

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**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

Bionano Genomics, Inc.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check all boxes that apply):

- No fee required
 - Fee paid previously with preliminary materials
 - Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11
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BIONANO GENOMICS, INC.

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



NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To Be Held On Wednesday, October 2, 2024

Dear Stockholders:

You are cordially invited to attend a Special Meeting of Stockholders (the “Special Meeting”) of Bionano Genomics, Inc., a Delaware corporation (the “Company”), to be held on Wednesday, October 2, 2024, at 10:00 a.m. Pacific Time. The Special Meeting will be held in a virtual meeting format only, via live audio webcast. **You will not be able to attend the Special Meeting in person.** You will be able to attend and participate in the Special Meeting online by visiting <https://www.virtualshareholdermeeting.com/BNGO2024SM>, where you will be able to listen to the meeting live, submit questions and vote. You will need to have the control number included in the *Notice of Internet Availability of Proxy Materials* (the “Notice”), on your voting instruction form, on your proxy card or on the instructions that accompanied your proxy materials to participate in the virtual Special Meeting. **As always, we encourage you to vote your shares prior to the Special Meeting.**

You are being asked to vote on the following matter:

1. To approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of up to an aggregate of 35,026,272 shares of common stock upon the exercise of certain Series A warrants and Series B warrants issued in connection with a private placement pursuant to the securities purchase agreement dated July 4, 2024, between the Company and certain institutional investors thereto.

This item of business is more fully described in the Proxy Statement accompanying this notice.

The record date for the Special Meeting is Monday, August 12, 2024. Only stockholders of record at the close of business on that date may vote at the Special Meeting or any adjournment thereof. Stockholders of record must have the control number included in your Notice, on your voting instruction form, on your proxy card or on the instructions that accompanied your proxy materials to participate in the Special Meeting. If your shares are held in street name and your voting instruction form or Notice indicates that you may vote those shares through the www.proxyvote.com website, then you may access, participate in, and vote at the Special Meeting with the control number indicated in your Notice, on your voting instruction form, on your proxy card or on the instructions that accompanied your proxy materials. Otherwise, stockholders who hold their shares in street name should contact their bank, broker, or other nominee (preferably at least five days before the Special Meeting) and obtain a “legal proxy” in order to be able to participate in or vote at the Special Meeting.

Important Notice Regarding the Availability of Proxy Materials for the Special Meeting to Be Held on Wednesday, October 2, 2024 at 10:00 a.m. Pacific Time via live audio webcast at <https://www.virtualshareholdermeeting.com/BNGO2024SM>.

The Company’s Notice and proxy materials are available at www.proxyvote.com.

By Order of the Board of Directors

/s/ Jonathan Dixon

Jonathan Dixon
Secretary

San Diego, California

, 2024

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You are cordially invited to attend the virtual Special Meeting. Whether or not you expect to attend the Special Meeting, PLEASE VOTE YOUR SHARES. As an alternative to voting online at the Special Meeting, you may vote via the internet, by telephone or, if you receive a paper proxy card, by mailing the completed proxy card as promptly as possible in order to ensure your representation at the Special Meeting. 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 Special Meeting. Please note, however, that if your shares are held of record by a bank, broker or other nominee and you wish to vote at the Special Meeting, you must follow the instructions from such organization and 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 SPECIAL MEETING OF STOCKHOLDERS

To Be Held on Wednesday, October 2, 2024

Our Board of Directors (sometimes referred to as the “Board”) is soliciting your proxy to vote at a Special Meeting of Stockholders (the “Special Meeting”) of Bionano Genomics, Inc., a Delaware corporation (sometimes referred to as “we,” “us,” the “Company” or “Bionano”) to be held virtually, via live audio webcast at <https://www.virtualshareholdermeeting.com/BNGO2024SM>, on Wednesday, October 2, 2024, at 10:00 a.m. Pacific Time, and any one or more adjournments or postponements 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 Special Meeting, we have elected to furnish this Proxy Statement and a form of proxy card (together, the “proxy materials”), to our stockholders primarily via the internet. On or about _____, 2024, we expect to mail to our stockholders a *Notice of Internet Availability of Proxy Materials* (the “Notice”) that contains notice of the Special Meeting and instructions on how to access our proxy materials on the internet, how to vote at the Special Meeting and how to request printed copies of the proxy materials.

Stockholders of record at the close of business on Monday, August 12, 2024 (the “Record Date”) will be entitled to vote at the Special Meeting. On the Record Date, there were _____ shares of common stock outstanding. A list of stockholders entitled to vote at the Special Meeting will be available for examination by stockholders for any purpose germane to the Special Meeting for ten days before the Special Meeting during normal business hours at our address above.

MEETING AGENDA

Proposals	Page	Board Recommendation
Proposal 1: To approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of up to an aggregate of 35,026,272 shares of common stock upon the exercise of certain Series A Warrants and Series B Warrants (each, as defined below) issued in connection with a private placement pursuant to securities purchase agreement dated July 4, 2024, between the Company and certain institutional investors thereto (the “Purchase Agreement”) (“Proposal 1” or the “Share Issuance Proposal”).	7	For

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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 Securities and Exchange Commission (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 Special Meeting, including at any one or more adjournments or postponements of the Special 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 _____, 2024 to all stockholders of record entitled to vote at the Special 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 _____, 2024.

Where and when is the Special Meeting?

The Special Meeting will be held on Wednesday, October 2, 2024, at 10:00 a.m. Pacific Time. The Special Meeting will be held in a virtual meeting format only, via live audio webcast on the internet, with no physical in-person meeting. A summary of the information you need to attend the Special Meeting online is provided below:

- Any stockholder may listen to the Special Meeting via audio webcast at <https://www.virtualshareholdermeeting.com/BNGO2024SM>. The webcast will begin at 10:00 a.m. Pacific Time.
- Stockholders of record as of the Record Date may vote during the Special Meeting via live audio webcast.
- To enter the meeting, please enter your control number.
- If you do not have your 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 Special Meeting via the internet are posted at <https://www.virtualshareholdermeeting.com/BNGO2024SM>.

We recommend that you log in approximately 5 minutes before 10:00 a.m. Pacific Time to ensure you are logged in when the Special Meeting starts. The information on our website is not incorporated by reference into this Proxy Statement.

If you plan to vote during the Special 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 Special Meeting online?

You will need the control number included on your Notice, on your voting instruction form, on your proxy card or on the instructions that accompanied your proxy materials in order to be able to vote your shares or submit questions during the Special Meeting. If you do not have your 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 Special Meeting via the internet are posted at <https://www.virtualshareholdermeeting.com/BNGO2024SM>.

For the Special Meeting, how do we ask questions of management and the Board?

Stockholders may submit questions relevant to the proposal to be voted on at the Special Meeting in advance of the Special Meeting through www.virtualshareholdermeeting.com/BNGO2024. We plan to spend up to 15 minutes answering appropriate stockholder questions at the conclusion of the Special Meeting and will include as many stockholder questions that comply with the rules of conduct for the Special Meeting as the allotted time permits. If we receive substantially similar questions, we will group such questions together and provide a single response to avoid repetition. Questions that are not relevant to the proposal to be voted on at the Special Meeting will not be

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responded to. Stockholders of record as of the Record Date may also submit questions beginning 15 minutes prior to and during the Special Meeting by logging in to <https://www.virtualshareholdermeeting.com/BNGO2024SM> and entering the control number included on the Notice, voting instruction form, proxy card or on the instructions that accompanied your proxy materials.

What if during the Special Meeting I have technical difficulties or trouble accessing the live audio webcast of the Special Meeting?

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

Who can vote at the Special Meeting?

On the Record Date, there were _____ shares of common stock outstanding and entitled to vote. Only stockholders of record on the Record Date will be entitled to vote at the Special Meeting.

Stockholder of Record: Shares Registered in Your Name

If on the Record Date your shares were registered directly in your name with our transfer agent, Equiniti Trust Company, LLC (f/k/a American Stock Transfer & Trust Company, LLC), then you are a stockholder of record. As a stockholder of record, you may vote at the Special Meeting or vote by proxy. Whether or not you plan to attend the Special 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 the Record Date 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 should be 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 Special 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 must follow the instructions provided by your brokerage firm, bank, or other similar organization for your bank, broker or other stockholder of record to vote your shares per your instructions. Alternatively, many brokers and banks provide the means to grant proxies or otherwise instruct them to vote your shares by telephone and via the internet, including by providing you with a 16-digit control number via email or on your Notice or your voting instruction form. If your shares are held in an account with a broker, bank or other stockholder of record providing such a service, you may instruct them to vote your shares by telephone (by calling the number provided in the proxy materials) or over the internet as instructed by your broker, bank or other stockholder of record. If you did not receive a 16-digit control number via email or on your Notice or voting instruction form, and you wish to vote prior to or at the virtual Special Meeting, you must follow the instructions from your broker, bank or other stockholder of record, including any requirement to obtain a valid legal proxy. Many brokers, banks and other stockholders of record allow a beneficial owner to obtain a valid legal proxy either online or by mail, and we recommend that you contact your broker, bank or other stockholder of record to do so.

How many votes do I have?

On the matter to be voted upon, you have one vote for each share of common stock you own as of the Record Date.

What am I voting on?

There is one matter scheduled for a vote:

- **Proposal 1:** To approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of up to an aggregate of 35,026,272 shares of common stock upon exercise of certain Series A Warrants and Series B Warrants issued in connection with a private placement pursuant to the Purchase Agreement.

What if another matter is properly brought before the Special Meeting?

The Board does not know of any other matters to be brought before the Special Meeting. If any other matters are properly brought before the Special Meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment. This discretionary authority is granted when you sign the form of proxy.

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 on the Record Date, you may vote at the Special 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 Special Meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the Special 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 to complete an electronic proxy card. You will be asked to provide the control number from the Notice, on your voting instruction form, on your proxy card or on the instructions that accompanied your proxy materials. Your internet vote must be received by 11:59 p.m., Eastern Time on Tuesday, October 1, 2024 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, voting instruction form or proxy card. Your telephone vote must be received by 11:59 p.m., Eastern Time on Tuesday, October 1, 2024 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 Special Meeting, we will vote your shares as you direct.
- **VOTE DURING MEETING:** To vote online during the Special Meeting, follow the provided instructions to join the Special Meeting at <https://www.virtualshareholdermeeting.com/BNGO2024SM>, starting at 10:00 a.m. Pacific Time on Tuesday, October 2, 2024.

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 broker, bank, dealer or other agent, you should have received the Notice or voting instruction form containing voting instructions from that organization rather than from us. Simply follow the voting instructions in the Notice or voting instruction form 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 Special Meeting, you will need the control number included on your Notice, on your voting instruction form, on your proxy card or on the instructions that accompanied your proxy materials.

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.

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 Special 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 "For" Proposal 1, approving the issuance of shares of common stock issuable upon exercise of certain warrants. If any other matter is properly presented at the Special 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 of shares held in “street name” and you do not instruct your broker how to vote your shares, the question of whether your broker will still be able to vote your shares depends on whether the New York Stock Exchange (“NYSE”) deems the particular proposal to be a “routine” matter. Although our shares are not listed with the NYSE, the NYSE regulates broker-dealers and their discretion to vote on stockholder proposals. Under the NYSE rules applicable to brokers and other similar organizations that are subject to NYSE rules, such organizations may use their discretion to vote your “uninstructed shares” with respect to matters considered to be “routine” under NYSE rules, but not with respect to “non-routine” matters. Under such 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.

In this regard, the NYSE has advised us that Proposal 1 (the Share Issuance Proposal) is considered “non-routine” and, accordingly, your broker may not vote your shares on this proposal without your instructions.

What are “broker non-votes”?

As discussed above, when a beneficial owner of shares held in “street name” does not give voting instructions to his or her broker, bank or other agent holding his or her shares as to how to vote on matters deemed to be “non-routine,” the broker, bank or other securities intermediary cannot vote the shares for such matter. When there is at least one “routine” matter to be considered at a meeting, a “broker non-vote” occurs when a separate matter is deemed “non-routine” and the broker, bank or other securities intermediary holding shares for a beneficial owner does not have discretionary voting authority with respect to the “non-routine” matter being considered and has not received instructions from the beneficial owner. Such un-voted shares on “non-routine” matters are counted as broker non-votes.

Because the NYSE has determined that Proposal 1 (the Share Issuance Proposal) is considered to be “non-routine”, we do not anticipate any broker non-votes at the Special Meeting. Accordingly, it is particularly important that beneficial owners instruct their bank, broker or agent how they wish to vote their shares for the Share Issuance Proposal.

Accordingly, 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 or bank by the deadline provided in the materials you receive from your broker or bank.

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 and other agents for the cost of forwarding proxy materials to beneficial owners. In addition, we have engaged Sodali & Co. 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 \$20,000 in total. If you have any questions regarding this proxy statement, you may contact Sodali & Co. 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 Special 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.

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- 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 Special Meeting which will be hosted via the internet. Simply attending the Special Meeting online will not, by itself, revoke your proxy. Even if you plan to attend the Special 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 Special Meeting online.

Your most current 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 broker, bank, or other agent you should follow the instructions provided by your broker, bank, 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 Share Issuance Proposal), the inspector of elections will separately count votes “For” and “Against,” and abstentions.

Abstentions will not be counted towards the vote total and will have no effect on Proposal 1 (the Share Issuance Proposal).

We have been advised by the NYSE that Proposal 1 (the Share Issuance Proposal) is considered “non-routine” under NYSE rules, and accordingly, your broker may not vote your shares on this proposal without instructions from you. Therefore, we do not anticipate any “broker non-votes” at the Special Meeting.

What vote is required for adoption or approval of the proposal and how will votes be counted?

The following table summarizes the minimum vote needed to approve the proposal and the effect of abstentions.

<u>Proposal Number</u>	<u>Proposal Description</u>	<u>Vote Required for Approval</u>	<u>Voting Options</u>	<u>Effect of Abstentions</u>	<u>Effect of Broker Non-Votes (if any)</u>	<u>Board Recommendation</u>
1	Share Issuance Proposal	“For” votes from the holders of a majority of total votes cast on the matter	FOR, AGAINST, or ABSTAIN	No effect	N/A	FOR

What Happens if Proposal 1 is approved at the Special Meeting?

If Proposal 1 is approved at the Special Meeting, the holders of the Purchase Warrants (as defined below) will be permitted to exercise the Purchase Warrants in exchange for up to an aggregate of 35,026,272 shares of common stock, subject to applicable beneficial ownership limitations contained in the Purchase Warrants and described below, and, if exercised for cash, we would receive proceeds of up to an additional approximately \$20 million. For additional information, please see “Proposal 1 - Potential Effects of Approval of this Proposal” below.

What Happens if Proposal 1 is not approved at the Special Meeting?

If Proposal 1 is not approved at the Special Meeting, the Purchase Warrants will not be exercisable and we would not realize proceeds of up to an aggregate of approximately \$20 million had such Purchase Warrants been exercised for cash, which could adversely impact our ability to fund our operations. In addition, we are contractually obligated pursuant to the terms of the Purchase Agreement to call a special meeting of stockholders every ninety (90) days following the date of the Special Meeting until the earlier of (i) the date on which the stockholders of the Company approve the issuance of the Purchase Warrant Shares upon the exercise of the Purchase Warrants and (ii) the date on which the Purchase Warrants are no longer outstanding. Accordingly, if Proposal 1 is not approved at the Special

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Meeting, the Company will incur substantial additional expenses and administrative and associated costs to satisfy this obligation to continue holding stockholder meetings to obtain stockholder approval and it will require significant time and attention by our Board and management, diverting their focus from the pursuit of our business strategy.

What is the quorum requirement?

A quorum of stockholders is necessary to hold the Special Meeting. The presence, by virtual attendance or by proxy, of the holders of one-third in voting power of the shares of common stock issued and outstanding on the Record Date and entitled to vote at a meeting of stockholders will constitute a quorum for the transaction of business at the Special Meeting. On the Record Date, there were _____ shares of common stock outstanding and entitled to vote.

Thus, the holders of _____ shares of common stock must be present by virtual attendance or represented by proxy at the Special 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 broker, bank, dealer or other agent) or if you vote online during the Special Meeting. Abstentions will be counted towards the quorum requirement. If there is no quorum, the chair of the Special Meeting or the holders of a majority of shares of our common stock present by virtual attendance at the Special Meeting or represented by proxy may adjourn the Special Meeting to another date.

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

Preliminary voting results will be announced at the Special 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 Special Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Special 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.

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 Friday, December 27, 2024, 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 18, 2025 and March 20, 2025. You are also advised to review the Company's amended and restated bylaws (the "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, stockholders who intend to solicit proxies in support of director nominees other than our Board's nominees must also comply with the additional requirements of Rule 14a-19(b) promulgated under the Securities Exchange Act of 1934, as amended.

PROPOSAL 1**TO APPROVE, FOR PURPOSES OF COMPLYING WITH NASDAQ LISTING RULE 5635(D), THE ISSUANCE OF UP TO AN AGGREGATE OF 35,026,272 SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF THE PURCHASE WARRANTS ISSUED IN CONNECTION WITH A PRIVATE PLACEMENT PURSUANT TO THE PURCHASE AGREEMENT****Background**

On July 4, 2024, the Company entered into the Purchase Agreement with certain institutional investors, pursuant to which the Company agreed to issue and sell, (i) in a registered direct offering (the “Registered Direct Offering”) priced at-the-market consistent with the rules of the Nasdaq Stock Market (“Nasdaq”), an aggregate of (a) 11,700,000 shares (the “Shares”) of the Company’s common stock, \$0.0001 par value per share, and (b) pre-funded warrants (the “Pre-Funded Warrants”) to purchase up to an aggregate of 5,813,136 shares of common stock, and (ii) in a concurrent private placement, (a) Series A warrants (the “Series A Warrants”) to purchase up to an aggregate of 17,513,136 shares of common stock (the “Series A Warrant Shares”), and (b) Series B warrants (the “Series B Warrants,” and together with the Series A Warrants, the “Purchase Warrants”) to purchase up to an aggregate of 17,513,136 shares of common stock (the “Series B Warrant Shares,” and together with the Series A Warrant Shares, the “Purchase Warrant Shares”). Each share of common stock and each Pre-Funded Warrant was sold together with one Series A Warrant to purchase one share of common stock and one Series B Warrant to purchase one share of common stock. The combined purchase price for each share of common stock and accompanying Purchase Warrants was \$0.571, and the combined purchase price for each Pre-Funded Warrant and accompanying Purchase Warrants was \$0.570 (equal to the combined purchase price per share of common stock and accompanying Purchase Warrants, minus \$0.001). The Pre-Funded Warrants have an exercise price of \$0.001 per share, are exercisable immediately and expire when exercised in full. The Purchase Warrants were issued to Armistice Capital Master Fund Ltd. and CVI Investments, Inc. The Registered Direct Offering was completed on July 8, 2024.

Under the Purchase Agreement, the Company is obligated to hold an annual or special meeting of stockholders on or prior to the date that is ninety (90) days following the closing date of the offering for the purpose of obtaining approval as may be required by the applicable rules and regulations of Nasdaq (or any successor entity) from the stockholders of the Company with respect to the issuance of all of the Purchase Warrant Shares upon the exercise of the Purchase Warrants (the “Stockholder Approval”). The Company also agreed to call a meeting every ninety (90) days thereafter to seek Stockholder Approval until such approval is effective or the Purchase Warrants are no longer outstanding.

Each Purchase Warrant has an exercise price of \$0.571 per share and will be exercisable beginning on the effective date of the Stockholder Approval. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The Series A Warrants will expire on the earlier of (i) the 24-month anniversary of the Stockholder Approval and (ii) 60 days following the later of (a) the date of the public announcement of the occurrence of a medical administrative contractor (including, without limitation, Molecular Diagnostic Services), issuing a final local coverage determination for optical genome mapping for hematological malignancies and (b) the date of the Stockholder Approval. The Series B Warrants will expire on the earlier of (i) the five-year anniversary of the Stockholder Approval and (ii) six months following the later of (a) the date of the public announcement of the occurrence of the Company receiving clearance from the U.S. Food and Drug Administration for an optical genome mapping system for any indication and (b) the date of the Stockholder Approval.

Beneficial Ownership Limitation

The Pre-Funded Warrants were offered in lieu of shares of common stock and provide that the holder may not exercise any portion of a Pre-Funded Warrant to the extent that immediately prior to or after giving effect to such exercise the holder would own more than 4.99% (or, at the election of the holder, 9.99%) of the Company’s outstanding common stock immediately following the consummation of the Registered Direct Offering. Each Pre-Funded Warrant is exercisable for one share of common stock at an exercise price of \$0.001 per share. The Pre-Funded Warrants are immediately exercisable and may be exercised at any time until all of the Pre-Funded Warrants are exercised in full.

A holder (together with its affiliates) of the Purchase Warrants or Pre-Funded Warrants, as the case may be, may not exercise any portion of the Purchase Warrants or Pre-Funded Warrants, as applicable, to the extent that the holder

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would own more than 4.99% (or, at the holder's option upon issuance, 9.99%) of the Company's outstanding common stock immediately after exercise, as such percentage ownership is determined in accordance with the terms of the Purchase Warrants or Pre-Funded Warrants, as applicable. In lieu of making the cash payment otherwise contemplated to be made to the Company upon exercise of a Purchase Warrant, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the Purchase Warrants, provided that such cashless exercise shall only be permitted if, at the time of such exercise, there is no effective registration statement registering the resale of shares of common stock underlying the Purchase Warrants or if the prospectus contained in such registration statement is not available for the resale of shares of common stock underlying the Purchase Warrants by the Purchase Warrant holder.

Why We Need Stockholder Approval

Nasdaq Listing Rule 5635(d) requires stockholder approval in connection with a transaction, other than a public offering, involving the sale or issuance by the issuer of common stock (or securities convertible into or exchangeable for common stock) equal to 20% or more of the common stock or 20% or more of the voting power outstanding before the issuance for a price that is less than the lower of: (i) the closing price of the common stock immediately preceding the signing of the binding agreement for the issuance of such securities; or (ii) the average closing price of the common stock for the five trading days immediately preceding the signing of the binding agreement for the issuance of such securities. Under Nasdaq's rules, when an issuance includes common stock (or the equivalent) and warrants, it is necessary to attribute a value of \$0.125, plus any amount that the warrant is currently in the money or could be in the money due to adjustments, such as for price protection, to each warrant for purposes of determining whether the common stock portion is at a discount.

Because the Purchase Warrants were issued in connection with a private placement transaction, neither the issuance of the Purchase Warrants pursuant to the Purchase Agreement nor the potential issuance of the shares of common stock underlying the Purchase Warrants would constitute a public offering under the Nasdaq Listing Rules. In addition, immediately prior to the execution of the Purchase Agreement, we had 70,940,562 shares of common stock issued and outstanding. Therefore, the potential issuance of up to 35,026,272 Purchase Warrant Shares upon the exercise in full of the Purchase Warrants would have constituted greater than 20% of the shares of common stock outstanding immediately prior to the execution of the Purchase Agreement. Finally, while the Purchase Warrants were sold with a strike price that satisfied the applicable Minimum Price per share under Nasdaq Rule 5635, the combined purchase price of each share of common stock and accompanying Purchase Warrants was not at least \$0.125 above the Minimum Price. Accordingly, stockholder approval is required as the potential issuance of the shares of common stock underlying the Purchase Warrants may not constitute a public offering under the Nasdaq Listing Rules and the previously described pricing conditions were not met.

Potential Effects of Approval of this Proposal

If approved, this Proposal 1 could result in the issuance of up to 35,026,272 shares of common stock upon the exercise of the Purchase Warrants subject to their respective beneficial ownership limitations. A concentration of ownership could adversely affect the prevailing market price and liquidity for the shares of common stock. Holders of our common stock or securities convertible into common stock could experience substantial dilution of their interests as a result of such exercise and could own or come to own a smaller percentage of our outstanding shares of common stock and, accordingly, a smaller percentage interest in the voting power, liquidation value and book value of the shares of common stock.

In addition, upon issuance of shares of common stock upon the exercise of the Purchase Warrants there would be a greater number of shares of our common stock eligible for sale in the public markets. Any such sales, or the anticipation of the possibility of such sales, represents an overhang on the market and could depress the market price of our common stock. Finally, the reservation of the shares underlying the Purchase Warrants precludes the Company from issuing such shares for other purposes including equity financings and we may be unable to raise additional capital as a result.

If the Share Issuance Proposal is approved and the Purchase Warrants are exercised for cash, we will receive proceeds of up to an additional approximately \$20 million, which would allow us to continue to execute upon our current business plan..

Potential Effects of Non-Approval of this Proposal

The Company is not seeking the approval of stockholders to authorize its entry into the transaction described above, as the Company has already done so and such documents are already binding obligations of the Company. The failure of stockholders to approve this proposal will not negate the existing terms of the transactions or the relevant documents, which will remain binding on the Company.

The failure of our stockholders to approve the Share Issuance Proposal and the resulting inability of investors in the private placement to exercise the Purchase Warrants for cash may materially adversely affect the Company's future ability to raise equity or debt capital from third parties on attractive terms, if at all, and also risks significantly impairing the operations, assets and ongoing viability of the Company. Based on our current business plan, our existing cash and cash equivalents and short-term investments (including the proceeds of recent financing) will be sufficient to fund our operating expenses and capital expenditure requirements into at least the fourth quarter of 2024. However, if we are not able to raise additional capital in the near-term, it is likely that we will have to delay, reduce or eliminate significant portions of our development and commercialization efforts relating to our technologies and products and we may be unable to continue to expand our installed base of optical genome mapping systems, any of which could, among other things, negatively impact our revenue opportunities. We also may have to reduce marketing, customer support or other resources devoted to our products or technologies or cease operations entirely. Any of these factors could have a material adverse effect on our financial condition, operating results and business. If the Purchase Warrants are exercised for cash, we would realize an aggregate of up to approximately \$20 million in gross proceeds, before giving effect to any beneficial ownership limitations contained in the Purchase Warrants and described above, which may have the effect of limiting the Purchase Warrant holders' ability to exercise the Purchase Warrants in full, or at all. If the Purchase Warrants cannot be exercised, we will not receive any such proceeds. Loss of these potential funds could jeopardize our ability to execute our business plan or fund our operations.

In addition, if the Share Issuance Proposal is not approved, the Company is obligated under the terms of the Purchase Agreement to call a special meeting of its stockholders every ninety (90) days thereafter to seek Stockholder Approval until such approval is effective or the Purchase Warrants are no longer outstanding. The Company will incur substantial additional expenses and administrative and associated costs to satisfy this obligation to continue holding stockholder meetings to obtain stockholder approval and it will require significant time and attention by our Board and management, diverting their focus from the pursuit of our business strategy.

Vote Required

The approval of this proposal requires "For" votes from the holders of a majority of total votes cast on the proposal in accordance with Nasdaq Listing Rule 5635(e). Abstentions will have no effect on the proposal. We have been advised by the NYSE that this Proposal 1 is considered "non-routine" under NYSE rules, and accordingly, your broker may not vote your shares without instructions from you. Therefore, we do not expect "broker non-votes" to exist in connection with this proposal. If a proxy card is signed and returned or otherwise voted without marking voting selections, the persons named in your proxy will vote your shares "For" this proposal.

**THE BOARD OF DIRECTORS RECOMMENDS
A VOTE "FOR" FOR THE APPROVAL OF PROPOSAL 1.**

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

The following table sets forth information regarding beneficial ownership of our capital stock as of August 1, 2024 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 a footnote 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 85,997,130 shares of our common stock outstanding on August 1, 2024, 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 August 1, 2024	Warrants	Number of Shares Beneficially Owned ⁽¹⁾	%(²)
Greater than 5% Stockholders					
Armistice Capital Master Fund Ltd. ⁽³⁾	5,000,000	—	—	5,000,000	5.81%
Directors and Named Executive Officers					
David L. Barker, Ph.D.	5,836	58,324	—	64,160	*
R. Erik Holmlin, Ph.D. ⁽⁴⁾	121,966	304,260	—	426,226	*
Yvonne Linney, Ph.D.	—	64,308	—	64,308	*
Albert Luderer, Ph.D.	—	62,362	—	62,362	*
Hannah Mamuszka	6,578	66,308	—	72,886	*
Aleksandar Rajkovik, M.D., Ph.D.	—	65,731	—	65,731	*
Christopher J. Twomey ⁽⁵⁾	6,450	61,458	5,450	73,358	*
Kristiina Vuori, M.D., Ph.D.	—	61,243	—	61,243	*
Vincent Wong, J.D.	—	60,129	—	60,129	*
Alka Chaubey, Ph.D., FACMG	43,398	138,369	—	186,767	*
Mark Oldakowski	64,851	139,242	—	204,093	*
All current executive officers and directors as a group (13 persons)⁽⁶⁾	288,104	1,143,969	5,450	1,437,250	1.65%

* 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 August 1, 2024. No other person or group of affiliated persons is known by us to beneficially own more than 5% of our common stock as of August 1, 2024.
- (2) For each named person, the percentage ownership includes common stock that the person has the right to acquire within 60 days after August 1, 2024, 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 August 1, 2024 unless otherwise provided.
- (3) We have been advised that, as of August 1, 2024, Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”) held 5,000,000 shares of common stock and warrants to purchase 25,810,080 shares of common stock. The warrants held by the Master Fund are subject to a beneficial ownership limitation of 4.99%, which prohibits the Master Fund from exercising any portion of the warrants to the extent that, following such exercise, the Master Fund’s ownership of our common stock would exceed the beneficial

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ownership limitation. Consequently, the Master Fund is not able to exercise all of its warrants due to the aforementioned beneficial ownership limitations, which is reflected in the table above. The securities are directly held by the Master Fund and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.

- (4) The indicated ownership includes 502 shares held indirectly through the Robert Erik Holmlin IRA.
- (5) The indicated ownership consists of (i) 6,450 shares of common stock held by the Christopher J. Twomey and Rebecca J. Twomey Family Trust U.T.D. September 20, 2002 for which Christopher J. Twomey and Rebecca J. Twomey serve as co-trustees (the “Trust”), (ii) 4,500 warrants to purchase one share of the Company’s common stock, expiring on April 6, 2025, held by the Trust and (iii) 950 warrants to purchase one share of the Company’s common stock, expiring on October 23, 2024, held by the Trust.
- (6) Consists of (i) shares identified in the list of directors and executive officers above; (ii) 34,025 shares of common stock held by Jonathan Dixon and Gulsen Kama; and (iii) 61,962 shares of common stock issuable upon the exercise of stock options that are exercisable or will be exercisable within 60 days of August 1, 2024 by Jonathan Dixon and Gulsen Kama.

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 Special Meeting materials with respect to two or more stockholders sharing the same address by delivering a single Notice or other Special 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.

A number of brokers with account holders who are Bionano stockholders will be “householding” the Company’s proxy materials. A single Notice 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, 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 at their addresses and would like to request “householding” of their communications should contact their brokers.

ADDITIONAL FILINGS

We make available, free of charge on our website, all of our filings that are made electronically with the SEC, including Forms 10-K, 10-Q and 8-K. To access these filings, go to our website ir.bionanogenomics.com and click on “SEC Filings” under the “Financial & Filings” heading. Copies of our Annual Report on Form 10-K for the year ended December 31, 2023, including financial statements and schedules thereto, filed with the SEC, are also available without charge to stockholders by contacting the Secretary of Bionano Genomics, Inc., 9540 Towne Centre Drive, Suite 100, San Diego, CA 92121 or call us at 858-888-7600, or by email at ir@bionano.com.

OTHER MATTERS

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

By Order of the Board of Directors

/s/ Jonathan Dixon

Jonathan Dixon
Secretary

, 2024



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 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 October 1, 2024. 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/BNGO2024SM

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 October 1, 2024. 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:

V55654-TBD

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

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

BIONANO GENOMICS, INC.



The Board of Directors recommends you vote FOR the following proposal:

For Against Abstain

- To approve, for purposes of complying with Nasdaq Listing Rule 5635(d), the issuance of up to an aggregate of 35,026,272 shares of common stock upon the exercise of certain milestone-linked series warrants issued in connection with a private placement

NOTE: The holders of your proxy may vote in their discretion upon any other business that may properly come before the meeting or any adjournment or postponement thereof.

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

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Signature [PLEASE SIGN WITHIN BOX]

Date

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Signature (Joint Owners)

Date

Important Notice Regarding the Availability of Proxy Materials for the Special Meeting:
The Notice and Proxy Statement is available at www.proxyvote.com.

V55655-TBD

BIONANO GENOMICS, INC.
Special Meeting of Stockholders
October 2, 2024, 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 Gülsen Kama 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 Special Meeting of Stockholders to be held virtually, via live webcast at www.virtualshareholdermeeting.com/BNGO2024SM, on Wednesday, October 2, 2024, 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' recommendation.

In their discretion, the holders of your proxy 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 October 1, 2024.

Continued and to be signed on reverse side