Filed pursuant to Rule 424(b)(3)
Registration No. 333-299660

PROSPECTUS



Up to 1,332,632 Shares of Common Stock Underlying Outstanding Warrants

This prospectus relates to the issuance of up to an aggregate of 1,332,632 shares of our common stock, par value $0.0001 per share (the "common stock"), that are issuable upon the exercise of certain currently outstanding warrants to purchase shares of common stock outstanding as of the date hereof that were initially offered and sold under our registration statement on Form S-3 (No. 333-270459), which became effective on May 10, 2023 and will expire on November 6, 2026 (collectively, the "Warrants"), comprising up to:

- 661,377 shares of common stock issuable upon exercise of outstanding warrants to purchase shares of common stock, each with an exercise price of $15.120 per share, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated January 3, 2025 (the "2025 Purchase Warrants");
- 164,684 shares of common stock issuable upon exercise of outstanding Series C warrants to purchase shares of common stock, each with an exercise price of $18.234 per share, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated October 30, 2024 (the "Series C Warrants");
- 145,560 shares of common stock issuable upon exercise of outstanding warrants to purchase shares of common stock, each with an exercise price of $61.20 per share, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated April 4, 2024 (the "2024 Purchase Warrants"); and
- 361,011 shares of common stock issuable upon exercise of outstanding warrants to purchase shares of common stock, each with an exercise price of $191.13 per share, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated October 11, 2023 (the "2023 Purchase Warrants").

The 2025 Purchase Warrants became exercisable on June 11, 2025 and will expire on the five-year anniversary of such date. The Series C Warrants became exercisable on January 15, 2025 and will expire on the five-year anniversary of such date. The 2024 Purchase Warrants were exercisable immediately upon issuance and will expire on the five-year anniversary of the date of issuance. The 2023 Purchase Warrants were exercisable immediately upon issuance and will expire on the five-year anniversary of the date of issuance. See "*Description of Securities Being Registered*."

We will receive the proceeds from the exercise of the Warrants but not from any sale of the underlying shares of common stock.

Our common stock is traded on the Nasdaq Capital Market under the symbol "BNGO." The last reported sale price of our common stock on the Nasdaq Capital Market on October 26, 2026, was $1.16 per share.

We are a "smaller reporting company" under the federal securities laws and, as such, are subject to reduced public company disclosure standards for this prospectus and future filings. See the section titled "*Prospectus Summary—Implications of Being a Smaller Reporting Company*" for additional information.

Our business and an investment in our common stock involve significant risks. These risks are described under the caption "*Risk Factors*" beginning on page 4 of this prospectus, as well as those risks described in our most recent Annual Report on Form 10-K and in our other filings with the Securities and Exchange Commission that are incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is November 5, 2026.

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ABOUT THIS PROSPECTUS

We incorporate by reference important information into this prospectus. You may obtain the information incorporated by reference without charge by following the instructions under "*Where You Can Find Additional Information.*" You should carefully read this prospectus as well as additional information described under "*Incorporation of Certain Information by Reference*," before deciding to invest in our securities. This prospectus relates to the offering of our common stock issuable upon the exercise of the 2025 Purchase Warrants, Series C Warrants, 2024 Purchase Warrants and 2023 Purchase Warrants currently outstanding as of the date of this prospectus.

We have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the securities offered hereby, and only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

The information incorporated by reference or provided in this prospectus contains statistical data and estimates, including those relating to market size and competitive position of the markets in which we participate, that we obtained from our own internal estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Industry publications, studies and surveys generally state that they have been obtained from sources believed to be reliable. While we believe our internal company research is reliable and the definitions of our market and industry are appropriate, neither this research nor these definitions have been verified by any independent source.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading "*Where You Can Find Additional Information*."

We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus and the offering of the shares of our common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this prospectus outside the United States. This prospectus does not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Unless otherwise mentioned or unless the context indicates otherwise, all references in this prospectus to "Bionano," "the Company," "we," "us," "our" and similar references refer to Bionano Genomics, Inc. and its subsidiaries or, as the context may require, Bionano Genomics, Inc. only. "Bionano Laboratories," "BioDiscovery" and "Purigen" refer to our wholly owned subsidiaries, Lineagen, Inc. (doing business as Bionano Laboratories), BioDiscovery, LLC and Purigen Biosystems, Inc., respectively.

Our design logo, "Bionano," and our other registered and common law trade names, trademarks and service marks are the property of Bionano Genomics, Inc. The trademarks, trade names and service marks appearing in this prospectus and the information incorporated by reference into this prospectus are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this prospectus and the information incorporated by reference into this prospectus, including logos, artwork, and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies or products.

CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein and therein, and any free writing prospectus that we have authorized for use in connection with this offering, contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond our control, and which may cause our actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. You can identify these forward-looking statements through our use of words such as "may," "can," "anticipate," "assume," "should," "indicate," "would," "believe," "contemplate," "expect," "seek," "estimate," "continue," "plan," "point to," "project," "predict," "could," "intend," "target," "will," "potential" and other similar words and expressions of the future.

Any statements in this prospectus, or incorporated by reference herein, and any free writing prospectus, about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and are forward-looking statements. There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statement made by us, including known and unknown risks, uncertainties and assumptions. These factors are described in the section titled "*Risk Factors*" and elsewhere in this prospectus, and include, but are not limited to:

- our ability to improve our margins, extend our cash runway and reach a potential pathway to profitability;
- our ability to continue as a going concern within 12 months of the filing of our Quarterly Report on Form 10-Q for the quarter ended June 30, 2026, which requires us to manage costs and obtain significant additional financing to fund our strategic plans and commercialization efforts;
- our ability to execute on our strategy and achieve our objectives;
- the impact and utility of our cost savings initiative and our recent financing;
- our ability to continue to drive OGM adoption by potential customers for routine use in genomic analysis;
- the impact, or lack thereof, of the Category I CPT codes to accelerate or increase the adoption of OGM;
- continued research, presentations and publications involving OGM and its utility compared to traditional cytogenetics and our technologies;
- the impact of our Stratys system and VIA software to increase throughput and simplify analysis of OGM data;
- our ability to drive adoption of OGM and our technology solutions;
- our ability to further deploy new products and applications for our technology platforms;
- our expectations and beliefs regarding future growth of the business and the markets in which we operate;
- our ability to consummate any strategic alternatives including the risk that if we fail to obtain additional financing we may seek relief under applicable insolvency laws;
- the size and growth potential of the markets for our products, and our ability to serve those markets;
- the rate and degree of market acceptance of our products;
- our ability to manage the growth of our business and integrate acquired businesses;
- our ability to expand our commercial organization to address effectively existing and new markets that we intend to target;
- the impact from future regulatory, judicial, and legislative changes or developments in the U.S. and foreign countries;
- our ability to compete effectively in a competitive industry;

- the introduction of competitive technologies or improvements in existing technologies and the success of any such technologies;
- the performance of our third-party contract sales organizations, suppliers and manufacturers;
- our ability to attract and retain key scientific or management personnel;
- the accuracy of our estimates regarding expenses, future revenues, reimbursement rates, capital requirements and needs for additional financing;
- the impact of adverse geopolitical and macroeconomic developments, such as the ongoing international conflicts, and related sanctions, regional or global pandemics, inflation, tariffs, increased cost of goods, supply chain issues, and global financial market conditions on our business and operations, as well as the business or operations of our suppliers, customers, manufacturers, research partners and other third parties with whom we conduct business and our expectations with respect to the duration of such impacts and the resulting effects on our business;
- our ability to realize the anticipated benefits and synergies of our prior and any future acquisitions or other strategic transactions;
- our ability to attract collaborators and strategic partnerships; and
- the risks and uncertainties under the heading "*Risk Factors*" contained in this prospectus, and in our most recent Annual Report on Form 10-K and in our subsequent Quarterly Reports on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC.

The foregoing does not represent an exhaustive list of matters that may be covered by the forward-looking statements contained herein or risk factors that we are faced with that may cause our actual results to differ from those anticipated in such forward-looking statements.

All forward-looking statements are expressly qualified in their entirety by this cautionary note. You are cautioned to not place undue reliance on any forward-looking statements, which speak only as of the date of this prospectus or the date of the document incorporated by reference into this prospectus. You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We have no obligation, and expressly disclaim any obligation, to update, revise or correct any of the forward-looking statements, whether as a result of new information, future events or otherwise. We have expressed our expectations, beliefs and projections in good faith and believe they have a reasonable basis. However, we cannot assure you that our expectations, beliefs or projections will result or be achieved or accomplished.

PROSPECTUS SUMMARY

This summary highlights information about our company, this offering and information contained in greater detail in other parts of this prospectus or incorporated by reference into this prospectus from our filings with the SEC listed in the section titled "Incorporation of Certain Information by Reference." Because it is only a summary, it does not contain all of the information that you should consider before purchasing our securities in this offering, and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere or incorporated by reference into this prospectus. You should read the entire prospectus, the registration statement of which this prospectus is a part, and the information incorporated by reference into this prospectus in their entirety, including the "Risk Factors" and our financial statements and the related notes incorporated by reference into this prospectus, before purchasing our securities in this offering. Except as otherwise indicated herein or as the context otherwise requires, all references in this prospectus to "Bionano," "the Company," "we," "us," "our" and similar references refer to Bionano Genomics, Inc. and its subsidiaries or, as the context may require, Bionano Genomics, Inc. only. "Bionano Laboratories," "BioDiscovery" and "Purigen" refer to our wholly owned subsidiaries, Lineagen, Inc. (doing business as Bionano Laboratories), BioDiscovery, LLC and Purigen Biosystems, Inc., respectively.

Company Overview

We are a provider of genome analysis solutions that can enable researchers and clinicians to reveal answers to challenging questions in biology and medicine. Our mission is to transform the way the world sees the genome through optical genome mapping ("OGM") solutions, diagnostic services and software. We offer OGM solutions for applications across basic, translational and clinical research, and for other applications including bioprocessing. We offer a platform-agnostic software solution, which integrates next-generation sequencing ("NGS"), microarray and OGM data designed to provide analysis, visualization, interpretation and reporting of copy number variants, single-nucleotide variants and absence of heterozygosity across the genome in one consolidated view. The Company also offers nucleic acid extraction and purification solutions using proprietary isotachophoresis ("ITP") technology. Through our Bionano Laboratories business, we also provide OGM-based diagnostic testing services.

We develop, manufacture, market and sell OGM systems, including the Saphyr® system and the Stratys™ system, which deliver OGM data to enable ultra-sensitive and ultra-specific detection of all classes of structural variation ("SV"). These systems are used to identify structural changes in chromosomes, the study of which is known as cytogenetics, and to accelerate the search for answers in genetic disease and cancer applications as well as in applications for cell and gene therapy. The systems are comprised of an instrument, chip consumables, reagents and software containing a suite of data analysis and visualization tools. OGM has been shown to outperform the current gold standard cytogenetic methods including karyotyping, fluorescence in-situ hybridization ("FISH"), Southern blot and chromosomal microarray ("CMA"), for the detection of SVs. OGM has also been shown to identify structural changes in chromosomes that cannot be identified using current commercially available gene sequencing solutions.

We develop, manufacture, market and sell the Ionic® Purification system, which is able to deliver high quality DNA in a more natural, native form and with fewer contaminants when compared to other isolation and purification solutions. The Ionic Purification system is used to extract, purify, and concentrate DNA or RNA from a variety of sample types, and is comprised of an instrument, consumables, and reagents.

We develop, manufacture, market and sell the VIA™ software which delivers genomic data interpretation solutions tailored for research use in cytogenomics and molecular pathology labs in genetic disease and cancer research markets, with an emphasis on SV. This industry leading, platform agnostic software solution is designed to provide analysis, visualization, interpretation and reporting of SVs, single-nucleotide variants and absence of heterozygosity across the genome in one consolidated view. Our software currently enables analysis of OGM, NGS and microarray data. We believe the integration of OGM with data types common in the industry, such as Variant Call Format ("VCF"), and Binary Alignment Map ("BAM"), into the VIA software should accelerate and broaden our position in digital cytogenetics and comprehensive genome analysis by enabling us to simplify the assessment of clinically relevant variants in cytogenomics applications, potentially reducing interpretation time per sample and expanding our reach into the discovery and translational research markets through the combination of OGM and NGS.

Our Bionano Laboratories business has developed and provides an OGM-based Laboratory Developed Test ("LDT") for facioscapulohumeral muscular dystrophy type 1 ("FSHD1"), which is a progressive disorder that primarily affects the

muscles of the face, shoulder blades (scapula), upper arms, and lower legs. Bionano Laboratories has previously offered LDTs for detecting SVs in individuals with hematologic malignancies, and for detecting SVs in pre- and post-natal samples, through its OGM-Dx™ testing services, and may decide to offer such LDTs in the future again. During 2024, Bionano Laboratories phased out the offering of certain testing services for individuals demonstrating clinical presentations consistent with neurodevelopmental disorders ("NDDs"), including autism spectrum disorders ("ASDs") and other disorders of childhood development, and during 2025 phased out the offering of OGM-based LDT tests for hematological malignancies and pre- and postnatal constitutional genetic disorders.

Bionano Laboratories also provides laboratory services to clinicians, scientists, pharmaceutical companies, and others who are seeking to incorporate OGM into their genomics research without the need to bring one of our OGM systems in house. Laboratory services for OGM are performed in our laboratory facilities in San Diego, California and, from time-to-time, at partner laboratories in the United States and Europe, and serve as solutions for researchers and clinicians who would like to use OGM for various applications in genomics but have yet to acquire an OGM system.

We have in recent years transformed our business from an instrument company to a provider of a full suite of genomic solutions. We expanded into molecular genetic clinical testing services through our August 2020 acquisition of Lineagen. We furthered our transformation through the expansion into software solutions, made possible by our October 2021 acquisition of BioDiscovery and continued with our November 2022 acquisition of Purigen bringing their leading nucleic acid isolation and purification technology to Bionano. We believe that these acquisitions, along with internal investments in research and development and the build out of our commercial teams, have positioned us well to provide solutions to our customers that we believe will make OGM the standard cytogenetic technique for structural variant analysis.

We expect to continue the cost saving initiatives previously undertaken and maintain focus on our business strategy and efforts on maximizing the utilization of OGM systems across our current installed base with less emphasis on new placements of OGM systems.

Corporate Information

We were formed in January 2003 as BioNanomatrix LLC, a Delaware limited liability company. In August 2007, we became BioNanomatrix Inc., a Delaware corporation. In October 2011, we changed our name to BioNano Genomics, Inc., and in July 2018, we changed our name to Bionano Genomics, Inc.

Our principal executive offices are located at 9540 Towne Centre Drive, Suite 100, San Diego, California 92121, and our telephone number is (858) 888-7600. Our website address is *www.bionano.com,* and we regularly post copies of our press releases as well as additional information about us on our website. Information contained in, or that can be accessed through, our website is not incorporated by reference into this prospectus, and you should not consider information on our website to be part of this prospectus or in deciding whether to purchase our securities.

Our design logo, "Bionano," and our other registered and common law trade names, trademarks and service marks are the property of Bionano Genomics, Inc. The trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies or products.

Implications of Being a Smaller Reporting Company

We are a "smaller reporting company" as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of any fiscal year for so long as either (1) the market value of our shares of common stock held by non-affiliates does not equal or exceed $250.0 million as of the prior June 30th, or (2) our annual revenues did not equal or exceed $100.0 million during such completed fiscal year and the market value of our shares of common stock held by non-affiliates did not equal or exceed $700.0 million as of the prior June 30th. To the extent we take advantage of any reduced disclosure obligations, it may make comparison of our financial statements with other public companies difficult or impossible.

THE OFFERING

Common stock offered by us	1,332,632 shares of common stock issuable upon exercise of outstanding Warrants.
Common stock outstanding immediately prior to this offering[(1)]	13,976,957 shares of common stock.
Common stock to be outstanding immediately following this offering[(1)]	15,309,589 shares of common stock, assuming exercise of the Warrants in full.
Use of Proceeds	We estimate that the proceeds from the exercise of the Warrants, if they are exercised in full, will be approximately $90 million. We intend to use the net proceeds, together with our existing cash and cash equivalents and available-for-sale securities, for general corporate purposes, including working capital, research and development expenses, and capital expenditures. See the section titled "*Use of Proceeds*."
Risk Factors	Investing in our securities involves a high degree of risk. See "*Risk Factors*" on page 4 of this prospectus and other documents incorporated by reference herein.
Nasdaq Capital Market symbol	"BNGO"

(1) The number of our shares of common stock shown above to be outstanding immediately before and after this offering as shown above is based on 13,976,957 shares of our common stock outstanding as of October 23, 2026, and excludes:

- 624,255 shares of common stock issuable upon the exercise of outstanding stock options with a weighted-average exercise price of $46.30 per share;
- 11,916,424 shares of common stock issuable upon the exercise of outstanding warrants with a weighted average exercise price of $13.40 per share;
- 1,374 shares of common stock issuable upon the vesting and settlement of restricted stock units outstanding;
- 35,471 shares of common stock reserved for future issuance under our 2020 Inducement Plan ("2020 Plan"), plus any additional shares of our common stock that may become available under the 2020 Plan;
- 1,379 shares of our common stock reserved for issuance under our 2018 Employee Stock Purchase Plan; and
- 118,738 shares of our common stock reserved for issuance under our 2018 Equity Incentive Plan.

Except as otherwise indicated, the information in this prospectus assumes no exercise or conversion of the outstanding stock options, or common warrants (other than the Warrants) summarized above and no vesting or settlement of the outstanding restricted stock units summarized above.

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should carefully consider the following risk factors and the risk factors discussed under the section titled "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2025, as updated by our subsequent filings, which are incorporated by reference into this prospectus in their entirety, together with all of the other information contained in this prospectus or incorporated by reference into this prospectus. For a description of these reports and documents, and information about where you can find them, see "Where You Can Find Additional Information" and "Incorporation of Certain Information by Reference." The risks and uncertainties described in these documents are not the only ones we face. Other risks and uncertainties, including those that we do not currently consider material, may impair our business. If any of the risks discussed below or incorporated by reference actually occur, our business, financial condition, operating results or cash flows could be materially adversely affected. This could cause the value of our securities to decline, and you may lose all or part of your investment.

Risks Related to this Offering

Management will have broad discretion as to the use of the proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion in the application of the net proceeds we receive from this offering, including for any of the purposes described in the section titled "*Use of Proceeds*," and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our product candidates and cause the price of our common stock to decline. See "*Use of Proceeds*" for further information on the anticipated use of proceeds from this offering.

We may issue additional equity or convertible debt securities in the future, which may result in dilution to you.

We have a significant number of outstanding stock options, restricted stock units, and warrants outstanding. To the extent that outstanding stock options, or warrants have been or may be exercised or converted, restricted stock units vest and settle, or other securities issued, investors purchasing our common stock upon the exercise of the Warrants in this offering may experience dilution. In addition, we may choose to raise additional capital in the future. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders or result in downward pressure on the price of our common stock.

Future sales of our common stock, or the perception that such future sales may occur, may cause our stock price to decline.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales could occur, during or after the completion of this offering could cause the market price of our common stock to decline. A substantial majority of the outstanding shares of our common stock are, and the shares of common stock being sold upon the exercise of the Warrants in this offering will be, freely tradable without restriction or further registration under the Securities Act.

The price of our securities has been and may in the future be volatile or may decline regardless of our operating performance, and you could lose all or part of your investment.

Our stock price has been and may continue to be volatile. The daily closing market price for our common stock has varied significantly in the last 12 months, ranging between a high price of $1.87 on October 28, 2025 and a low price of $1.06 on July 30, 2026. During this time, the price per share of common stock has ranged from an intra-day low of $1.00 per share to an intra-day high of $2.23 per share.

The trading price of our common stock is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. We cannot predict the actions of market participants and, therefore, can offer no assurances that the market for our common stock will be stable or appreciate over time. The market price of our common stock may be influenced by many factors, including but not limited to:

- our commercial progress in marketing and selling our genome analysis systems, including sales and revenue trends;
- changes in laws or regulations applicable to our systems;
- adverse developments related to our laboratory facilities;
- increased competition in the diagnostics services industry;
- changes in the structure or funding of research at academic and governmental research institutions, as well as pharmaceutical, biotechnology and contract research companies, including changes that would affect their ability to purchase our products, consumables and technologies;
- the failure to obtain and/or maintain coverage and adequate reimbursement for our Bionano Laboratories products and diagnostic assays and patients' willingness to pay out-of-pocket in the absence of such coverage and adequate reimbursement;
- the failure of our customers to obtain and/or maintain coverage and adequate reimbursement for their services using our OGM systems, Ionic Purification systems or our VIA software;
- adverse developments concerning our manufacturers and suppliers;
- our inability to establish future collaborations;
- additions or departures of key scientific or management personnel;
- introduction of new testing services offered by us or our competitors;
- announcements of significant acquisitions, dispositions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage our growth;
- the size and growth, if any, of our targeted markets;
- the failure or discontinuation of any of our product development and research programs;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community and securities analysts or that we may otherwise provide to the public;
- publication of research reports about us or our industries or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- issuances of debt or equity securities;
- sales of our securities by us or our stockholders in the future;
- trading volume of our securities;
- changes in accounting practices;
- ineffectiveness of our internal controls;
- data breaches of our company, providers, vendors or customers;

- regulatory or legal developments in the United States and other countries;
- disputes or other developments relating to proprietary rights, including our ability to adequately protect our proprietary rights in our technologies;
- significant lawsuits, including patent or stockholder litigation;
- natural disasters, infectious diseases, conflict, including the ongoing military international conflicts and the related sanctions, civil unrest, epidemics or pandemics, outbreaks, resurgences or major catastrophic events;
- general political and economic conditions, including potential future disruptions in access to bank deposits or lending commitments due to bank failures;
- our cost saving initiatives announced in 2023 and 2024;
- other events or factors, many of which are beyond our control; and
- other uncertainties affecting us, including those described in the section titled "*Risk Factors*" in this prospectus, in our most recent Annual Report on Form 10-K and in any subsequently filed Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

As a result, you may not be able to sell your shares of our common stock at or above the exercise price at which you purchase them. In addition, the stock market in general, and the market for life science technology companies in particular (including companies in the diagnostic, genomic and biotechnology related sectors), have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our securities, regardless of our actual operating performance. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. Because of the volatility of our stock price, we may become the target of securities litigation in the future. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

We do not currently intend to pay dividends on our common stock, and any return to investors is expected to come, if at all, only from potential increases in the price of our common stock.

We have never declared or paid any cash dividends on our capital stock, and you should not rely on an investment in our common stock to provide dividend income. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

It is not possible to predict the actual number of shares of common stock we will issue upon exercise of the Warrants, or the gross proceeds resulting from those issuances.

The number of shares of common stock we issue upon the exercise of the Warrants will depend upon the number of Warrants exercised by the holders thereof. Accordingly, the number of shares of common stock we will issue and the gross proceeds resulting from those issuances will be based on decisions made by others, outside of our control, and it is not currently possible to predict the number of shares that will be issued or the gross proceeds to be raised in connection with those issuances.

USE OF PROCEEDS

If the Warrants are exercised in full, we will receive proceeds of approximately $90 million. However, we do not know when, if or the extent to which such Warrants may be exercised, and it is possible that no Warrants may be exercised, in which case we would not receive any proceeds from this offering.

We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents and available-for-sale securities, for general corporate purposes, including working capital, research and development expenses, and capital expenditures.

The amounts and timing of our use of the net proceeds from this offering will depend on a number of factors, such as the timing and progress of our research and development efforts, the timing and progress of any partnering and commercialization efforts, technological advances and the competitive environment for our products. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from the sale of the securities offered by us hereunder. Accordingly, our management will have broad discretion in the timing and application of these proceeds. Pending application of the net proceeds as described above, we intend to temporarily invest the proceeds in short-term, interest-bearing instruments.

DETERMINATION OF OFFERING PRICE

The exercise prices of the Warrants were negotiated between us and the investors in the respective offerings based on the trading of our common stock prior to the offering, among other things. Other factors considered in determining the exercise price of the Warrants that we sold included our history and prospects, the stage of development of our business, our business plans for the future and the extent to which they have been implemented, an assessment of our management, the general conditions of the securities markets at the time of the offering and such other factors as were deemed relevant.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We currently intend to retain any future earnings for use in the operation of our business and do not intend to declare or pay any cash dividends in the foreseeable future. Any future determination to pay dividends on our capital stock would be at the discretion of our board of directors, subject to applicable laws, and would depend on our financial condition, results of operations, capital requirements, general business conditions and other factors that our board of directors considers relevant.

DESCRIPTION OF SECURITIES BEING REGISTERED

We are offering shares of our common stock that are issuable upon the exercise of outstanding Warrants previously issued by us under our registration statement on Form S-3 (No. 333-270459), which became effective on May 10, 2023, comprising up to:

- 661,377 shares of common stock issuable upon exercise of outstanding 2025 Purchase Warrants, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated January 3, 2025;
- 164,684 shares of common stock issuable upon exercise of outstanding Series C Warrants, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated October 30, 2024;
- 145,560 shares of common stock issuable upon exercise of outstanding 2024 Purchase Warrants, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated April 4, 2024; and
- 361,011 shares of common stock issuable upon exercise of outstanding 2023 Purchase Warrants, that were originally issued pursuant to a prospectus dated May 10, 2023 and a related prospectus supplement dated October 11, 2023.

Common Stock

The following description of our capital stock, certain provisions of our amended and restated certificate of incorporation, as amended ("Certificate of Incorporation"), and amended and restated bylaws, as amended ("Bylaws"), and certain provisions of Delaware law are summaries. The following description is not complete and is subject to and qualified in its entirety by our Certificate of Incorporation and Bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the General Corporation Law of the State of Delaware.

As of the date of this prospectus, our Certificate of Incorporation authorized us to issue 400,000,000 shares of common stock, par value $0.0001 per share, and 10,000,000 shares of preferred stock, par value $0.0001 per share.

Voting Rights

Holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and do not have cumulative voting rights. Our Certificate of Incorporation establishes a classified board of directors that is divided into three classes with staggered three-year terms. Only the directors in one class will be subject to election by a plurality of the votes cast at each annual meeting of our stockholders, with the directors in the other classes continuing for the remainder of their respective three-year terms.

Economic Rights

Except as otherwise expressly provided in our Certificate of Incorporation or required by applicable law, all shares of common stock have the same rights and privileges and rank equally, share ratably, and are identical in all respects for all matters, including those described below.

Dividends. Subject to preferences that may be applicable to any then-outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation Rights. In the event of our liquidation, dissolution or winding-up, holders of our common stock are entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

No Preemptive or Similar Rights

The holders of our shares of common stock are not entitled to preemptive rights, and such shares are not subject to conversion, redemption or sinking fund provisions. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Preferred Stock

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Warrants

The following summary of certain terms and provisions of the Warrants is not complete and is subject to, and qualified in its entirety by, the provisions of the Warrants, the forms of which are filed as exhibits to the registration statement of which this prospectus forms a part. Unless otherwise noted, the terms below apply to all of the Warrants.

Duration and Exercise Price

Each 2025 Purchase Warrant has an initial exercise price per share equal to $15.120 per share. The 2025 Purchase Warrants became exercisable on June 11, 2025 and will expire on the five-year anniversary of that date.

Each Series C Warrant has an initial exercise price per share equal to $18.234 per share. The Series C Warrants became exercisable immediately upon issuance on October 31, 2024 and will expire on the five-year anniversary of that date.

Each 2024 Purchase Warrant has an initial exercise price per share equal to $61.20 per share. The 2024 Purchase Warrants became exercisable immediately upon issuance on April 8, 2024 and will expire on the five-year anniversary of that date.

Each 2023 Purchase Warrant has an initial exercise price per share equal to $191.13 per share. The 2023 Purchase Warrants became exercisable immediately upon issuance on October 13, 2023 and will expire on the five-year anniversary of that date.

For each Warrant, the exercise price and number of shares of our common stock issuable upon exercise are subject to appropriate adjustment in the event of stock dividends, stock splits, recapitalization, reorganizations or similar events affecting our common stock and the exercise price.

Exercisability

The Warrants are exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the Warrant to the extent that the holder would own more than 4.99% of the outstanding common stock immediately after exercise. For the 2025 Purchase Warrants, the Series C Warrants and the 2024 Purchase Warrants, the holder may instead elect a limit of 9.99% of the outstanding common stock immediately after exercise. Upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's Warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the applicable Warrants. No fractional shares of our common stock will be issued in connection with the exercise of a Warrant. In lieu of fractional shares, we will round to the next whole share.

Cashless Exercise

If, at the time a holder exercises a 2025 Purchase Warrant, Series C Warrant or 2024 Purchase Warrant, there is no effective registration statement registering the issuance of the shares to be issued upon exercise, or the prospectus contained therein is not available for that issuance, the holder may elect a cashless exercise. If, at the time a holder exercises a 2023 Purchase Warrant, a registration statement registering the issuance or resale of the underlying shares under the Securities Act is not then effective or available, and an exemption from registration under the Securities Act is not available for that issuance or resale, the holder may likewise elect a cashless exercise. In either case, instead of making the cash payment otherwise contemplated to be made to us upon exercise in payment of the aggregate exercise price, the holder may elect to receive the net number of shares of our common stock determined according to a formula set forth in the applicable Warrants.

Transferability

Subject to applicable laws, a Warrant may be transferred upon notice to us in writing and surrender of the Warrant to us together with the appropriate instruments of transfer.

Exchange Listing

The Warrants are not listed on any securities exchange or nationally recognized trading system.

Rights as a Stockholder

Except as otherwise provided in the Warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the Warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their Warrants.

Fundamental Transaction

In the event of a fundamental transaction, as described in the applicable form of Warrant, and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of greater than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of greater than 50% of the voting power represented by our outstanding common stock, the holders of the Warrants will be entitled to receive upon exercise of the Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Warrants immediately prior to such fundamental transaction. As an alternative, in the event of a fundamental transaction, the holder of a Warrant, at its option, exercisable at any time concurrently with, or within 30 days after, the consummation of a fundamental transaction (or, if later, the date of the public announcement of the applicable fundamental transaction), may cause the Company to purchase the unexercised portion of the Warrants from the holder by paying to the holder an amount in cash equal to the Black Scholes Value (as defined in the applicable Warrant) of the remaining unexercised portion of such Warrants on the date of the consummation of such fundamental transaction. The 2023 Purchase Warrants do not include this repurchase right.

Anti-Takeover Provisions

The provisions of the General Corporation Law of the State of Delaware ("DGCL"), our Certificate of Incorporation and our Bylaws, certain provisions of which are summarized below, may have the effect of delaying, deferring or discouraging another person from acquiring control of our company. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Section 203 of the General Corporation Law of the State of Delaware

We are subject to Section 203 of the DGCL. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which such person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the commencement of the transaction, excluding for purposes of determining the number of shares outstanding (but not the outstanding voting stock owned by the interested stockholder) (a) shares owned by persons who are directors and also officers and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the consummation of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

In general, Section 203 of the DGCL defines a "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the entity or person's affiliates and associates, beneficially owns, or is an affiliate or associate of the corporation and within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

A Delaware corporation may "opt out" of these provisions with an express provision in its certificate of incorporation. We have not opted out of these provisions, which may, as a result, discourage or prevent mergers or other takeover or change of control attempts of us.

Certificate of Incorporation and Bylaws

Among other things, our Certificate of Incorporation and Bylaws:

- do not provide stockholders with cumulative voting rights with the result that stockholders holding a plurality of the voting power of our shares of common stock may be able to elect all of our directors;
- provide for stockholder actions to be taken at a duly called meeting of stockholders and not by written consent;
- provide that a special meeting of stockholders may only be called by a majority of our board of directors, the chair of our board of directors or our chief executive officer;

- establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;
- divide our board of directors into three classes with staggered three-year terms;
- provide that the authorized number of directors may be changed only by resolution adopted by a majority of the authorized number of directors constituting the board of directors;
- provide that the board of directors or any individual director may only be removed with cause and the affirmative vote of the holders of at least 66 2/3% of the voting power of all of our then outstanding shares of common stock;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law or subject to the rights of holders of preferred stock as designated from time to time, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us arising pursuant to any provision of the General Corporation Law of the State of Delaware or our Certificate of Incorporation or Bylaws, or (iv) any action asserting a claim against us or any of our directors or officers or other employees that is governed by the internal affairs doctrine (these choice of forum provisions do not apply to suits brought to enforce a duty or liability created by the Securities Act, the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction).

The foregoing provisions make it difficult for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede or discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.

These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

Transfer Agent and Registrar

Our transfer agent and registrar for our common stock is Equiniti Trust Company, LLC.

Listing on the Nasdaq Capital Market

Our common stock is listed on the Nasdaq Capital Market under the symbol “BNGO.”

PLAN OF DISTRIBUTION

We are offering 1,332,632 shares of our common stock issuable upon the exercise of currently outstanding Warrants previously issued by us under our registration statement on Form S-3 (No. 333-270459), which became effective on May 10, 2023, and are comprised of up to:

- 661,377 shares of common stock issuable upon exercise of outstanding 2025 Purchase Warrants;
- 164,684 shares of common stock issuable upon exercise of outstanding Series C Warrants;
- 145,560 shares of common stock issuable upon exercise of outstanding 2024 Purchase Warrants; and
- 361,011 shares of common stock issuable upon exercise of outstanding 2023 Purchase Warrants.

The 2025 Purchase Warrants became exercisable on June 11, 2025 and will expire on the five-year anniversary of such date. The Series C Warrants became exercisable on January 15, 2025 and will expire on the five-year anniversary of such date. The 2024 Purchase Warrants were exercisable immediately upon issuance and will expire on the five-year anniversary of the date of issuance. The 2023 Purchase Warrants were exercisable immediately upon issuance and will expire on the five-year anniversary of the date of issuance. See "*Description of Securities Being Registered*."

The shares of our common stock issuable upon the exercise of the Warrants will not be offered through underwriters, brokers or dealers. We will not pay any compensation in connection with the offering of the shares of our common stock upon exercise of the Warrants.

Pursuant to the terms of the Warrants, the shares of common stock will be distributed to those Warrant holders who properly exercise their Warrants and deliver payment of the aggregate exercise price, in accordance with the terms of the Warrants.

Our common stock is listed on the Nasdaq Capital Market and trades under the symbol "BNGO." The transfer agent of our common stock is Equiniti Trust Company, LLC.

LEGAL MATTERS

The validity of the securities being offered hereby and certain other legal matters will be passed upon for us by Troutman Pepper Locke LLP, Charlotte, North Carolina.

EXPERTS

The consolidated financial statements of Bionano Genomics, Inc. (the Company) as of December 31, 2025 and 2024 and for each of the years then ended incorporated by reference in this prospectus and in the registration statement have been so incorporated in reliance on the report of BDO USA, P.C., an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting. The report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement.

For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You should rely only on the information contained in this prospectus or incorporated by reference into this prospectus. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any jurisdiction where the offer is not permitted. You should assume that the information contained in this prospectus, or any document incorporated by reference in this prospectus, is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus or any sale of our securities.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at *http://www.sec.gov*.

We maintain a website at *www.bionano.com*. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus and is not incorporated by reference herein, and the inclusion of our website address in this prospectus is an inactive textual reference only.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with it into this prospectus, which means that we can disclose important information to you by referring you to those documents filed separately with the SEC. The information incorporated by reference is an important part of this prospectus. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede information contained in this prospectus.

The following documents are incorporated by reference into this document:

- our Annual Report on Form 10-K for the year ended December 31, 2025, filed with the SEC on March 23, 2026;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2026 and June 30, 2026, filed with the SEC on May 13, 2026 and August 10, 2026, respectively;
- our Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on May 6, 2026, May 14, 2026, May 28, 2026, June 5, 2026 and June 24, 2026 to the extent the information in such reports is filed and not furnished;
- our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 2, 2026 (solely those portions that were incorporated by reference into Part III of our Annual Report on Form 10-K for the fiscal year ended December 31, 2025); and
- the description of our common stock contained in our registration statement on Form 8-A/A, filed with the SEC on August 17, 2018, including all amendments and reports filed for the purpose of updating such description, including Exhibit 4.5 to the Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on March 5, 2024.

All other reports and documents filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date that this registration statement becomes effective and after the date of this prospectus but before the termination of the offering of the securities described in this prospectus (excluding information furnished pursuant to Items 2.02 and 7.01 of Form 8-K) shall be deemed to be incorporated by reference into this prospectus.

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that we have "furnished" to the SEC pursuant to the Exchange Act shall be incorporated by reference into this prospectus.

Any statement contained in this prospectus or contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded to the extent that a statement contained in this prospectus or any subsequently filed supplement to this prospectus, or document deemed to be incorporated by reference into this prospectus, modifies or supersedes such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You can obtain any of the filings incorporated by reference into this prospectus through us or from the SEC through the SEC's website at *www.sec.gov*. We will furnish without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents by writing or telephoning us at the following address:

Bionano Genomics, Inc.
9540 Towne Centre Drive, Suite 100
San Diego, California 92121
Telephone: (858) 888-7600

You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide different or additional information on our behalf. An offer of these securities is not being made in any jurisdiction where the offer or sale is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date of those respective documents.



Up to 1,332,632 Shares of Common Stock Underlying Outstanding Warrants

PROSPECTUS

November 5, 2026