proxy card. You will be asked to provide the 16-digit control number from the Notice. Your Internet vote must be received by 11:59 p.m., Eastern Time on June 8, 2022 to be counted.

- **VOTE BY PHONE:** To vote over the telephone, dial toll-free 800-690-6903 using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number from the Notice. Your telephone vote must be received by 11:59 p.m., Eastern Time on June 8, 2022 to be counted.
- **VOTE BY PROXY CARD:** To vote using the proxy card, simply complete, sign and date the proxy card that may be delivered to you and return it promptly in the envelope provided. If you return your signed proxy card to us before the Annual Meeting, we will vote your shares as you direct.
- **VOTE DURING MEETING:** To vote online during the Annual Meeting, follow the provided instructions to join the Annual Meeting at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022), starting at 10:00 a.m. Pacific Time on Thursday, June 9, 2022.

*Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If you are a beneficial owner of shares registered in the name of your brokerage firm, bank, dealer or other agent, you should have received the Notice containing voting instructions from that organization rather than from Bionano. Simply follow the voting instructions in the Notice to ensure that your vote is counted. Alternatively, you may vote by telephone or over the Internet as instructed by your broker or bank. To vote online during the Annual Meeting, you must obtain a valid proxy from your brokerage firm, bank, dealer or other agent. Follow the instructions from your broker, bank, dealer or other agent, or contact that organization to request a proxy form.

**Internet proxy voting may be provided to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your Internet access, such as usage charges from Internet access providers and telephone companies.**

**Can I vote my shares by filling out and returning the Notice?**

No. The Notice identifies the items to be voted on at the Annual Meeting, but you cannot vote by marking the Notice and returning it. The Notice provides instructions on how to vote through the Internet, by telephone, by using a printed proxy card or by submitting a ballot online during the Annual Meeting.

**How many votes do I have?**

On each matter to be voted upon, you have one vote for each share of common stock you own as of April 12, 2022.

**If I am a stockholder of record and I do not vote, or if I return a proxy card or otherwise vote without giving specific voting instructions, what happens?**

If you are a stockholder of record and do not vote by completing your proxy card, by telephone, through the Internet or online during the Annual Meeting, your shares will not be voted.

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, “For” the Director Election Proposal, “For” the Say-On-Pay Proposal, for “One Year” for the Say-On-Frequency Proposal and “For” the Auditor Ratification Proposal. If any other matter is properly presented at the Annual Meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

**If I am a beneficial owner of shares held in street name and I do not provide my broker or bank with voting instructions, what happens?**

If you are a beneficial owner and do not instruct your brokerage firm, bank, dealer or other agent how to vote your shares, the question of whether your broker or nominee will still be able to vote your shares depends on whether the particular proposal is considered to be a routine matter under applicable rules. Brokers and nominees can use their discretion to vote uninstructed shares with respect to matters that are considered to be routine under applicable rules, but not with respect to non-routine matters. Under applicable rules and

interpretations, non-routine matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals, elections of directors (even if not contested), executive compensation (including any advisory stockholder votes on executive compensation and on the frequency of stockholder votes on executive compensation), and certain corporate governance proposals, even if management-supported. Accordingly, without your instructions your broker or nominee may not vote your shares on Proposal 1, Proposal 2 and Proposal 3, but may vote your shares on Proposal 4

***If you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your broker, bank, dealer or other agent by the deadline provided in the materials you receive from your broker, bank, dealer or other agent.***

#### **Who is paying for this proxy solicitation?**

Bionano will pay for the entire cost of soliciting proxies. In addition to these proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks, dealers or other agents for the cost of forwarding proxy materials to beneficial owners. In addition, we have engaged Morrow Sodali LLC to assist in the solicitation of proxies and provide related advice and informational support, for a services fee and the reimbursement of customary disbursements, which are not expected to exceed \$10,000 in total. If you have any questions regarding this proxy statement, you may contact Morrow Sodali LLC at (203) 561-6945.

#### **What does it mean if I receive more than one Notice?**

If you receive more than one Notice, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on each Notice to ensure that all of your shares are voted.

#### **Can I change my vote after submitting my proxy?**

*Stockholder of Record: Shares Registered in Your Name*

Yes. You can revoke your proxy at any time before the final vote at the Annual Meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

- You may submit another properly completed proxy card with a later date.
- You may grant a subsequent proxy by telephone or through the Internet.
- You may send a timely written notice that you are revoking your proxy to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121.
- You may vote during the Annual Meeting which will be hosted via the Internet. Simply attending the Annual Meeting online will not, by itself, revoke your proxy. Even if you plan to attend the Annual Meeting online, we recommend that you also submit your proxy or voting instructions or vote by telephone or through the Internet so that your vote will be counted if you later decide not to attend the Annual Meeting online.

Your most recent proxy card or telephone or Internet proxy is the one that is counted.

*Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If your shares are held by your brokerage firm, bank, dealer or other agent as a nominee, you should follow the instructions provided by your broker, bank, dealer or other agent.

#### **When are stockholder proposals and director nominations due for next year's Annual Meeting?**

To be considered for inclusion in the Company's proxy materials for next year's annual meeting, your proposal must be submitted in writing by December 28, 2022, to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121. If you wish to submit a proposal (including a director nomination) that is not to be included in the Company's proxy materials for next year's annual meeting, you must do so between February 9, 2023 and March 11, 2023. You are also advised to review the Company's amended and restated bylaws, which contain additional requirements relating to advance notice of stockholder proposals and director nominations.



In addition to satisfying the foregoing requirements under our bylaws, to comply with the universal proxy rules (once effective), stockholders who intend to solicit proxies in support of director nominees other than our Board's nominees must provide notice that sets forth any additional information required by Rule 14a-19 promulgated under the Securities Exchange Act of 1934, as amended, no later than April 10, 2023.

### **What are “broker non-votes”?**

When a beneficial owner of shares held in “street name” does not give instructions to the brokerage firm, bank, dealer or other agent holding the shares as to how to vote on matters deemed to be non-routine under applicable rules, the broker or nominee cannot vote the shares. These unvoted shares are counted as “broker non-votes.”

*As a reminder, if you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your brokerage firm, bank, dealer or other agent by the deadline provided in the materials you receive from your brokerage firm, bank, dealer or other agent.*

### **How are votes counted?**

Each share of our common stock you own entitles you to one vote. The inspector of elections will count votes for the meeting.

With respect to Proposal 1, the Director Election Proposal, the inspector of elections will separately count votes “For,” “Withhold” and broker non-votes. Stockholders do not affirmatively vote “Against” nominees. Instead, if you do not want to elect a particular nominee, you should choose to “Withhold” a vote in favor of the applicable nominee for director and the inspector of elections will count each “Withhold” for each nominee.

With respect to Proposal 3, the Say-On-Frequency Proposal, the inspector of elections will separately count votes for “One Year,” “Two Years” and “Three Years,” abstentions and broker non-votes.

With respect to Proposal 2, the Say-On-Pay Proposal, and Proposal 4, the Auditor Ratification Proposal, the inspector of elections will separately count votes “For” and “Against,” abstentions and, as applicable, broker non-votes.

Abstentions will be counted towards the vote total for Proposals 2, 3 and 4 and will have the same effect as “Against” votes or, in the case of Proposal 3, votes “Against” each of the proposed voting frequencies. Abstentions will have no effect on Proposal 1. For Proposals 1, 2 and 3, broker non-votes will be counted towards the presence of a quorum but will not be counted towards the vote total.

### **How many votes are needed to approve each proposal?**

- For Proposal 1, the Director Election Proposal, the three nominees receiving the most “For” votes from the holders of shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the matter will be elected. Only votes “For” or “Withhold” will affect the outcome. Broker non-votes, if any, will have no effect.
- Proposal 2, the Say-On-Pay Proposal, will be considered approved if it receives “For” votes from the holders of a majority of shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the matter. If you mark your proxy to “Abstain” from voting, it will have the same effect as an “Against” vote. Broker non-votes, if any, will have no effect.
- For Proposal 3, the Say-On-Frequency Proposal, the frequency receiving the votes of the holders of a majority of shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the matter will be considered the frequency preferred by the stockholders. If you mark your proxy to “Abstain” from voting, it will have the same effect as an “Against” vote on each of the proposed voting frequencies. Broker non-votes, if any, will have no effect.
- Proposal 4, the Auditor Ratification Proposal, must receive “For” votes from the holders of a majority of shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the matter. If you “Abstain” from voting, it will have the same effect as an “Against” vote. Because Proposal 4 is considered “routine,” we do not expect any broker non-votes.

**What is the quorum requirement?**

A quorum of stockholders is necessary to hold the Annual Meeting. A quorum will be present if stockholders holding at least a majority of the outstanding shares entitled to vote are present by virtual attendance at the Annual Meeting or represented by proxy. On the Record Date, there were 289,455,337 shares outstanding and entitled to vote. **Thus, the holders of 144,727,669 shares must be present by virtual attendance or represented by proxy at the Annual Meeting to have a quorum.**

Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your brokerage firm, bank, dealer or other agent) or if you vote online during the Annual Meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the holders of a majority of shares present by virtual attendance at the Annual Meeting or represented by proxy may adjourn the Annual Meeting to another date.

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

Preliminary voting results will be announced at the Annual Meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file with the SEC within four business days after the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Annual Meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

## PROPOSAL 1

### ELECTION OF DIRECTORS

The Board is divided into three classes. Each class consists, as nearly as possible, of one-third of the total number of directors, and each class has a three-year term. Vacancies on the Board may be filled only by persons elected by a majority of the remaining directors. A director elected by the Board to fill a vacancy in a class, including vacancies created by an increase in the number of directors, shall serve for the remainder of the full term of that class and until the director's successor is duly elected and qualified.

The Board presently has nine members. There are three Class I directors whose term of office expire in 2022: David L. Barker, Ph.D., R. Erik Holmlin, Ph.D. and Vincent J. Wong, J.D., M.B.A. Proxies may not be voted for a greater number of persons than the number of nominees named in this proxy statement. Each of the nominees, except for Mr. Wong, is currently a director of the Company who was previously elected by the stockholders. Each of Dr. Barker, Dr. Holmlin and Mr. Wong was recommended for nomination to the Board by the Nominating and Corporate Governance Committee of the Board (the "Nominating and Corporate Governance Committee"). If elected at the Annual Meeting, each of these nominees would serve until the 2025 Annual Meeting of Stockholders and until his successor has been duly elected and qualified, or, if sooner, until the director's death, resignation or removal.

#### Vote Required

Directors are elected by a plurality of the votes of the holders of shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the election of directors. Accordingly, the three nominees receiving the highest number of affirmative votes will be elected. Shares represented by executed proxies will be voted, if authority to do so is not withheld, for the election of Dr. Barker, Dr. Holmlin and Mr. Wong. If any nominee becomes unavailable for election as a result of an unexpected occurrence, shares that would have been voted for that nominee will instead be voted for the election of a substitute nominee proposed by the Company. Each of Dr. Barker, Dr. Holmlin and Mr. Wong has agreed to serve if elected. The Company's management has no reason to believe that any nominee will be unable to serve.

#### NOMINEES

The Nominating and Corporate Governance Committee seeks to assemble a board that, as a whole, possesses the appropriate balance of professional and industry knowledge, financial expertise and high-level management experience necessary to oversee and direct the Company's business. To that end, the Nominating and Corporate Governance Committee has identified and evaluated nominees in the broader context of the Board's overall composition, with the goal of recruiting members who complement and strengthen the skills of other members and who also exhibit integrity, collegiality, sound business judgment and other qualities that the Nominating and Corporate Governance Committee views as critical to the effective functioning of the Board. To provide a mix of experience and perspective on the Board, the Nominating and Corporate Governance Committee also seeks to attain diversity and balance among directors of race, ethnicity, gender, age, geography, thought, viewpoints, and backgrounds. The brief biographies below include information, as of the date of this proxy statement, regarding the specific and particular experience, qualifications, attributes or skills of each director or nominee that led the Nominating and Corporate Governance Committee to recommend that nominee should he or she continue to serve on the Board. However, each of the members of the Nominating and Corporate Governance Committee may have a variety of reasons why he or she believes a particular person would be an appropriate nominee for the Board, and these views may differ from the views of other members.

The following table sets forth, for the Class I nominees and our other directors who will continue in office after the Annual Meeting, their ages and position/office held with us as of the date of this proxy statement:

Name	Age	Position/Office Held With Bionano
<b><i>Class I directors, whose terms will expire at the 2022 annual meeting of stockholders</i></b>		
R. Erik Holmlin, Ph.D.	54	President, Chief Executive Officer and Director
David L. Barker, Ph.D. <sup>(1)</sup>	80	Chairman, Director
Vincent J. Wong, J.D., M.B.A. <sup>(2)</sup>	50	Director
<b><i>Class II directors, whose terms will expire at the 2023 annual meeting of stockholders</i></b>		
Albert Luderer, Ph.D. <sup>(2)(3)</sup>	73	Director
Kristiina Vuori, M.D., Ph.D. <sup>(1)(3)</sup>	54	Director
Hannah Mamuszka <sup>(1)</sup>	45	Director
<b><i>Class III directors for election at the Annual Meeting</i></b>		
Christopher Twomey <sup>(2)</sup>	62	Director
Yvonne Linney, Ph.D. <sup>(3)</sup>	60	Director
Aleksandar Rajkovic, M.D., Ph.D.	58	Director

(1) Member of the Compensation Committee of the Board (the "Compensation Committee")

(2) Member of the Audit Committee

(3) Member of the Nominating and Corporate Governance Committee

Set forth below is biographical information for the nominees and each person whose term of office as a director will continue after the Annual Meeting. This includes information regarding each director's experience, qualifications, attributes or skills that led our Board to recommend them for board service.

#### **CLASS I DIRECTOR NOMINEES FOR ELECTION FOR A THREE-YEAR TERM EXPIRING AT THE 2025 ANNUAL MEETING**

**R. Erik Holmlin, Ph.D.** Dr. Holmlin has served as our President and Chief Executive Officer and as a member of our board of directors since January 2011. Dr. Holmlin has also served as a member of the board of directors of Innovatus Life Sciences Acquisition Corp, a blank check company seeking to effect a business combination with one or more businesses, since March 2021. From June 2010 to February 2011, Dr. Holmlin served as president and Chief Executive Officer of GenVault Corporation, a private biosample management solutions company. Previously, Dr. Holmlin held positions as an entrepreneur in residence at Domain Associates, LLC, a dedicated life sciences venture capital firm; Chief Commercial Officer of Exiqon A/S, a publicly traded RNA research solutions company; founder and executive at GeneOhm Sciences, Inc., which was acquired by Becton, Dickinson and Company; and a National Institutes of Health postdoctoral fellow at Harvard University. Dr. Holmlin received his bachelor's degree in Chemistry from Occidental College, his Ph.D. in Chemistry from the California Institute of Technology and MBAs from University of California, Berkeley and Columbia University.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Holmlin's over 18 years of experience in the life sciences and healthcare industries, which includes the areas of technology development, product commercialization and venture financing, qualifies him to serve on our board of directors.

**David L. Barker, Ph.D.** Dr. Barker has served on our board of directors since May 2010, and as Chairman of our board of directors since August 2016. Dr. Barker has also served as a member of the board of directors of AmideBio, LLC, a private biotechnology company, since August 2011, and of Singular Genomics Systems, Inc., a public life science technology company, since September 2016. He has also served as a scientific advisor to LunaPBC, a public benefit corporation, since November 2017. Dr. Barker previously served as a member of the board of directors of Aspen Neuroscience, a private cell therapy company, from October 2018 to May 2021, IntegenX, Inc., a private DNA testing technology company, from June 2006 to March 2018 (when it was acquired by Thermo Fisher Scientific), and of Integrated Diagnostics, Inc., a private molecular diagnostics

company, from October 2009 to August 2018 (when it was acquired by Biodesix, Inc.). He served as Vice President and Chief Scientific Officer at Illumina, Inc. (“Illumina”) from 2000 to 2007, and on the Illumina scientific advisory board until May 2016. Dr. Barker was previously a member of the board of directors of NextBio, Inc. (acquired by Illumina in 2013), ProteinSimple, Inc. (acquired by Bio-Techne Corporation (“BT”) in 2014) and Zephyrus Biosciences, Inc. (acquired by BT in 2016). Dr. Barker served from 1998 to 2000 as Vice President and Chief Science Advisor at Amersham Biosciences, now part of General Electric. From 1988 to 1998, Dr. Barker held senior positions, including Vice President of Research and Business Development, at Molecular Dynamics, Inc., until the acquisition of Molecular Dynamics by Amersham. In his academic career, Dr. Barker conducted interdisciplinary research in neurobiology as a postdoctoral fellow at Harvard Medical School, Assistant Professor at the University of Oregon and Associate Professor at Oregon State University. Dr. Barker holds a BS with honors in Chemistry from the California Institute of Technology and a Ph.D. in Biochemistry from Brandeis University.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Barker’s extensive experience in managing and leading early stage and established companies within the clinical diagnostic and biotechnology industries qualifies him to serve as a member of our Board.

***Vincent J. Wong, J.D., M.B.A.*** Mr. Wong has served on our board of directors since December 2021. Since March 2021, Mr. Wong has served as Chief Commercial Officer at Geneoscopy, Inc., a private company developing diagnostic tests for gastrointestinal health. Mr. Wong has also served as an Executive in Residence at IU Ventures, an affiliate of Indiana University advising portfolio start-up companies, since March 2021. From April 2005 to December 2020, Mr. Wong served in various leadership roles at Roche Diagnostics Corporation, the diagnostics division of Roche Holding AG and its affiliated entities, including as Vice President of Sales, Point of Care Diagnostics, Vice President, Physician Office and Specialty Diagnostics, and Vice President, Strategy and Communications. Mr. Wong holds a BA in Economics and Government from the University of Notre Dame, a JD from Indiana University Maurer School of Law and an MBA from Northwestern University’s Kellogg School of Management.

Our Nominating and Corporate Governance Committee and Board believe that Mr. Wong’s extensive experience in leadership roles in the diagnostics industry qualifies him to serve as a member of our Board.

**THE BOARD OF DIRECTORS RECOMMENDS  
A VOTE “FOR” EACH NAMED NOMINEE FOR THE DIRECTOR ELECTION PROPOSAL.**

## CLASS II DIRECTORS CONTINUING IN OFFICE UNTIL THE 2023 ANNUAL MEETING

**Albert Luderer, Ph.D.** Dr. Luderer has served on our board of directors since October 2011. Since September 2013, Dr. Luderer has served as the Chief Executive Officer and a member of the board of directors of Indi Molecular, Inc., a private synthetic antibody technology company. He has also served as the Executive Chairman of the board of directors of Prostate Management Diagnostics Inc., a non-profit cancer research company, since January 2016, and as the Chairman of the board of directors of AllerGenis, LLC, a private diagnostic company, since September 2021. Dr. Luderer previously served as the Chief Executive Officer of Integrated Diagnostics, Inc., a private molecular diagnostics company, from March 2010 to June 2018, when it was sold to Biodesix, Inc. Dr. Luderer has over 30 years of experience in executive leadership roles in the areas of technology development, operations and business development. Dr. Luderer received his bachelor's degree in Zoology from Drew University and his MS in Immunochemistry and Ph.D. in Immunogenics from Rutgers University.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Luderer's experience in the biotechnology sector, with special focuses on technology, business development and commercialization, qualifies him to serve as a member of our Board.

**Kristiina Vuori, M.D., Ph.D.** Dr. Vuori has served on our board of directors since May 2019. Since January 2010, Dr. Vuori has served as President of Sanford Burnham Prebys Medical Discovery Institute, or the Institute, a non-profit research organization. Dr. Vuori has also served as a member of the board of directors of Inhibrx, Inc., a public biotechnology company, since October 2021, of Forian Inc., a public software company, since January 2021, of Sio Gene Therapies Inc., a public gene therapy company, since October 2020, of the California Institute for Regenerative Medicine, a governmental research institute, since January 2011, and of the Sanford Consortium for Regenerative Medicine, a non-profit biomedical research institute, since January 2011. In addition, Dr. Vuori has also held the Pauline and Stanley Foster Presidential Chair at the Institute since January 2010 and served as the Institute's interim Chief Executive Officer from January 2013 to September 2014, and from September 2017 to 2020. Since January 1995, Dr. Vuori has served as a Professor at the Institute's National Cancer Institute designated Cancer Center, an interdisciplinary basic and translational research effort mobilizing over 400 scientists. In addition, Dr. Vuori served on the board of directors of WebMD from July 2014 to September 2017 (when it was acquired by KKR & Co. Inc.). She serves or has served in the past five years on the boards of directors of the American Association for Cancer Research and the California Breast Cancer Research Council. Dr. Vuori earned her M.D. and Ph.D. from the University of Oulu, Finland.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Vuori's experience in biomedical research and as an educator of research scientists, her experience managing a large non-profit research organization, and her various leadership roles qualify her to serve on our Board.

**Hannah Mamuszka.** Ms. Mamuszka has served on our board of directors since May 2020. Since March 2016, Ms. Mamuszka has served as Founder and Chief Executive Officer of Alva10, Inc., a private market access strategy firm. Ms. Mamuszka has also served as member of the board of directors of Circle Cardiovascular Imaging Inc., a private cardiac imaging company, since June 2021 and as an advisory board member of Carolina Health Informatics Program, an interdisciplinary research and training program, since January 2021. Ms. Mamuszka also served as an Executive Director of Precision Care Alliance, a non-profit focused on policy reform to enable diagnostic development, from April 2019 to May 2020. Additionally, from December 2010 to June 2015, she served as Vice President of Business Development and Clinical Strategy at Exosome Diagnostics, Inc., a private company developing liquid biopsy tests. Prior to joining Exosome, Ms. Mamuszka served as Director of Strategic Business Development, Companion Diagnostics at Asuragen, Inc., a private company focused on diagnostics and therapeutics. From January 2005 to January 2010, Ms. Mamuszka served in various director level positions, most recently as Global Director for Pharmaceutical Services, at Oncotech Inc., then by acquisition, at Exiqon A/S. Ms. Mamuszka has previously held various laboratory positions at ArQule, Inc., Millennium Pharmaceuticals Inc., Organogenesis, Inc. and the National Cancer Institute. Ms. Mamuszka received her BS in neurobiology and physiology from the University of Maryland at College Park and her MS in molecular biology from Harvard University.

Our Nominating and Corporate Governance Committee and Board believe that Ms. Mamuszka's over 20 years of experience in the life sciences industry, extensive experience with diagnostics and various leadership roles qualify her to serve as a member of our Board.

### CLASS III DIRECTORS CONTINUING IN OFFICE UNTIL THE 2024 ANNUAL MEETING

**Christopher J. Twomey.** Mr. Twomey has served on our board of directors since July 2018. Since August 2013, Mr. Twomey has served as a director and Chairman of the Audit Committee of Tandem Diabetes Care, Inc., a public medical device company. From March 1990 to June 2007, Mr. Twomey served in various roles, including as Senior Vice President, Finance and Chief Financial Officer, at Biosite Incorporated, a medical diagnostics company. From October 1981 to March 1990, Mr. Twomey served as an audit manager for Ernst & Young, LLP. Mr. Twomey served as a director of Senomyx, Inc., a private taste technologies company, from March 2006 to November 2018 (when it was acquired by Firmenich SA). From July 2006 to March 2014, Mr. Twomey also served as a director and Chairman of the Audit Committee of Cadence Pharmaceuticals, Inc., a private specialty pharmaceutical company that was acquired by Mallinckrodt plc in 2014. Mr. Twomey received his BA in Business Economics from the University of California at Santa Barbara.

Our Nominating and Corporate Governance Committee and Board believe that Mr. Twomey's substantial leadership skills and expertise in accounting and financial reporting qualifies him to serve as a member of our Board, and that such skills are especially valuable in his role as Chairman of our Audit Committee.

**Yvonne Linney, Ph.D.** Dr. Linney has served on our board of directors since May 2020. Since January 2021, Dr. Linney has served as Chief Operating Officer and member of the board of directors of Artificial, Inc., a private laboratory automation optimization software company, where she also served as a strategic advisor from September 2020 to January 2021. Dr. Linney has also served as a strategic advisor at the California Life Sciences Institute, a private life sciences membership organization, since March 2019, as a Boardroom Ready Member at Women in Bio, a private professional organization, since July 2019, and as a strategic advisor at Tag.bio, a private data science platform company, since January 2019. From January 2019 to January 2021 Dr. Linney served as Principal at Linney BioConsulting, a strategy development firm in the life science industry. From December 2016 to November 2018, Dr. Linney served as the Chief Executive Officer and member of the board of directors of Transcriptic, Inc. (now Strateos, Inc.), a private robotic and cloud laboratory platform company, where she had previously served as Chief Operating Officer since October 2015. In addition, from November 2006 to January 2015, Dr. Linney served as Vice President and General Manager, Life Science Solutions at Agilent Technologies, Inc., a public life sciences and diagnostics company. Prior to joining Agilent, Dr. Linney served as Director of Molecular Diagnostics and Global Strategic Marketing at Bayer Diagnostics (now part of Siemens Healthcare) from 2005 to 2006 and Senior Director, Marketing and Product Management at Caliper Life Sciences from 2003 to 2005. Dr. Linney holds a BS in Microbiology and Virology from Warwick University, UK, and a Ph.D. in Genetics from Leicester University, UK.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Linney's over 30 years of experience in leadership roles in the life sciences and diagnostics industries qualify her to serve as a member of our Board.

**Aleksandar Rajkovic, M.D., Ph.D.** Dr. Rajkovic has served on our board of directors since February 2022. Since May 2018, Dr. Rajkovic has served as Chief Genomics Officer and Director of the Genomic Medicine Initiative at University of California San Francisco ("UCSF"). Dr. Rajkovic also serves as Medical Director and Chief of the Center for Genetic and Genomic Medicine for the UCSF Health System, serves as the Stuart Lindsay Distinguished Professor in Experimental Pathology at UCSF, serves on the board of directors for the American College of Medical Genetics Foundation, since April 2020, and on the scientific advisory board of Allelica, a private genomics software company, since February 2022. From July 2009 to May 2018, Dr. Rajkovic served as the Marcus Allen Hogge Chair in Reproductive Sciences and director of reproductive genetics at the Magee-Womens Hospital at University of Pittsburgh Medical Center. Dr. Rajkovic holds a BS in Chemistry from Johns Hopkins University and an M.D. and Ph.D. in Molecular Biology from Case Western Reserve University.

Our Nominating and Corporate Governance Committee and Board believe that Dr. Rajkovic's extensive experience in the clinical application of genetic and genomic testing qualifies him to serve as a member of our Board.

**INDEPENDENCE OF THE BOARD OF DIRECTORS**

Under the listing requirements and rules of the Nasdaq Stock Market (“Nasdaq”), independent directors must comprise a majority of our board of directors. In addition, the rules of Nasdaq 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 rules of the Nasdaq, a director will only qualify as an “independent director” if, in the opinion of that company’s board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Compensation Committee members must not have a relationship with us that is material to the director’s ability to be independent from management in connection with the duties of a Compensation Committee member. Additionally, Audit Committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Exchange Act. 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 be an affiliated person of the listed company or any of its subsidiaries.

Our Board has undertaken a review of the independence of the directors and considered whether any director has a material relationship with us that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning such director’s background, employment and affiliations, including family relationships, our board of directors determined that each of Dr. Barker, Mr. Wong, Dr. Luderer, Dr. Vuori, Ms. Mamuszka, Mr. Twomey, Dr. Linney and Dr. Rajkovic, representing eight of our nine directors, are “independent directors” as defined under current rules and regulations of the SEC and the listing standards of Nasdaq. In making these determinations, our Board considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances that our Board deemed relevant in determining their independence.

**BOARD DIVERSITY**

The Board Diversity Matrix below provides certain self-identified information regarding the composition of the Board. Each of the categories listed in the below table has the meaning as it is used in Nasdaq Rule 5605(f) and related instructions.

<b>Board Diversity Matrix (As of April 27, 2022)</b>				
Total Number of Directors	9			
	<b>Female</b>	<b>Male</b>	<b>Non-Binary</b>	<b>Did Not Disclose Gender</b>
<b>Part I: Gender Identity</b>				
Directors	3	4	—	2
<b>Part II: Demographic Background</b>				
African American or Black	—	—	—	—
Alaskan Native or Native American	—	—	—	—
Asian	—	1	—	—
Hispanic or Latinx	—	—	—	1
Native Hawaiian or Pacific Islander	—	—	—	—
White	3	3	—	—
Two or More Races or Ethnicities	—	—	—	—
LGBTQ+	—			
Did Not Disclose Demographic Background	1			

**BOARD LEADERSHIP STRUCTURE**

The Board has an independent Chairman, Dr. Barker, who has authority, among other things, to call and preside over Board meetings, including meetings of the independent directors, to set meeting agendas and to



determine materials to be distributed to the Board. Accordingly, the Chairman has substantial ability to shape the work of the Board. We believe that separation of the positions of Chairman and Chief Executive Officer reinforces the independence of the Board in its oversight of our business and affairs. In addition, we have a separate chair for each committee of the Board. The chair of each committee is expected to report annually to our Board on the activities of their committee in fulfilling their responsibilities as detailed in their respective charters or specify any shortcomings should that be the case. In addition, we believe that having an independent Chairman creates an environment that is more conducive to objective evaluation and oversight of management's performance, increasing management accountability and improving the ability of the Board to monitor whether management's actions are in the best interests of us and our stockholders. As a result, we believe that having an independent Board Chairman can enhance the effectiveness of the Board as a whole.

## ROLE OF THE BOARD IN RISK OVERSIGHT

Risk is inherent with every business, and we face a number of risks, including strategic, financial, business and operational, legal and compliance, cybersecurity and reputational. One of the key functions of our Board is informed oversight of our risk management process. Our Board does not have a standing risk management committee, but rather administers this oversight function directly through the Board as a whole, as well as through various standing committees of the Board that address risks inherent in their respective areas of oversight. In particular, our Board is responsible for monitoring and assessing strategic risk exposure and our Audit Committee has the responsibility to consider and discuss our major financial risk exposures and the steps that management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The Audit Committee also monitors compliance with legal and regulatory requirements, in addition to oversight of the performance of our internal audit function. Our Nominating and Corporate Governance Committee monitors the effectiveness of our corporate governance guidelines, including whether they are successful in preventing illegal or improper liability-creating conduct. Our Compensation Committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking. It is the responsibility of the committee chairs to report findings regarding material risk exposures to the Board as quickly as possible. The Chairman coordinates between the Board and management with regard to the determination and implementation of responses to any problematic risk management issues.

## MEETINGS OF THE BOARD OF DIRECTORS

The Board met six times during the last fiscal year. Each Board member attended 75% or more of the aggregate number of meetings of the Board and of the committees on which he or she served, held during the portion of the last fiscal year for which he or she was a director or committee member.

As required under the Nasdaq listing standards, in 2021, our independent directors met five times in regularly scheduled executive sessions at which only independent directors were present.

## INFORMATION REGARDING COMMITTEES OF THE BOARD OF DIRECTORS

The Board has four standing committees: an Audit Committee; a Compensation Committee; a Nominating and Corporate Governance Committee; and a Science and Technology Committee. The following table provides membership and meeting information for fiscal year 2021 for each of these committees of the Board:

Name	Audit	Compensation	Nominating and Corporate Governance	Science and Technology
R. Erik Holmlin, Ph.D.				
David L. Barker, Ph.D.		X*		X*
Yvonne Linney, Ph.D.			X	
Albert Luderer, Ph.D.	X		X*	X
Hannah Mamuszka		X		
Christopher Twomey	X*			
Kristiina Vuori, M.D., Ph.D.		X	X	X
Vincent J. Wong, J.D., M.B.A.	X			
Aleksandar Rajkovic, M.D., Ph.D.				X
Number of meetings in fiscal year 2021	4	8	3	1

\* Committee Chairperson

Below is a description of each committee of the Board.

Each of the committees has authority to engage legal counsel or other experts or consultants, as it deems appropriate to carry out its responsibilities. The Board has determined that each member of each committee meets the applicable Nasdaq rules and regulations regarding “independence” and each member is free of any relationship that would impair his or her individual exercise of independent judgment with regard to the Company.

### **Audit Committee**

The Audit Committee was established by the Board in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), to oversee the Company’s corporate accounting and financial reporting processes and audits of its financial statements. For this purpose, the Audit Committee performs several functions. The primary purpose of the Audit Committee is to discharge the responsibilities of the Board with respect to the Company’s corporate accounting and financial reporting processes, systems of internal control over financial reporting and financial-statement audits, as well as overseeing the Company’s independent registered accounting firm. Specific responsibilities of the Audit Committee include, among other things:

- helping the Board oversee the Company’s corporate accounting and financial reporting processes;
- managing the selection, engagement, qualifications, independence and performance of a qualified firm to serve as the independent registered public accounting firm to audit the Company’s financial statements;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing related person transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually, that describes our internal quality control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law;
- approving, or, as permitted, pre-approving, audit and permissible non-audit services to be performed by the independent registered public accounting firm;
- reviewing and discussing with our management and our auditors, as appropriate, our guidelines and policies with respect to risk assessment and risk management, including our major financial risk exposures and the steps taken by management to identify, monitor and control exposures to strategic, financial, operational, regulatory and other risks inherent in our business, which includes cybersecurity risks; and
- reviewing reports from management and our auditors regarding the adequacy and effectiveness of our procedures to monitor and ensure compliance with our legal and regulatory responsibilities, including our disclosure controls and procedures, as well as our Code of Business Conduct and Ethics, and regarding legal matters and compliance with legal and regulatory requirements that may have a material effect on our business, financial statements or compliance policies, including any material reports or inquiries from regulatory or governmental agencies.

The Audit Committee is currently composed of three directors: Mr. Twomey, Dr. Luderer and Mr. Wong. The Board has adopted a written Audit Committee charter that is available to stockholders on the Company’s website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2021.

The Board reviews the Nasdaq listing standards definition of independence for Audit Committee members on an annual basis and has determined that all members of the Company’s Audit Committee are independent (as independence is currently defined in Rule 5605(c)(2)(A)(i) and (ii) of the Nasdaq listing standards and Rule 10A-3(b)(1) of the Exchange Act).

Each member of the Audit Committee can read and understand fundamental financial statements in accordance with applicable requirements. In arriving at these determinations, the Board has examined each Audit Committee member's scope of experience and the nature of their employment in the corporate finance sector.

The chair of the Audit Committee is Mr. Twomey, who the Board has determined is an "audit committee financial expert" as defined in applicable SEC rules. The Board made a qualitative assessment of Mr. Twomey's level of knowledge and experience based on a number of factors, including his formal education, prior experience, business acumen and independence. In addition to the Company's Audit Committee, Mr. Twomey also serves on the Audit Committee of Tandem Diabetes Care, Inc. The Board has determined that this simultaneous service does not impair Mr. Twomey's ability to effectively serve on the Audit Committee.

#### **Report of the Audit Committee of the Board of Directors\***

The Audit Committee has reviewed and discussed the audited financial statements for the fiscal year ended December 31, 2021 with management of the Company. The Audit Committee has discussed with the independent registered public accounting firm the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board ("PCAOB") and the SEC. The Audit Committee has also received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the PCAOB regarding the independent registered accounting firm's communications with the Audit Committee concerning independence, and has discussed with the independent registered public accounting firm the accounting firm's independence. Based on the foregoing, the Audit Committee has recommended to the Board that the audited financial statements be included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

Mr. Twomey, Chair  
Dr. Luderer  
Mr. Wong

\* *The material in this report is not "soliciting material," is not deemed "filed" with the SEC and is not to be incorporated by reference in any filing of the Company under the Exchange Act or the Securities Act of 1933, as amended, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.*

#### **Compensation Committee**

The Compensation Committee is currently composed of three directors: Dr. Barker, Dr. Vuori and Ms. Mamuszka. The Board has determined that each member of the Compensation Committee is independent under the Nasdaq listing standards, a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act and an "outside director" as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"). The Board has adopted a written Compensation Committee charter that is available to stockholders on the Company's website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2021.

The Compensation Committee acts on behalf of the Board to review, adopt or recommend to the Board for adoption and oversee the Company's compensation strategy, policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of the Compensation Committee include, among other things:

- reviewing and approving the compensation of our chief executive officer, other executive officers and senior management;
- reviewing and recommending to the Board the compensation paid to our directors;
- reviewing and approving the compensation arrangements with our executive officers and other senior management;
- administering our equity incentive plans and other benefit programs;
- reviewing, adopting, amending and terminating, incentive compensation and equity plans, severance agreements, profit sharing plans, bonus plans, change-of-control protections and any other compensatory arrangements for our executive officers and other senior management;

- reviewing, evaluating and recommending to the Board succession plans for our executive officers; and
- reviewing and establishing general policies relating to compensation and benefits of our employees, including our overall compensation philosophy.

#### *Compensation Committee Processes and Procedures*

Typically, the Compensation Committee meets at least twice per year and with greater frequency if necessary. The agenda for each meeting is usually developed by the Chair of the Compensation Committee, in consultation with management. The Compensation 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 Compensation Committee to make presentations, to provide financial or other background information or advice or to otherwise participate in Compensation Committee meetings. The Chief Executive Officer does not participate in and is not present during any deliberations or determinations of the Compensation Committee regarding his compensation or individual performance objectives. The charter of the Compensation Committee grants the Compensation Committee full access to all books, records, facilities and personnel of the Company. In addition, under its charter, the Compensation Committee has the authority to obtain, at the expense of the Company, advice and assistance from compensation consultants and internal and external legal, accounting or other advisors and other external resources that the Compensation Committee considers necessary or appropriate in the performance of its duties. The Compensation Committee has direct responsibility for the oversight of the work of any consultants or advisers engaged for the purpose of advising the Compensation Committee. In particular, the Compensation Committee has the sole authority to retain, in its sole discretion, 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. Under its charter, to the extent required by the SEC and Nasdaq rules, the Compensation Committee may select, or receive advice from, a compensation consultant, legal counsel or other adviser to the Compensation Committee, other than in-house legal counsel and certain other types of advisers, only after taking into consideration six factors, prescribed by the SEC and Nasdaq, that bear upon the adviser's independence; however, there is no requirement that any adviser be independent.

During the past fiscal year, after taking into consideration the six factors prescribed by the SEC and Nasdaq described above, the Compensation Committee re-engaged Aon/Radford as its compensation consultant. Our Compensation Committee identified Aon/Radford based on its services to the Company during the prior fiscal year and Aon/Radford's general reputation in the industry and experience providing similar services to companies similar to Bionano. The Compensation Committee requested that Aon/Radford:

- evaluate the efficacy of the Company's compensation strategy and practices in supporting and reinforcing the Company's long-term strategic goals;
- assist in refining the Company's compensation strategy and in developing and implementing an executive compensation program to execute that strategy;
- develop a comparative group of companies and perform analyses of competitive performance and compensation levels for that group; and
- examine competitiveness of equity compensation and retention value of the equity program.

The Compensation Committee holds one or more meetings during the first quarter of the year to discuss and make recommendations to the Board for annual compensation adjustments, annual bonuses, annual equity awards, and current year corporate performance objectives. However, the Compensation Committee also 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 the Company's compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, the Compensation Committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year. For executives other than the Chief Executive Officer, the Compensation Committee solicits and considers evaluations and recommendations submitted to the Compensation Committee by the Chief Executive Officer. In the case of the Chief Executive Officer, the evaluation of his performance is conducted by the Compensation Committee, which determines recommendations to the Board regarding any adjustments to his compensation as well as equity awards to be granted. For all executives and directors as part of its deliberations, the Compensation Committee

may review and consider, as appropriate, materials such as financial reports and projections, operational data, executive and director stock ownership information, company stock performance data, analyses of historical executive compensation levels and current Company-wide compensation levels, compensation data from comparative companies, compensation surveys, and recommendations of any compensation consultant, if applicable.

### **Nominating and Corporate Governance Committee**

The Nominating and Corporate Governance Committee is responsible for identifying, reviewing and evaluating candidates to serve as directors of the Company (consistent with criteria approved by the Board), reviewing and evaluating incumbent directors, selecting or recommending to the Board for selection candidates for election to the Board, making recommendations to the Board regarding the membership of the committees of the Board, assessing the performance of the Board, and developing a set of corporate governance principles for the Company.

The Nominating and Corporate Governance Committee is currently composed of three directors: Dr. Luderer, Dr. Vuori and Dr. Linney. Each member of the Nominating and Corporate Governance Committee is independent under the Nasdaq listing standards, a non-employee director and free from any relationship that would interfere with the exercise of his independent judgment. The Board has adopted a written Nominating and Corporate Governance Committee charter that is available to stockholders on the Company's website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2021.

The responsibilities of the Nominating and Corporate Governance Committee include, among other things:

- identifying and evaluating candidates, including the nomination of incumbent directors for reelection and nominees recommended by stockholders, to serve on the Board;
- considering and making recommendations to the Board regarding the composition and chairmanship of the committees of the Board, taking into account such factors as experience, skills, expertise and diversity;
- instituting plans or programs for the continuing education of the Board and orientation of new directors;
- developing and making recommendations to the Board regarding corporate governance guidelines and matters; and
- overseeing periodic evaluations of the Board's performance, including committees of the Board and management.

The Nominating and Corporate Governance Committee believes that candidates for director should have certain minimum qualifications, including the ability to read and understand basic financial statements, being over 21 years of age and having the highest personal integrity and ethics. The Nominating and Corporate Governance Committee also intends to consider such factors as possessing relevant expertise upon which to be able to offer advice and guidance to management, having sufficient time to devote to the affairs of the Company, demonstrated excellence in his or her field, having the ability to exercise sound business judgment and having the commitment to rigorously represent the long-term interests of the Company's stockholders. However, the Nominating and Corporate Governance Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board, the operating requirements of the Company and the long-term interests of stockholders. In conducting this assessment, the Nominating and Corporate Governance Committee typically considers diversity (including gender, racial and ethnic diversity), age, skills and such other factors as it deems appropriate, given the current needs of the Board and the Company, to maintain a balance of knowledge, experience and capability.

The Nominating and Corporate Governance Committee appreciates the value of thoughtful Board refreshment, and regularly identifies and considers qualities, skills and other director attributes that would enhance the composition of the Board. In the case of incumbent directors whose terms of office are set to expire, the Nominating and Corporate Governance Committee reviews these directors' overall service to the Company during their terms, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair the directors' independence. The Nominating and

Corporate Governance Committee also takes into account the results of the Board's self-evaluation, conducted annually on a group and individual basis. In the case of new director candidates, the Nominating and Corporate Governance Committee also determines whether the nominee is independent for Nasdaq purposes, which determination is based upon applicable Nasdaq listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The Nominating and Corporate Governance Committee then uses its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm. The Nominating and Corporate Governance Committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board. The Nominating and Corporate Governance Committee meets to discuss and consider the candidates' qualifications and then selects candidates for recommendation to the Board by majority vote.

Our Nominating and Corporate Governance Committee does not have a formal policy regarding board diversity. Diversity is one of a number of factors, however, that the committee takes into account in identifying nominees, and the Nominating and Corporate Governance Committee believes that it is essential that the board members represent diverse viewpoints. To accomplish the Board's diversity objectives, the Nominating and Corporate Governance Committee may retain an executive search firm to help identify potential directors that meet these objectives. In 2021, the Nominating and Corporate Governance Committee retained cStone & Associates in connection with the identification and appointment of Mr. Wong and Dr. Rajkovic as members of our Board.

The Nominating and Corporate Governance Committee will consider director candidates recommended by stockholders. The Nominating and Corporate Governance Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether or not the candidate was recommended by a stockholder. Stockholders who wish to recommend individuals for consideration by the Nominating and Corporate Governance Committee to become nominees for election to the Board may do so by delivering a written recommendation to the Nominating and Corporate Governance Committee at the following address: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121, no later than the close of business on the 90<sup>th</sup> day nor earlier than the close of business on the 120<sup>th</sup> day prior to the first anniversary of the preceding year's annual meeting of stockholders. Submissions must include the name and address of the Company stockholder on whose behalf the submission is made; the number of Company shares that are owned beneficially by such stockholder as of the date of the submission; the full name of the proposed candidate; a description of the proposed candidate's business experience for at least the previous five years; complete biographical information for the proposed candidate; and a description of the proposed candidate's qualifications as a director. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected.

#### **Science and Technology Committee**

The Science and Technology Committee of the Board is responsible for overseeing matters relating to our scientific and technologic capabilities and development programs and monitoring and evaluating significant emerging trends and issues in science and technology relevant to us. The Science and Technology Committee is currently composed of four directors: Dr. Barker, Dr. Luderer, Dr. Vuori and Dr. Rajkovic.

The responsibilities of the Science and Technology Committee include, among other things:

- assisting management in developing insights and recommendations for product development and technical innovation;
- recommending external advisors for our use of science and technology;
- assisting management in identifying, evaluating and overseeing technology and product development investments;
- reviewing and overseeing our innovation strategy; and
- overseeing our clinical development strategy and reviewing our intellectual property portfolio.

#### **STOCKHOLDER COMMUNICATIONS WITH THE BOARD OF DIRECTORS**

The Board has adopted a formal process by which stockholders may communicate with the Board or any of its directors. Stockholders who wish to communicate with the Board may do so by sending written communications addressed to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100,

San Diego, CA 92121. These communications will be reviewed by the Secretary of Bionano, who will determine whether the communication is appropriate for presentation to the Board or the relevant director. The purpose of this screening is to allow the Board to avoid having to consider irrelevant or inappropriate communications (such as advertisements, solicitations and hostile communications). The screening procedures have been approved by a majority of the independent directors. All communications directed to the Audit Committee in accordance with our Open Door Policy for Reporting Complaints Regarding Accounting and Auditing Matters that relate to questionable accounting or auditing matters will be promptly and directly forwarded to the Audit Committee.

## **CODE OF ETHICS**

We have adopted a Code of Business Conduct and Ethics that applies to all of our officers, directors and employees. The Code of Business Conduct and Ethics is available on the Company's website at [www.bionanogenomics.com](http://www.bionanogenomics.com). The information on our website is not incorporated by reference into this proxy statement or our Annual Report for fiscal year 2021. If we make any substantive amendments to the Code of Business Conduct and Ethics or grant any waiver from a provision of the Code of Business Conduct and Ethics to any executive officer or director, the Company will promptly disclose the nature of the amendment or waiver on its website.

## **Hedging Policy\***

As part of our insider trading policy, no officer, director, other employee or consultant may engage in short sales, transactions in put or call options, hedging transactions or other inherently speculative transactions with respect to our common stock at any time. In addition, no officer, director, other employee or consultant may margin, or make any offer to margin, or otherwise pledge as security, any of our common stock, including without limitation, borrowing against such stock, at any time.

\* *The disclosure under the caption "Hedging Policy" is not to be incorporated by reference in any filing of the Company under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.*

**PROPOSAL 2**  
**ADVISORY VOTE ON EXECUTIVE COMPENSATION**

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act (“the Dodd-Frank Act”) and Section 14A of the Exchange Act, our stockholders are entitled to vote to approve, on an advisory basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with SEC rules.

This vote is not intended to address any specific item of compensation, but rather the overall compensation of our named executive officers and the philosophy, policies and practices described in this proxy statement. The compensation of our named executive officers subject to the vote is disclosed in the compensation tables and the related narrative disclosure contained in this proxy statement. As discussed in those disclosures, we believe that our compensation policies and decisions are consistent with current market practices. Compensation of our named executive officers is designed to enable us to attract and retain talented and experienced executives to lead us successfully in a competitive environment.

Accordingly, the Board is asking the stockholders to indicate their support for the compensation of our named executive officers as described in this proxy statement by casting a non-binding advisory vote “FOR” the following resolution:

“RESOLVED, that the compensation paid to Bionano’s named executive officers, as disclosed pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the compensation tables and any related material disclosed in this proxy statement, is hereby APPROVED.”

Because the vote is advisory, it is not binding on the Board or us. Nevertheless, the views expressed by our stockholders, whether through this vote or otherwise, are important to management and the Board and, accordingly, the Board and the Compensation Committee intend to consider the results of this vote in making determinations in the future regarding executive compensation arrangements.

Advisory approval of this proposal requires the vote of the holders of a majority of the shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the matter at the Annual Meeting. Unless the Board decides to modify its policy regarding the frequency of soliciting advisory votes on the compensation of our named executives, the next scheduled say-on-pay vote will be determined by the Board in connection with the results of the advisory Say-On-Frequency Proposal, which is expected to be at the 2023 Annual Meeting of the stockholders.

**THE BOARD OF DIRECTORS RECOMMENDS  
A VOTE “FOR” THE SAY-ON-PAY PROPOSAL.**



**PROPOSAL 3**  
**ADVISORY VOTE ON THE FREQUENCY OF SOLICITATION OF**  
**ADVISORY STOCKHOLDER APPROVAL OF EXECUTIVE COMPENSATION**

The Dodd-Frank Act and Section 14A of the Exchange Act also enable out stockholders, at least once every six years, to indicate their preference regarding how frequently we should solicit a non-binding advisory vote on the compensation of our named executive officers as disclosed in our proxy statements. Accordingly, we are asking stockholders to indicate whether they would prefer an advisory vote every year, every other year or every three years. Alternatively, stockholders may abstain from casting a vote.

After considering the benefits and consequences of each alternative, the Board recommends that the advisory vote on the compensation of our named executive officers be submitted to the stockholders once every year.

The Board believes that an advisory vote every year on the compensation of our named executive officers will allow stockholders to provide the Board with their periodic direct input on the Company's compensation philosophy, policies and practices as disclosed in the proxy statement.

While the Board believes that its recommendation is appropriate at this time, the stockholders are not voting to approve or disapprove that recommendation, but are instead asked to indicate their preferences, on an advisory basis, as to whether the non-binding advisory vote on the approval of our named executive officer compensation practices should be held every year, every other year or every three years. The option among those choices that receives the vote of the holders of a majority of the shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the matter at the Annual Meeting will be deemed to be the frequency preferred by the stockholders.

Because this vote is advisory and, therefore, not binding on the Board or us, the Board may decide that it is in the best interests of the stockholders that we hold an advisory vote on executive compensation more or less frequently than the option preferred by the stockholders. The vote will not be construed to create or imply any change or addition to the fiduciary duties of the Board.

**THE BOARD OF DIRECTORS RECOMMENDS**  
**A VOTE IN FAVOR OF "ONE YEAR" ON THE SAY-ON-FREQUENCY PROPOSAL.**

## PROPOSAL 4

### RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee has selected BDO USA, LLP to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022 and our Board has further directed that management submit the Audit Committee's selection of BDO USA, LLP as the Company's independent registered public accounting firm for ratification by the stockholders at the Annual Meeting. On February 24, 2022, our Audit Committee approved the engagement of BDO USA, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022. Representatives of BDO USA, LLP are expected to be present by virtual attendance at the Annual Meeting. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Neither the Company's Amended and Restated Bylaws nor other governing documents or law require stockholder ratification of the selection of BDO USA, LLP as the Company's independent registered public accounting firm. However, the Audit Committee is submitting the selection of BDO USA, LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee in its discretion may direct the appointment of different independent auditors at any time during the year if they determine that such a change would be in the best interests of the Company and its stockholders.

#### Vote Required

The affirmative vote of the holders of a majority of the shares present by virtual attendance at the Annual Meeting or represented by proxy and entitled to vote on the matter at the Annual Meeting will be required to ratify the selection of BDO USA, LLP.

### CHANGES IN THE COMPANY'S CERTIFYING ACCOUNTANT FEES AND SERVICES

Deloitte & Touche, LLP audited our financial statements for the fiscal year ended December 31, 2019. On May 3, 2020, the Audit Committee approved the dismissal of Deloitte & Touche and appointed BDO USA, LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020.

The report of Deloitte & Touche, LLP on our financial statements for the fiscal year ended December 31, 2019 did not contain an adverse opinion or a disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope or accounting principles, except that, the report expressed an unqualified opinion and included an explanatory paragraph relating to substantial doubt about our ability to continue as a going concern.

In connection with the audit of our financial statements for the fiscal year ended December 31, 2019, and during the subsequent interim period through May 3, 2020 (the effective date of Deloitte & Touche, LLP's dismissal), there were no disagreements (as that term is defined in Item 304(a)(1)(iv) of Regulation S-K and related instructions) with Deloitte & Touche, LLP on any matters of accounting principles or practices, financial statement disclosure or auditing scope and procedures which, if not resolved to the satisfaction of Deloitte & Touche, LLP, would have caused Deloitte & Touche, LLP to make reference to the matter in their report on the consolidated financial statements for such year.

For the fiscal year ended December 31, 2019, there were no reportable events (as described in Item 304(a)(1)(v) of Regulation S-K), except that, as disclosed in Part II, Item 9A of our Annual Report on Form 10-K for the year ended December 31, 2020 (the "2020 Annual Report"), we reported material weaknesses in our internal control over financial reporting during such period. As disclosed in the 2020 Annual Report, in connection with our evaluation of the effectiveness of its internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) as of December 31, 2019, we concluded that our internal control over financial reporting was not effective as of December 31, 2019 because we did not have a sufficient number of resources to support the growth and complexity of our financial reporting requirements. The foregoing material weakness contributed to a material weakness in our control activities based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control-Integrated Framework. Specifically, the design of certain controls did not adequately provide appropriate segregation of duties and allow timely completion of financial reporting and accounting activities. The failure to maintain appropriate segregation of duties had a pervasive impact and as such, this deficiency resulted in a risk that could have impacted all financial statement account balances and disclosures. The material weaknesses did

not result in any identified material misstatements to our financial statements, and there were no changes to previously released financial results. Our activities to remediate the material weaknesses are disclosed in 2020 Annual Report. The Audit Committee discussed the material weaknesses in our internal control over financial reporting with Deloitte & Touche, LLP, and authorized Deloitte & Touche, LLP to respond fully to the inquiries of BDO USA, LLP concerning such material weaknesses.

During the year ended December 31, 2019, and the subsequent interim period through May 3, 2020, neither we nor anyone on our behalf consulted with BDO USA, LLP regarding either (i) the application of accounting principles to a specific transaction, either completed or proposed, or the type of audit opinion that might be rendered on our consolidated financial statements or the effectiveness of internal control over financial reporting, and neither a written report or oral advice was provided to us that BDO USA, LLP concluded was an important factor considered by us in reaching a decision as to any accounting, auditing or financial reporting issue or (ii) any matter that was either the subject of a disagreement (as defined in Item 304(a)(1)(iv) of Regulation S-K and the related instructions) or any reportable event (as described in Item 304(a)(1)(v) of Regulation S-K).

## PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table summarizes the aggregate fees billed to the Company by BDO USA, LLP for the fiscal years ended December 31, 2021 and 2020.

	2021	2020
Audit fees <sup>(1)</sup>	\$888,296	\$517,162
Audit-related fees <sup>(2)</sup>	—	—
Tax fees <sup>(3)</sup>	16,000	19,425
All other fees	—	—
<b>Total</b>	<b><u>\$904,296</u></b>	<b><u>\$536,587</u></b>

(1) Audit fees consist of fees billed for professional services rendered for the audit of the consolidated annual financial statements of the Company, review of the interim condensed consolidated financial statements included in quarterly reports, review of SEC-filings, and services that are normally provided in connection with statutory and regulatory filings or engagements.

(2) Audit-related fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the consolidated financial statements of the Company and are not reported under "Audit fees."

(3) Tax fees consist of fees billed for professional services rendered for tax compliance, advice and planning. For the fiscal years ended December 31, 2021 and 2020, these services included assistance regarding federal and state tax compliance and consultations regarding various income tax issues.

During the fiscal years ended December 31, 2021 and 2020, all of the total hours expended on our financial audit by BDO USA, LLP were provided by BDO USA, LLP's full-time permanent employees.

## PRE-APPROVAL POLICIES AND PROCEDURES

In considering the nature of the services provided by BDO USA, LLP, the Audit Committee determined that such services were compatible with the provision of independent audit services.

The Audit Committee discussed these services with BDO USA, LLP and management to determine that they were permitted under the rules and regulations concerning auditor independence promulgated by the SEC to implement the Sarbanes-Oxley Act of 2002, as well as the Public Company Accounting Oversight Board. The Audit Committee required that all services performed by BDO USA, LLP be pre-approved prior to the services being performed. During the fiscal years ended December 31, 2021 and 2020, all services by BDO USA, LLP, respectively, were pre-approved in accordance with these procedures, and the Audit Committee continues to require that all services performed by BDO USA, LLP be pre-approved in accordance with these procedures prior to the services being performed.

**THE BOARD OF DIRECTORS RECOMMENDS  
A VOTE "FOR" THE AUDITOR RATIFICATION PROPOSAL.**

## EXECUTIVE OFFICERS

The following table sets forth information concerning our executive officers as of the date of this proxy statement:

Name	Age	Position
R. Erik Holmlin, Ph.D.	54	President, Chief Executive Officer and Director
Christopher Stewart	52	Chief Financial Officer
Mark Oldakowski	48	Chief Operating Officer
Alka Chaubey, Ph.D.	49	Chief Medical Officer
Richard Shippy	52	Chief Business Officer
Soheil Shams, Ph.D.	58	Chief Informatics Officer

### EXECUTIVE OFFICERS WHO ARE NOT DIRECTORS

The following sets forth certain information with respect to our executive officers who are not directors:

**Christopher Stewart, Mr.** Stewart has served as our Chief Financial Officer since September 2020. Mr. Stewart served as the Head of Maxwell Ultracapacitors at Tesla, Inc., a public electric vehicle and clean energy company, from May 2019 to July 2020, and as Vice President, Finance and Information Technology at Maxwell Technologies Inc., a public energy storage company, from July 2015 to May 2019 (at which point the company was acquired by Tesla, Inc.). In addition, Mr. Stewart held multiple leadership roles, including as Vice President, Finance at Entropic Communications and as Chief Financial Officer of V-ENABLE Inc. (currently GroundTruth), a leader in targeted mobile advertising. Mr. Stewart received his B.S. in Business Administration from the University of Southern California and his M.S. in Industrial Administration from Carnegie Mellon University.

**Mark Oldakowski, Mr.** Oldakowski has served as our Chief Operating Officer since November 2017 and previously served as our Vice President, Product Development and Operations since October 2014. Mr. Oldakowski previously served as the Senior Director of Engineering and Chief Product Officer at Brooks Life Science Systems (currently Azenta Life Sciences), a private automation and cryogenic solutions company, from December 2011 to August 2014, and as a Director of Engineering at Affymetrix, Inc. (now Applied Biosystems), a private life science systems company, from April 2009 to October 2011. From December 2007 to April 2009, Mr. Oldakowski served as a Senior Manager and Core Team Leader of R&D for Siemens Healthcare Diagnostics, and for the prior 13 years, he developed sequencing and real-time PCR systems at Applied Biosystems, now a part of Thermo Fisher Scientific. Mr. Oldakowski received both his bachelor's degree in Electrical Engineering and his master's degree in Computer and Systems Engineering from Rensselaer Polytechnic Institute.

**Alka Chaubey, Ph.D., FACMG.** Dr. Chaubey has served as our Chief Medical Officer since August 2020. Dr. Chaubey has also served on the board of directors of the Cancer Genomics Consortium, a nonprofit organization focusing on clinical cancer genomics, since August 2016, as a member of the Diversity, Equity and Inclusion Committee of the American Board of Medical Genetics and Genomics, since March 2021, and as the Genetics Subdivision Nominating Committee representative of the Association for Molecular Pathology, a nonprofit organization focusing on molecular diagnostics, until July 2021. Dr. Chaubey served as the Head of Cytogenomics at PerkinElmer Genomics, a subsidiary of the public company PerkinElmer, Inc. focused on genetic and genomic testing, from May 2018 to August 2020, where she led the successful development and launch of several innovative products including the CNGnome test (low-pass whole genome sequencing), and a new FSHD assay utilizing Saphyr. She has also played an integral role on Vanadis team at PerkinElmer in their efforts to bring a new PCR-free NIPT technology to the market. Prior to PerkinElmer Genomics, Dr. Chaubey was the Director of the Cytogenomics Laboratory at the Greenwood Genetic Center, a nonprofit genetic diagnostic institute, from August 2013 to August 2020, where she also served as an Assistant Director from August 2010 to August 2013. Dr. Chaubey also holds an academic appointment as the Scientific Director of the Georgia Esoteric and Molecular Laboratory, Scientific Director of the Cytogenetics Laboratory of the Augusta University Medical Center and Adjunct Assistant professor of Pathology of the Medical College of Georgia at Augusta University. Dr. Chaubey received her Ph.D. from Guru Nanak Dev University, Amritsar, India and completed her post-doctoral studies at Center for Cellular and Molecular Biology, Hyderabad, India, and University of Illinois at Chicago.

**Richard Shippy, Mr.** Shippy has served as our Chief Business Officer since June 2021, and as our Chief Business Officer and Head of Global Sales since February 2022. From August 2018 to June 2021, Mr. Shippy co-founded and served as Vice President of Cradle Genomics, Inc., a private prenatal testing company, where he led commercial operations. From December 2012 to August 2018, Mr. Shippy held various leadership roles at Illumina, Inc., a public genetic variation and biological function company, serving as Senior Director, Product Marketing, Reproductive and Genetic Health, Director, Product Marketing, Reproductive and Genetic Health, and Director, Product Marketing, Molecular Cytogenetics, in connection with their DNA sequencing and array-based technologies. From January 2009 to December 2012, Mr. Shippy worked at Affymetrix, Inc. (now Applied Biosystems), a private life science systems company, as Senior Director, Strategic Product Marketing, Clinical Applications, and Director, Strategic Product Marketing, Molecular Cytogenetics, where he had an active role in launching biotechnologies and obtaining FDA approval for genome analysis technology. Mr. Shippy received his M.S. in Biochemistry from Northern Illinois University.

**Soheil Shams, Ph.D.** Dr. Shams has served as our Chief Informatics Officer since October 2021 following the acquisition of BioDiscovery, Inc. From September 1997 to October 2021, Dr. Shams was the Founder and President of BioDiscovery, a private software company for the application of genomics. Prior to founding BioDiscovery, Dr. Shams was a lecturer at UCLA in the department of Computer Science for several years teaching graduate and undergraduate courses on AI and machine perception. Further, he has authored over 50 technical publications within his field and has received multiple prestigious awards for his contributions to the biotechnology industry. Dr. Shams received his B.S. in Electrical Engineering from California State University, Long Beach and received his Ph.D. and M.S. in Computer Engineering from the University of Southern California.

**SECURITY OWNERSHIP OF  
CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth information regarding beneficial ownership of our capital stock as of April 1, 2022 by:

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

The following table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, the Company believes that each of the stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned.

Applicable percentages are based on 289,453,959 shares of our common stock outstanding on April 1, 2022, adjusted as required by rules promulgated by the SEC. Unless otherwise indicated, the address for the following stockholders is care of: Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121.

Name of Beneficial Owner	Shares Owned Directly	Securities Exercisable within 60 Days of April 1, 2022	Warrants	Number of Shares Beneficially Owned <sup>(1)</sup>	%( <sup>2</sup> )
<b>Greater than 5% Stockholders</b>					
The Vanguard Group <sup>(3)</sup>	14,825,634	—	—	14,825,634	5.12%
BlackRock, Inc. <sup>(4)</sup>	18,660,129	—	—	18,660,129	6.45%
<b>Directors and Named Executive Officers</b>					
David L. Barker, Ph.D. <sup>(5)</sup>	3,894	134,398	3,894	142,186	*
R. Erik Holmlin, Ph.D.	20,797	1,081,493	1,630	1,103,920	*
Yvonne Linney, Ph.D.	—	142,673	—	142,673	*
Albert Luderer, Ph.D.	—	130,193	—	130,193	*
Hannah Mamuszka	—	142,673	—	142,673	*
Aleksandar Rajkovic, M.D., Ph.D.	—	16,248	—	16,248	*
Christopher J. Twomey <sup>(6)</sup>	64,500	121,152	64,500	240,152	*
Kristiina Vuori, M.D., Ph.D.	—	118,158	—	118,158	*
Vincent Wong, J.D.	—	16,951	—	16,951	*
Mark Oldakowski	18,165	492,038	815	511,018	*
Richard Shippy	—	34,375	—	34,375	*
<b>All current executive officers and directors as a group</b> (14 persons) <sup>(7)</sup>	175,014	3,159,914	70,839	3,405,767	1.2%

\* Represents beneficial ownership of less than 1%.

- (1) Beneficial ownership is determined in accordance with SEC rules. In computing the beneficial ownership we have included shares for which the named person has sole or shared power over voting or investment decisions. The number of shares of common stock beneficially owned includes common stock which the named person has the right to acquire, through option exercise, RSU vesting, warrant exercise or otherwise, within 60 days after April 1, 2022. No other person or group of affiliated persons is known by us to beneficially own more than 5% of our common stock as of April 1, 2022.
- (2) For each named person, the percentage ownership includes common stock that the person has the right to acquire within 60 days after April 1, 2022, as described in Footnote 1. However, such shares are not deemed outstanding with respect to the calculation of ownership percentage for any other person. In some cases, beneficial ownership calculations for five percent or greater stockholders are based solely on publicly-filed Schedules 13D or 13G, which five percent or greater stockholders are required to file with the SEC, and which generally set forth ownership interests as of April 1, 2022 unless otherwise provided.
- (3) Consists of 14,825,634 shares of common stock held by The Vanguard Group, Inc.'s ("Vanguard") clients, including investment companies registered under the Investment Company Act of 1940 and other managed accounts, that have the right to receive or the

power to direct the receipt of dividends from, or the proceeds from the sale of, such common stock. Vanguard has shared voting power with regard to 547,082 shares, sole dispositive power with regard to 14,064,639 shares and shared dispositive power with regard to 760,995 shares. The address of Vanguard is 100 Vanguard Blvd., Malvern, PA 19355. The foregoing information was obtained from a Form 13G filed on February 9, 2022.

- (4) Consists of 18,660,129 shares of common stock held by the following subsidiaries of BlackRock, Inc. (“BlackRock”): BlackRock Advisors, LLC; BlackRock (Netherlands) B.V.; BlackRock Institutional Trust Company, National Association; BlackRock Asset Management Ireland Limited; BlackRock Financial Management, Inc.; BlackRock Japan Co., Ltd.; BlackRock Asset Management Schweiz AG; BlackRock Investment Management, LLC; FutureAdvisor, Inc.; BlackRock Investment Management (UK) Limited; BlackRock Asset Management Canada Limited; BlackRock Fund Advisors; and BlackRock Fund Managers Ltd. BlackRock has sole voting power and sole dispositive power over the shares of common stock. The address of BlackRock is 55 East 52nd Street, New York, NY 10055. The foregoing information was obtained from a Form 13G filed on February 4, 2022.
- (5) The indicated ownership consists of (i) 3,894 shares of common stock and 3,894 shares of common stock issuable upon the exercise of outstanding warrants held by David L. Barker and (ii) 134,398 shares of common stock subject to options exercisable as of April 1, 2022 held by The Barker/Loring Trust Dated August 27, 2018.
- (6) The indicated ownership consists of 64,500 shares of common stock issuable upon the exercise of outstanding warrants held by the Christopher J. Twomey and Rebecca J. Twomey Family Trust U.T.D. September 20, 2002.
- (7) Consists of (i) shares identified in the list of directors and named executive officers above; (ii) 67,658 shares of common stock held by executive officers who are not named in the table above; and (iii) 729,562 shares of common stock issuable upon the exercise of stock options that are exercisable or will be exercisable within 60 days of April 1, 2022 by executive officers who are not named in the table above.

#### **DELINQUENT SECTION 16(A) REPORTS**

Section 16(a) of the Exchange Act requires our directors and executive officers, and persons who own more than 10% of a registered class of our equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock and other equity securities. Officers, directors and greater than 10% stockholders are required by SEC regulation to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us and written representations that no other reports were required, during the fiscal year ended December 31, 2021, all Section 16(a) filing requirements applicable to our officers, directors and greater than 10% beneficial owners of our capital stock were complied with, except that one report, covering an unvested option to purchase 400,000 shares of our common stock, was filed late by Robert J. Priar, our then-Chief Commercial Officer, and an initial report of ownership was filed late by Mr. Priar. Both reports were due to be filed Thursday, June 3, 2021 but were filed Tuesday, June 8, 2021.

## EXECUTIVE AND DIRECTOR COMPENSATION

Our named executive officers for the year ended December 31, 2021, consisting of our principal executive officer and the next two most highly compensated executive officers as of December 31, 2021, were:

- R. Erik Holmlin, Ph.D., our Chief Executive Officer;
- Mark Oldakowski, our Chief Operating Officer; and
- Richard Shippy, our Chief Business Officer.

The following section provides an overview of the 2021 executive compensation decisions for our named executive officers. The compensation decisions described in the tables and narrative below were made in 2021 or in early 2022.

### Summary Compensation Table

The following table presents all of the compensation awarded to or earned by or paid to our named executive officers during the fiscal years ended December 31, 2021 and 2020.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards <sup>(1)</sup> (\$)	Option Awards <sup>(2)</sup> (\$)	Non-Equity Incentive Plan Compensation <sup>(3)</sup> (\$)	All Other Compensation <sup>(4)</sup> (\$)	Total (\$)
R. Erik Holmlin, Ph.D. <i>Chief Executive Officer</i>	2021	483,684	34,300 <sup>(5)</sup>	2,749,200	4,170,430	121,508	21,349	7,580,471
	2020	376,290 <sup>(6)</sup>	—	—	188,500	121,508	21,275	707,573
Mark Oldakowski <i>Chief Operating Officer</i>	2021	371,162	26,300 <sup>(5)</sup>	1,137,600	1,479,830	76,420	13,848	3,105,160
	2020	288,278 <sup>(6)</sup>	—	—	78,000	76,420	11,400	454,098
Richard Shippy <sup>(7)</sup> <i>Chief Business Officer</i>	2021	172,308	—	—	2,032,000	—	6,912	2,211,220

- (1) Represent the aggregate grant date fair value of time-based restricted stock unit, or RSU, awards and performance-vesting restricted stock unit, or PSU, awards for the applicable fiscal year calculated in accordance with FASB ASC 718, Compensation – Stock Compensation. The grant date fair value of each RSU award is measured based on the closing price of our common stock on the date of grant. Included is a PSU award granted to Dr. Holmlin that, in order to vest, requires achievement of certain performance-based vesting conditions during a four-year performance period. The grant date fair value of this PSU award was determined in accordance with FASB ASC 718 based upon the then-probable outcome of the performance-based vesting conditions underlying such award. The maximum potential value of this PSU award, assuming the highest level of performance achievement, calculated in accordance with FASB ASC 718, was \$1,374,600. These amounts do not reflect whether the NEO has actually realized or will realize a financial benefit from the awards upon the vesting of the granted stock awards, or the sale of the shares underlying such stock awards. For additional detail, see Note 10 of the Annual Report.
- (2) In accordance with SEC rules, this column reflects the aggregate grant date fair value of option awards to our named executive officers during fiscal years ended December 31, 2020 and December 31, 2021 under our 2018 Equity Incentive Plan, as amended (the “2018 Plan”) and our 2020 Inducement Plan, as amended (the “Inducement Plan”), as determined in accordance with FASB ASC 718. The valuation assumptions used in calculating their fair value of the stock options are included in the notes to our audited consolidated financial statements included in Note 10 of the Annual Report. These amounts do not reflect the actual economic value that may be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.
- (3) Amounts reported represent bonuses earned in 2021 and paid in 2022 at the discretion of our Board.
- (4) Amounts for 2021 reflect 401(k) matching contributions of \$11,600, \$11,993 and \$5,908 for Dr. Holmlin, Mr. Oldakowski and Mr. Shippy, respectively, based on a percentage matching system offered by us and \$1,855 for life insurance premiums, prorated for Mr. Shippy to \$1,005 for service in 2021. For Dr. Holmlin, the amount for 2021 also includes a payout of accrued paid time off (“PTO”) of \$7,894, based on our PTO policy change in mid-2021.
- (5) Amounts represent bonus payments to Dr. Holmlin and Mr. Oldakowski in recognition of material sacrifices made for the Company at the height of the COVID-19 pandemic.
- (6) In connection with a COVID-related cost savings initiative, the base salaries for Dr. Holmlin and Mr. Oldakowski were reduced by 50% from April 16, 2020 through June 15, 2020.
- (7) Mr. Shippy began providing services to us in June 2021 and did not receive any compensation from us prior to such date.



## Compensation Program Overview

Our compensation program for executive officers is designed to encourage our management team to continually achieve our short-term and long-term corporate objectives while effectively managing business risks and challenges. We provide what we believe is a competitive total compensation package to our management team through a combination of base salary, an annual performance-based bonus and long-term equity-based incentives.

The compensation of our named executive officers other than our chief executive officer is generally determined and approved by the Compensation Committee of our Board, and the compensation of our chief executive officer is approved by our Board based upon the recommendations of the Compensation Committee.

### Annual Base Salary

The compensation of our named executive officers is generally determined and approved by our Board, based on the recommendation of the Compensation Committee. The 2021 base salaries that became effective as of January 1, 2021 were as follows:

NAME	2021 BASE SALARY \$( <sup>(2)</sup> )
R. Erik Holmlin, Ph.D.	490,000
Mark Oldakowski	376,000
Richard Shippy <sup>(1)</sup>	320,000

(1) Mr. Shippy began providing services to us in June 2021 and did not receive any compensation from us prior to such date. The value provided is the annualized rate for 2021.

(2) Upon review of our compensation philosophy, market data and the recommendations of Aon/Radford, our Compensation Committee approved base salary increases for Dr. Holmlin, Mr. Oldakowski and Mr. Shippy to \$545,000, \$420,000 and \$370,000, respectively, each effective January 1, 2022.

### Bonus Opportunity

In addition to base salaries, our named executive officers are eligible to receive annual performance-based cash bonuses, which are designed to provide appropriate incentives to our executives to achieve defined annual performance goals and to reward our executives for individual achievement towards these goals. The annual performance-based bonus each named executive officer is eligible to receive is generally based on the extent to which we achieve the corporate goals that our Compensation Committee establishes each year and, for all except Dr. Holmlin, the individual's contributions to such achievements. Dr. Holmlin's payout is based entirely on Company performance; Mr. Oldakowski's and Mr. Shippy's payouts are based on Company performance (50% weighting) and individual performance (50% weighting). At the end of the year, our board of directors reviews each executive's performance and determines the actual bonus payout to be awarded to each of our named executive officers.

For 2021, the target bonus for Dr. Holmlin was 50% of base salary, for Mr. Oldakowski was 40% of base salary and for Mr. Shippy was 40% of base salary. Our corporate performance objectives for 2021, as established by our Compensation Committee, included goals regarding operations (including target revenues, key personnel additions and operating income), market development (including promotion of additional studies evaluating our products, development of laboratory development tests and obtaining PLA codes), product development (including with respect to sample prep, bioinformatics applications for OGM and product enhancements), and product quality (including an assessment of supply issues and advancement of research and development initiatives). In February 2022, our Compensation Committee approved a 97% overall achievement level of our corporate performance objectives and awarded bonuses to our named executive officers. The 2021 amounts reflected as Non-Equity Incentive Plan Compensation in the Summary Compensation Table for our named executive officers reflect bonuses earned for 2021 performance.

### Equity-Based Incentive Awards

We believe that our ability to grant equity-based awards is a valuable and necessary compensation tool that aligns the long-term financial interests of our employees, consultants and directors with the financial interests of our stockholders. In addition, we believe that our ability to grant equity-based awards helps us to attract, retain

and motivate employees, consultants and directors, and encourages them to devote their best efforts to our business and financial success. Our board of directors and our Compensation Committee is responsible for approving equity grants. Vesting of equity awards is generally tied to continuous service with us and serves as an additional retention measure. Our executives generally are awarded an initial new hire grant upon commencement of employment. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to our August 2018 initial public offering, or the IPO, we granted all equity awards pursuant to the 2006 Plan. Following our IPO, we have granted all equity awards pursuant to the 2018 Plan and the Inducement Plan. We have historically granted options to our named executive officers, however, in May 2021, in consultation with our compensation consultant, and based on market data, we granted RSU and PSU awards to certain of our named executive officers as further described below. All options are granted with a per share exercise price equal to no less than the fair market value of a share of our common stock on the date of the grant of such award. Generally, our stock option awards vest over a four-year period subject to the holder's continuous service to us. Going forward, we will continue to evaluate our equity compensation practices with respect to the use of options, RSUs, and PSUs and may use a mix of these equity vehicles to incentivize our executive team.

In April 2021, our Compensation Committee granted annual options to purchase 775,000 shares to Dr. Holmlin and 275,000 shares to Mr. Oldakowski. Each option has an exercise price of \$7.83 per share and vests as follows: shares subject to the option vest monthly over 48 months beginning on the one-month anniversary of the vesting commencement date, such that the option shall be fully vested and exercisable on the four-year anniversary of the vesting commencement date, provided in each case that the holder is then providing services to us in accordance with the terms of the 2018 Plan.

The Compensation Committee views it as paramount to secure and retain our senior leadership team, in a fiercely competitive market for talent, and to incentivize them to continue generating value for all stockholders. As such, in May 2021, the Compensation Committee made a separate, one-time grant of RSUs, which have value even during periods of stock price underperformance, and, with respect to Dr. Holmlin, PSUs, in each case in order to further reinforce retention incentives for Dr. Holmlin and Mr. Oldakowski. The Compensation Committee does not intend to provide one-time awards except in rare circumstances as warranted by the situation in a judicious and limited manner, and with robust disclosure of the rationale and context. The Compensation Committee, on advice from our compensation consultant, determined that the RSUs and PSUs would further align Dr. Holmlin's and Mr. Oldakowski's interests with stockholders and also recognize their significant contributions in steering us through a challenging period that included, but was not limited to, market conditions affecting our stock price, the COVID-19 pandemic impacts on revenue, and opportunities to raise additional funds for our operations and to execute on strategic transactions.

In May 2021, our Compensation Committee granted RSU awards to be issued 290,000 shares to Dr. Holmlin and 240,000 shares to Mr. Oldakowski. Each RSU vests as follows: 50% of the total RSUs vest on May 12, 2022 and 50% of the total RSUs vest on May 12, 2023, provided in each case that the holder is then providing services to us in accordance with the terms of the 2018 Plan. In addition, Dr. Holmlin's RSU provides that if his employment with us is terminated for any reason other than as a result of death, disability, cause, or resignation without good reason, the RSU shall be accelerated such that effective as of such termination the RSU shall be deemed vested to the same extent as if Dr. Holmlin remained continuously employed with us through the date that is 18 months following such termination, subject to Dr. Holmlin's execution of a release.

In May 2021, our Compensation Committee also granted a PSU award to be issued 290,000 shares to Dr. Holmlin, which vests upon the Compensation Committee's certification of achievement of a revenue performance goal within a four-year performance period. The Compensation Committee set the target for the revenue performance goal at a level that it determined to be rigorous and challenging and that would require extraordinary efforts, strong leadership, effective leveraging of our competencies and a focus on driving results. Additional detail about the performance goal will be disclosed at the end of the performance period, as doing so before that time could be competitively harmful to us. The PSU award also provides that if Dr. Holmlin's employment with us is terminated for any reason other than as a result of death, disability, cause, or resignation without good reason, then the PSU may become vested if the performance goal is achieved by the earlier of 18 months following such termination or May 12, 2025, subject to Dr. Holmlin's execution of a release.

In June 2021, our Compensation Committee granted an option to purchase 400,000 shares to Mr. Shippy in connection with his commencement of employment with us. The option has an exercise price of \$7.37 per share and vests as follows: 25% of the shares subject to the option vest on the one-year anniversary of the grant date, and the remaining shares subject to the option vest in 36 equal monthly installments thereafter, provided in each case that the holder is then providing services to us in accordance with the terms of the 2018 Plan.

In February 2022, our Compensation Committee granted annual options to purchase 1,400,000 shares to Dr. Holmlin, 650,000 shares to Mr. Oldakowski and 550,000 shares to Mr. Shippy. Each option has an exercise price of \$2.18 per share and vests as follows: shares subject to the option vest monthly over 48 months beginning on the one-month anniversary of the grant date, such that each option shall be fully vested and exercisable on the four-year anniversary of the grant date.

For additional information, please see below under “Outstanding Equity Awards at Fiscal Year-End.”

#### **Agreements with Our Named Executive Officers**

Below are descriptions of our employment agreements with our named executive officers. For a discussion of the severance pay and other benefits to be provided in connection with a termination of employment and/or a change in control under the arrangements with our named executive officers, please see “Potential Payments upon Termination or Change in Control” below.

*Dr. Holmlin.* We entered into an employment agreement with Dr. Holmlin in January 2011, as amended in March 2011 and in November 2017, which governs the current terms of his employment with us. Pursuant to the agreement, as amended, Dr. Holmlin is entitled to an annual base salary and an annual performance bonus. Dr. Holmlin’s employment is at will.

*Mr. Oldakowski.* We entered into an employment agreement with Mr. Oldakowski on November 7, 2017, which governs the current terms of his employment with us. Pursuant to the agreement, Mr. Oldakowski is entitled to an annual base salary and is eligible to receive an annual performance bonus. Mr. Oldakowski’s employment is at will.

*Mr. Shippy.* We entered into an employment agreement with Mr. Shippy on June 14, 2021, which governs the current terms of his employment with us. Pursuant to the agreement, Mr. Shippy was entitled to an initial annual base salary of \$320,000 (subsequently increased to \$370,000, as described under “Annual Base Salary” above). Mr. Shippy is eligible to receive an annual performance bonus with a target amount of up to 40% of his base salary. Mr. Shippy’s employment is at will.

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

Regardless of the manner in which a named executive officer’s service terminates, each named executive officer is entitled to receive amounts earned during his term of service, including unpaid salary and unused vacation. In addition, each of our named executive officers is eligible to receive certain benefits pursuant to his employment agreement with us, as described below. For the definitions of “cause,” “good reason” and “disability” referenced below, please refer to the individual employment agreements with each of our named executive officers.

*Dr. Holmlin.* Upon Dr. Holmlin’s termination for any reason other than death, disability, cause or resignation without good reason, and subject to Dr. Holmlin’s execution of a release, Dr. Holmlin shall be eligible to receive (i) a lump sum amount equal to nine months of base salary, (ii) accelerated vesting of any options or restricted shares that would have vested within 18 months after the date of termination and (iii) premiums for continued health coverage for nine months following the date of termination, or until Dr. Holmlin is no longer eligible for continuation coverage, whichever is earlier. In the event of termination due to disability, and subject to Dr. Holmlin’s execution of a release, Dr. Holmlin shall be eligible to receive accelerated vesting in full for any unvested portion of the options granted pursuant to his agreement. In the event of a deemed liquidation event (as defined in Dr. Holmlin’s employment agreement), the options granted to Dr. Holmlin pursuant to his agreement shall vest in full.

*Mr. Oldakowski.* Upon termination without cause, and subject to Mr. Oldakowski’s execution of a release, Mr. Oldakowski will be eligible to receive (i) six months of continued base salary payments at the rate in effect at the time of termination and (ii) premiums for continued health coverage for six months following the date of

termination or until Mr. Oldakowski is no longer eligible for continuation coverage or he becomes eligible for new healthcare eligibility available through new employment, whichever is earlier.

*Mr. Shippy.* Upon termination without cause, and subject to Mr. Shippy's execution of a release, Mr. Shippy will be eligible to receive (i) six months of continued base salary payments at the rate in effect at the time of termination and (ii) premiums for continued health coverage for six months following the date of termination or until Mr. Shippy is no longer eligible for continuation coverage or he becomes eligible for new healthcare eligibility available through new employment, whichever is earlier.

Each of our named executive officers holds stock options, RSU awards or PSU awards under the 2006 Plan, 2018 Plan or the Inducement Plan, as the case may be, that were granted subject to the general terms of the 2006 Plan, the 2018 Plan or the Inducement Plan, as applicable, and the relevant form award agreement. The specific vesting terms of each named executive officer's stock options are described below under "Outstanding Equity Awards at Fiscal Year-End." The acceleration provisions applicable to Dr. Holmlin's RSU and PSU awards is described above under "Equity-Based Incentive Awards."

### Outstanding Equity Awards at Fiscal Year-End

The following table presents information regarding outstanding equity awards held by our named executive officers as of December 31, 2021.

Name	Grant Date	Option Awards <sup>(1)</sup>				Stock Awards <sup>(2)</sup>			Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested <sup>(5)</sup>
		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price Per Share <sup>(3)</sup> (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested <sup>(4)</sup> (#)	Market Value of Shares or Units of Stock That Have Not Vested <sup>(5)</sup> (\$)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested <sup>(6)</sup> (#)	
R. Erik Holmlin, Ph.D. <sup>(7)</sup>	5/12/2021	—	—	—	—	—	—	290,000	867,100
	5/12/2021	—	—	—	—	290,000	867,100	—	—
	4/1/2021 <sup>(8)</sup>	129,166	645,834	7.83	3/31/2031	—	—	—	—
	2/18/2020 <sup>(8)</sup>	132,916	157,084	1.04	2/17/2030	—	—	—	—
	3/1/2019 <sup>(8)</sup>	99,687	45,313	4.25	2/28/2029	—	—	—	—
	10/1/2018	256,540	—	7.77	9/30/2028	—	—	—	—
	2/7/2017 <sup>(9)</sup>	96,243	57,744	1.30	2/6/2027	—	—	—	—
	1/29/2015	7,284	—	64.22	1/28/2025	—	—	—	—
Mark Oldakowski	6/20/2012	1,115	—	68.50	6/19/2022	—	—	—	—
	5/12/2021	—	—	—	—	240,000	717,600	—	—
	4/1/2021 <sup>(8)</sup>	45,833	229,167	7.83	3/31/2031	—	—	—	—
	2/18/2020 <sup>(8)</sup>	119,998	2	1.04	2/17/2030	—	—	—	—
	3/1/2019 <sup>(8)</sup>	41,250	18,750	\$ 4.25	2/28/2029	—	—	—	—
	10/1/2018	59,590	—	\$ 7.77	9/30/2028	—	—	—	—
	2/7/2017	34,219	—	\$ 1.30	2/6/2027	—	—	—	—
	1/29/2015	541	—	64.22	1/28/2025	—	—	—	—
Richard Shippy	10/27/2014	1,086	—	64.22	10/26/2024	—	—	—	—
	6/15/2021 <sup>(10)</sup>	—	400,000	\$ 7.37	6/14/2031	—	—	—	—

(1) Option awards in this column were granted under the 2006 Plan, the 2018 Plan and the Inducement Plan.

(2) Stock awards in this column were granted under the 2018 Plan.

(3) All of the option awards were granted with a per share exercise price equal to the fair market value of one share of our common stock on the date of grant, as determined in good faith by our board of directors.

(4) Each award listed in this column represents an RSU award that vests in two equal annual installments on the anniversary of the applicable vesting commencement date, subject to the continued service through each such applicable vesting date, and with respect to Dr. Holmlin, subject to potential acceleration as described under "Equity-Based Incentive Awards" above.

(5) The market values of the RSU and PSU awards that have not vested are calculated by multiplying the number of shares underlying the RSU or PSU awards shown in the table by \$2.99, the closing price of our ordinary shares on December 31, 2021.

(6) PSU award granted on May 14, 2021 under the 2018 Plan that, in order to vest, requires achievement of certain performance goals during a

four-year performance period ending on May 12, 2025, subject to continued service with us through the end of the performance period and to potential acceleration as described under “Equity-Based Incentive Awards” above. The number of shares subject to the PSU award assumes achievement of the goals, as there is only a single estimated payout pursuant to the award. For additional detail, see the discussion in Note 10 of the Annual Report. As of December 31, 2021, none of the performance criteria underlying these PSU awards have been achieved.

- (7) All outstanding options under the 2006 Plan, held by Dr. Holmlin, were amended by our board of directors in August 2018 to suspend the vesting until such time as the price of our common stock is at least \$12.00 per share for 90 consecutive trading days, at which point the suspension will automatically and immediately lapse and the awards will vest to the extent they otherwise would have vested pursuant to their terms and notwithstanding the suspension and will continue to vest thereafter under their original vesting schedules. In addition, the suspension will lapse as to the awards held by Dr. Holmlin upon Dr. Holmlin’s death, disability or upon a change in control of the Company, as such terms are defined in the 2018 Plan.(8)Each option award vests as follows: the shares subject to the option vest monthly over 48 months beginning on the one-month anniversary of the vesting commencement date, such that the option shall be fully vested and exercisable on the four-year anniversary of the vesting commencement date.
- (9) Each option award vests as follows: 25% of the shares subject to the option are fully vested and 6.25% of the shares subject to the option vest at the end of each three-month anniversary of the vesting commencement date, subject to single trigger acceleration of vesting in connection with a change of control, provided in each case that the holder is then providing services to us in accordance with the terms of the 2006 Plan.
- (10) Option awards vest as follows: 25% of the shares subject to the option vest on the one-year anniversary of the grant date, and the remaining shares subject to the option vest in 36 equal monthly installments thereafter, subject to the continued service through each such applicable vesting date.

### **Perquisites, Health, Welfare and Retirement Benefits**

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, life, disability and accidental death and dismemberment insurance plans, in each case on the same basis as all of our other employees. We pay the premiums for the life, disability, accidental death and dismemberment insurance for all of our employees, including our named executive officers. In addition, we provide a 401(k) plan to our employees, including our named executive officers, as discussed in the section below entitled “-401(k) Plan.” We generally do not provide perquisites or personal benefits to our named executive officers.

#### **401(k) Plan**

We maintain a defined contribution employee retirement plan, or 401(k) plan, for our employees. Our named executive officers are eligible to participate in the 401(k) plan on the same basis as our other employees. The 401(k) plan is intended to qualify as a tax-qualified plan under Section 401(k) of the Code. The plan permits us to make discretionary contributions, including matching contributions equal to 100% of salary deferrals up to the first 3% of eligible compensation plus 50% of salary deferrals up to the next 2% of eligible compensation. The 401(k) plan currently does not offer the ability to invest in our securities.

#### **Nonqualified Deferred Compensation**

Our named executive officers did not participate in, or earn any benefits under, a nonqualified deferred compensation plan sponsored by us during the fiscal year ended December 31, 2021. Our Board may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

#### **Equity Benefit Plans**

The principal features of our equity plans are summarized below.

#### **2020 Inducement Plan**

The Board adopted the Inducement Plan in August 2020. Our 2020 Inducement Plan was adopted without stockholder approval pursuant to Rule 5635(c) of the Nasdaq Listing Rules. Our 2020 Inducement Plan provides for the grant of nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, performance cash awards and other forms of stock awards.

Stock awards granted under our 2020 Inducement Plan may only be made to individuals who did not previously serve as employees or non-employee directors of the Company or an affiliate of the Company (or following such individuals’ bona fide period of non-employment with the Company or an affiliate of the Company), as an inducement material to the individuals’ entering into employment with the Company or an affiliate of the Company or in a manner otherwise permitted by Rule 5635(c) of the Nasdaq Listing Rules. In addition, stock awards must be approved by either a majority of the Company’s “independent directors”

(as such term is defined in Rule 5605(a)(2) of the Nasdaq Listing Rules) or the Compensation Committee, provided such committee comprises solely independent directors. The terms of our 2020 Inducement Plan are otherwise substantially similar to our 2018 Plan (including with respect to the treatment of stock awards upon corporate transactions involving us or certain changes in our capitalization), except stock awards granted under our 2020 Inducement Plan may not be repriced without stockholder approval.

The maximum number of shares of our common stock that may be issued under our 2020 Inducement Plan is 3,100,000 shares. Shares subject to stock awards granted under our 2020 Inducement Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, do not reduce the number of shares available for issuance under our 2020 Inducement Plan. Additionally, shares become available for future grant under our 2020 Inducement Plan if they were issued under stock awards granted under our 2020 Inducement Plan and we repurchase or reacquire them or they are forfeited. This includes shares used to pay the exercise price of a stock award or to satisfy the tax withholding obligations related to a stock award.

### ***2018 Equity Incentive Plan***

Our 2018 Plan became effective upon the IPO following approval by our Board and our stockholders. The number of shares of common stock reserved for issuance under the 2018 Plan will automatically increase on January 1 of each calendar year, starting on January 1, 2019 through January 1, 2028, in an amount equal to 5% of the total number of shares of the Company's capital stock outstanding on the last day of the calendar month before the date of each automatic increase, or a lesser number of shares determined by the Board. As of December 31, 2021, 6,196,940 shares of common stock were authorized for future grants under the 2018 Plan and there were 11,040,465 outstanding stock options.

Our 2018 Plan provides for the grant of incentive stock options, or ISOs, within the meaning of Section 422 of the Code, to employees, including employees of any parent or subsidiary, and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, performance cash awards and other forms of stock awards to employees, directors and consultants, including employees and consultants of our affiliates. Our 2018 Plan is a successor to and continuation of our 2006 Plan. Our Compensation Committee has the authority, concurrent with our Board, to administer our 2018 Plan, and may also delegate to one or more of our officers certain authority under the terms of the 2018 Plan.

Pursuant to the 2018 Plan, the maximum number of shares of common stock subject to stock awards granted under the 2018 Plan or otherwise during a single calendar year to any non-employee director, taken together with any cash fees paid by the Company to such non-employee director during such calendar year for service on the Board of Directors, will not exceed \$500,000 in total value (calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes), or, with respect to the calendar year in which a non-employee director is first appointed or elected to the Board of Directors, \$800,000.

Stock options under the 2018 Plan are generally granted with an exercise price equal to the fair market value of our common stock on the date of grant. Options granted under the 2018 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator. Options may have a term up to a maximum of 10 years. Unless the terms of an optionee's stock option agreement provides otherwise, if an optionee's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionee may generally exercise any vested options for a period of three months following the cessation of service. If an optionee's service relationship with us, or any of our affiliates, ceases due to disability or death, or an optionee dies within a certain period following cessation of service, the optionee or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual. In no event may an option be exercised beyond the expiration of its term.

Our 2018 Plan provides that in the event of certain specified significant corporate transactions (or a change in control, as defined below), unless otherwise provided in an award agreement or other written agreement between us and the award holder, the administrator may take one or more of the following actions with respect to such stock awards:

- arrange for the assumption, continuation, or substitution of a stock award by a successor corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;
- accelerate the vesting, in whole or in part, of the stock award and provide for its termination if not exercised (if applicable) at or before the effective time of the transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us;
- cancel or arrange for the cancellation of the stock award, to the extent not vested or not exercised before the effective time of the transaction, in exchange for a cash payment, if any, as determined by the board; or
- make a payment, in the form determined by our Board, equal to the excess, if any, of (A) the value of the property the participant would have received on exercise of the award immediately before the effective time of the transaction, over (B) any exercise price payable by the participant in connection with the exercise. The plan administrator is not obligated to treat all stock awards or portions of stock awards, even those that are of the same type, in the same manner and is not obligated to treat all participants in the same manner.

Under the 2018 Plan, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction, or (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

In the event of a change in control, the board of directors may take any of the above-mentioned actions. Awards granted under the 2018 Plan will not receive automatic acceleration of vesting and exercisability in the event of a change in control, although this treatment may be provided for in an award agreement or other written agreement between the Company and the participant. Under the 2018 Plan, a change in control is generally (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock, (2) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity), (3) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our stockholders, (4) a complete dissolution or liquidation of the Company, or (5) when a majority of our Board becomes comprised of individuals who were not serving on our Board on the date of the underwriting agreement related to the IPO, or the incumbent board, or whose nomination, appointment, or election was not approved by a majority of the incumbent board still in office.

#### ***Amended and Restated 2006 Equity Compensation Plan***

Our Board adopted and our stockholders originally approved our 2006 Plan in September 2006, and it was subsequently amended and restated in September 2008 and most recently amended in March 2016. No further grants may be made under our 2006 Plan following the IPO, however outstanding awards granted under our 2006 Plan remain subject to the terms of our 2006 Plan and applicable award agreements. As of December 31, 2021, there were options to purchase 244,364 shares of common stock outstanding under the 2006 Plan.

Our 2006 Plan allowed for the grant of ISOs to employees, including employees of any subsidiary, and for the grant of NSOs, stock appreciation rights, restricted stock awards and restricted stock units and other equity awards to employees, directors and consultants, including employees and consultants of our subsidiaries. Our Compensation Committee has the authority, concurrent with our Board, to administer our 2006 Plan. Unless the terms of an optionee's stock option agreement provides otherwise, if an optionee's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionee may generally exercise any vested options for a period of three months following the cessation of service. If an optionee's

service relationship with us, or any of our affiliates, ceases due to disability or death, or an optionee dies within a certain period following cessation of service, the optionee or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability or death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual. In no event may an option be exercised beyond the expiration of its term.

Our 2006 Plan provides that in the event of a change of control, all awards granted under the 2006 Plan shall become fully vested and exercisable (as applicable), unless the board of directors determines otherwise. In the event of a change of control, the administrator may take any of the following actions with respect to any or all outstanding awards: (i) determine that all outstanding options and stock appreciation rights that are not exercised shall be assumed by, or replaced with comparable options by the surviving corporation (or a parent or subsidiary of the surviving corporation), and other outstanding grants that remain in effect after the change of control shall be converted to similar grants of the surviving corporation (or a parent or subsidiary of the surviving corporation), (ii) require that grantees surrender their outstanding options and stock appreciation rights in exchange for one or more payments, in cash or Company stock as determined by the board of directors, in an amount, if any, equal to the amount by which the then fair market value of the shares of Company stock subject to the grantee's unexercised options and stock appreciation rights exceeds the exercise price or base amount of the options and stock appreciation rights, on such terms as the board of directors determines, or (iii) after giving grantees an opportunity to exercise their outstanding options and stock appreciation rights, terminate any or all unexercised options and stock appreciation rights at such time as the board of directors deems appropriate.

Such assumption, surrender or termination shall take place as of the date of the change of control or such other date as the board of directors may specify.

Under the 2006 Plan, a change of control is generally (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock, (2) the consummation of a merger or consolidation with another corporation where our stockholders, immediately prior to the merger or consolidation, will not beneficially own, immediately after the merger or consolidation, shares entitling such stockholders to more than 50% of all votes to which all stockholders of the surviving corporation would be entitled in the election of directors, (3) the consummation of a sale or other disposition of all or substantially all of our assets, or (4) the consummation of a liquidation or dissolution.

#### ***2018 Employee Stock Purchase Plan***

Additional long-term equity incentives are provided through the 2018 Employee Stock Purchase Plan, or the ESPP, which became effective in connection with the IPO. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code. Our Compensation Committee has the authority, concurrent with our Board, to administer the ESPP. Under the ESPP, generally all of our regular employees (including our Named Executive Officers during their employment with us) may participate and may contribute, normally through payroll deductions, up to 15% of their earnings for the purchase of our common stock.

The ESPP is implemented through a series of offerings of purchase rights to eligible employees. Under the ESPP, we may specify offerings with a duration of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which our common stock will be purchased for employees participating in the offering. Unless otherwise determined by our Compensation Committee, shares are purchased for accounts of employees participating in the ESPP at a price per share equal to the lower of (a) 85% of the fair market value of our common stock on the first date of an offering or (b) 85% of the fair market value of our common stock on the date of purchase.



## Equity Compensation Plan Information

The following table provides information as of December 31, 2021 with respect to equity compensation plans (including individual compensation arrangements) under which the Company's common stock is authorized for issuance.

Plan Category	(a)	(b)	(c)
	Number of securities to be issued upon exercise of outstanding options and rights	Weighted average exercise price of outstanding options and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by stockholders:			
Amended and Restated 2006 Equity Compensation Plan <sup>(1)</sup>	244,364	\$4.37	—
2018 Equity Incentive Plan, as amended <sup>(2)</sup>	11,040,465	\$5.62	6,196,940
2018 Employee Stock Purchase Plan <sup>(3)</sup>	—	—	217,560
Equity compensation plans not approved by stockholders:			
2020 Inducement Plan	2,299,466	\$2.15	656,167
<b>Total</b>	<b>13,584,275</b>	<b>\$4.97</b>	<b>7,058,765</b>

(1) Effective following the IPO in August 2018, no additional awards may be granted under the 2006 Plan.

(2) Pursuant to an "evergreen" provision contained in the 2018 Plan, as amended May 3, 2020, on January 1st of each year through January 1, 2028, the number of shares authorized for issuance under the 2018 Plan will be automatically increased by the lesser of: (a) 5.0% of the total number of shares of our capital stock outstanding on December 31st of the preceding calendar year; or (b) such lesser number of shares of our common stock as our Board may designate prior to the applicable January 1st.

(3) Pursuant to an "evergreen" provision contained in the ESPP, on January 1st of each year through January 1, 2028, the number of shares authorized for issuance under the ESPP will be automatically increased by a number equal to the lesser of: (a) 1.0% of the total number of shares of capital stock outstanding on December 31st of the preceding calendar year; (b) 220,000 shares; or (c) such lesser number of shares of our common stock as our Board may designate prior to the applicable January 1st.

## Director Compensation

Our Compensation Committee reviews the compensation program for our non-employee directors on an annual basis, with the assistance of its independent compensation consultant, who prepares a comprehensive assessment of our non-employee director compensation program. Such assessment includes comparing our current non-employee director compensation against competitive market practices using the same compensation peer group used for executive compensation purposes and an update on recent trends in director compensation. Following such review, the Compensation Committee approves any updates to the non-employee director compensation policy.

Our Board adopted a non-employee director compensation policy in July 2018 that became effective upon the IPO and is applicable to each member of our Board who is not also serving as an employee or consultant to the Company. The Compensation Committee subsequently amended the non-employee director compensation policy effective August 17, 2021 and subsequently effective November 2, 2021. This compensation policy, as in effect prior to the August 2021 amendment, provided that each such non-employee director would receive the following compensation for service on our Board:

- an annual cash retainer of \$30,000;
- an additional annual cash retainer of \$20,000 for service as chairman of the board of directors;
- an additional annual cash retainer of \$15,000, \$10,000 and \$10,000 for service as chair of the Audit Committee, Compensation Committee and the Nominating and Corporate Governance Committee, respectively;

- an additional annual cash retainer of \$7,500, \$5,000 and \$5,000 for service as a member of the Audit Committee, Compensation Committee and the Nominating and Corporate Governance Committee, respectively (not applicable to committee chairs);
- an initial option grant to purchase common stock with an aggregate Black-Scholes option value of \$50,000 on the date of each such non-employee director's appointment to our Board; and
- an annual option grant to purchase common stock with an aggregate Black-Scholes option value of \$35,000 on the date of each of our annual stockholder meetings.

Following the August 2021 amendment, this compensation policy provides that each such non-employee director will receive the following compensation for service on our Board:

- an annual cash retainer of \$40,000;
- an additional annual cash retainer of \$20,000 for service as chairman of the board of directors;
- an additional annual cash retainer of \$20,000, \$15,000 and \$10,000 for service as chair of the Audit Committee, the Compensation Committee and the Nominating and Corporate Governance Committee, respectively;
- an additional annual cash retainer of \$10,000, \$7,500 and \$5,000 for service as a member of the Audit Committee, Compensation Committee and the Nominating and Corporate Governance Committee, respectively (not applicable to committee chairs);
- an initial option grant to purchase common stock with an aggregate Black-Scholes option value of \$247,500 on the date of each such non-employee director's appointment to our Board; and
- an annual option grant to purchase common stock with an aggregate Black-Scholes option value of \$165,000 on the date of each of our annual stockholder meetings.

The foregoing increases in non-employee director compensation were effective retroactively as of the beginning of the third quarter of 2021. In November 2021, this compensation policy was amended to provide for a \$10,000 additional annual cash retainer for service as chair of the Science and Technology Committee and a \$5,000 additional annual cash retainer for service as a member of the Science and Technology Committee (not applicable to the committee chair), and otherwise remains as previously in effect.

Each of the option grants described above will be granted under our 2018 Plan. Each such option grant will vest and become exercisable subject to the director's continuous service to us, provided that each option will vest in full upon a change in control (as defined in the 2018 Plan). The term of each option will be 10 years, subject to earlier termination as provided in the 2018 Plan, provided that upon a termination of service other than for death, disability or cause, the post-termination exercise period will be 12 months from the date of termination. An eligible director may decline all or any portion of his or her compensation by giving notice to the Company prior to the date cash may be paid or equity awards are to be granted, as the case may be.

We have reimbursed and will continue to reimburse all of our non-employee directors for their reasonable out-of-pocket expenses incurred in attending board of directors and committee meetings. Dr. Holmlin, our President and Chief Executive Officer, is also a director but did not receive any additional compensation for his service as a director.

The following table sets forth in summary form information concerning the compensation of our non-employee directors during the year ended December 31, 2021:

NAME	FEES EARNED OR PAID IN CASH	OPTION AWARDS \$( <sup>1</sup> )	TOTAL (\$)
David L. Barker, Ph.D.	\$71,875	\$165,000	\$236,875
Yvonne Linney, Ph.D.	\$37,500	\$165,000	\$202,500
Albert Luderer, Ph.D.	\$50,625	\$165,000	\$215,625
Hannah Mamuszka	\$38,125	\$165,000	\$203,125
Aleksandar Rajkovic, M.D., Ph.D. <sup>(2)</sup>	—	—	—
Christopher Twomey	\$48,750	\$165,000	\$213,750
Kristiina Vuori, M.D., Ph.D.	\$43,125	\$165,000	\$208,125
Vincent Wong, J.D. <sup>(3)</sup>	—	\$247,500	\$247,500

(1) The amounts reported reflect the aggregate grant date fair value of each equity award granted to our non-employee directors during the fiscal year ended December 31, 2021, as determined in accordance with FASB ASC 718. The valuation assumptions used in calculating these amounts are included in the notes to our consolidated financial statements included elsewhere in the Annual Report. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. These amounts do not reflect the actual economic value that will be realized by our non-employee directors upon the vesting of the stock options, the exercise of the stock options or the sale of the common stock underlying such stock options. As of December 31, 2021, the aggregate number of shares outstanding under all options to purchase our common stock held by our non-employee directors were: Dr. Barker, 138,422; Dr. Linney 173,672; Dr. Luderer 134,217; Ms. Mamuszka 173,672; Dr. Rajkovic 0; Mr. Twomey 125,176; Dr. Vuori 123,023; and Mr. Wong 122,054.

(2) Dr. Rajkovic was appointed to our Board in February 2022.

(3) Mr. Wong was appointed to our Board in December 2021 and therefore did not attend any Board meetings during 2021.

**RELATED-PERSON TRANSACTIONS POLICY AND PROCEDURES**

In 2018, the Company adopted a written Related-Person Transactions Policy that sets forth the Company's policies and procedures regarding the identification, review, consideration and approval or ratification of "related-persons transactions." For purposes of the Company's policy only, a "related-person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which the Company and any "related person" are participants involving an amount that exceeds \$120,000.

Transactions involving compensation for services provided to the Company as an employee, director, consultant or similar capacity by a related person are not covered by this policy. A related person is any executive officer, director, or more than 5% stockholder of the Company, including any of their immediate family members, and any entity owned or controlled by such persons.

Under the policy, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to the Audit Committee (or, where Audit Committee approval would be inappropriate, to another independent body of the Board) or the Board for consideration and approval or ratification. The presentation must include a description of, among other things, all of the parties, the direct and indirect interests of the related parties, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management's recommendation. To identify related-person transactions in advance, the Company relies on information supplied by its executive officers, directors and certain significant stockholders. In considering related-person transactions, the Audit Committee takes into account the relevant available facts and circumstances including, but not limited to (a) the risks, costs and benefits to the Company, (b) the impact on a director's independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated, (c) the terms of the transaction, (d) the availability of other sources for comparable services or products and (e) the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval. The policy requires that, in determining whether to approve, ratify or reject a related-person transaction, the Audit Committee consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, the best interests of the Company and its stockholders, as the Audit Committee determines in the good faith exercise of its discretion.

**CERTAIN RELATED-PERSON TRANSACTIONS**

Other than compensation arrangements for our directors and executive officers, which are described above under the heading "Executive and Director Compensation" and except as set forth below, there were no transactions since January 1, 2020 to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed the lesser of (a) \$120,000 or (b) 1% of the average of our total assets for the fiscal years ended December 31, 2021 or 2020; and
- any of our directors, executive officers or holders of more than 5% of our capital stock, 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.

**Indemnification Agreements**

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated bylaws. These agreements, among other things, require us to indemnify our directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may decline in value to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

## HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Notices of Internet Availability of Proxy Materials or other Annual Meeting materials with respect to two or more stockholders sharing the same address by delivering a single Notice of Internet Availability of Proxy Materials or other Annual Meeting materials addressed to those stockholders. This process, which is commonly referred to as “householding,” potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are Bionano stockholders will be “householding” the Company’s proxy materials. A single Notice of Internet Availability of Proxy Materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders.

Once you have received notice from your broker that they will be “householding” communications to your address, “householding” will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in “householding” and would prefer to receive a separate Notice of Internet Availability of Proxy Materials, please notify your broker or Bionano. Direct your written request to the attention of the Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121 or call us at 858-888-7600. Stockholders who currently receive multiple copies of the Notice of Internet Availability of Proxy Materials at their addresses and would like to request “householding” of their communications should contact their brokers.

## OTHER MATTERS

The Board knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the Annual Meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

By Order of the Board of Directors

/s/ R. Erik Holmlin, Ph.D.

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R. Erik Holmlin, Ph.D.

Secretary

April 27, 2022

**A copy of the Company's Annual Report to the Securities and Exchange Commission on Form 10-K for the fiscal year ended December 31, 2021 is available without charge upon written request to: Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121.**



BIONANO GENOMICS, INC.  
9540 TOWNE CENTRE DRIVE  
SUITE 100  
SAN DIEGO, CA 92121



**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 on June 8, 2022. 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/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022)

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 on June 8, 2022. 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:

D81268-P70398

KEEP THIS PORTION FOR YOUR RECORDS  
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

<b>BIONANO GENOMICS, INC.</b>		<b>For All</b>	<b>Withhold All</b>	<b>For All Except</b>	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.
<b>The Board of Directors recommends you vote FOR the following proposal:</b>					
1.	Election of Class I Directors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Nominees:</b>					
	01) David L. Barker, Ph.D.				
	02) R. Erik Holmlin, Ph.D.				
	03) Vincent J. Wong, J.D., M.B.A.				
<b>The Board of Directors recommends you vote FOR the following proposal 2:</b>					
2.	Approval, on an advisory basis, of our executive compensation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>The Board of Directors recommends you vote 1 YEAR on the following proposal 3:</b>		<b>1 Year</b>	<b>2 Years</b>	<b>3 Years</b>	<b>Abstain</b>
3.	Approval, on an advisory basis, of the frequency of the advisory approval of our executive compensation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>The Board of Directors recommends you vote FOR the following proposal 4:</b>					
4.	To ratify the selection of BDO USA, LLP by the Audit Committee of the Board of Directors to serve as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>NOTE:</b> The proxies may vote in their discretion upon any other business that may properly come before the meeting or any adjournment 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.					
<input type="text"/>		<input type="text"/>		<input type="text"/>	
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).

D81269-P70398

**BIONANO GENOMICS, INC.  
Annual Meeting of Stockholders  
June 9, 2022, 10:00 AM (Pacific Time)  
This proxy is solicited on behalf of the Board of Directors**

The undersigned hereby appoints R. Erik Holmlin, Ph.D. and Christopher Stewart, and each or either of them, as the true and lawful attorneys of the undersigned, with full power of substitution and revocation, and authorizes them, and each of them, to represent and to vote, as designated on the reverse side of this ballot, all the shares of capital stock of Bionano Genomics, Inc. which the undersigned is entitled to vote at the Annual Meeting of Stockholders to be held virtually, via live webcast at [www.virtualshareholdermeeting.com/BNGO2022](http://www.virtualshareholdermeeting.com/BNGO2022), on Thursday, June 9, 2022, at 10:00 AM Pacific Time, and any adjournment or postponement thereof.

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

**In their discretion, the proxies are authorized to vote upon such other business as may properly come before the meeting.**

**Votes must be received by 11:59 P.M., Eastern Time, on June 8, 2022.**

**Continued and to be signed on reverse side**