

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549
FORM S-8
 REGISTRATION STATEMENT
 UNDER
 THE SECURITIES ACT OF 1933

Bionano Genomics, Inc.

(Exact name of registrant as specified in its charter)

Delaware
 (State or other jurisdiction of
 incorporation or organization)

26-1756290
 (I.R.S. Employer
 Identification No.)

9540 Towne Centre Drive, Suite 100
San Diego, California
 (Address of Principal Executive Offices)

92121
 (Zip Code)

Bionano Genomics, Inc. Amended and Restated 2018 Equity Incentive Plan, as amended
Bionano Genomics, Inc. 2018 Employee Stock Purchase Plan
 (Full titles of the plans)

R. Erik Holmlin, Ph.D.
President and Chief Executive Officer
Bionano Genomics, Inc.
9540 Towne Centre Drive, Suite 100
San Diego, California 92121
(858) 888-7600

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Thomas A. Coll, Esq.
Su Lian Lu, Esq.
Cooley LLP
10265 Science Center Drive
San Diego, California 92121
(858) 550-6000

R. Erik Holmlin, Ph.D.
President and Chief Executive Officer
Bionano Genomics, Inc.
9540 Towne Centre Drive, Suite 100
San Diego, California 92121
(858) 888-7600

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed by Bionano Genomics, Inc. (the “*Registrant*”) with the Securities and Exchange Commission (the “*SEC*”) for the purpose of registering (i) an additional 2,287,580 shares of Registrant’s Common Stock, par value \$0.0001 per share (“*Common Stock*”), issuable under the Registrant’s 2018 Equity Incentive Plan, as amended (the “*2018 Plan*”), pursuant to the provisions of the 2018 Plan providing for an automatic increase on January 1 of each year in the number of shares of Common Stock reserved and available for issuance under the 2018 Plan, and (ii) 22,000 additional shares of Common Stock issuable under the Registrant’s 2018 Employee Stock Purchase Plan (the “*2018 ESPP*”) pursuant to the provisions of the 2018 ESPP providing for an automatic increase on January 1 of each year in the number of shares of Common Stock reserved and available for issuance under the 2018 ESPP.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

These additional shares of Common Stock are securities of the same class as other securities for which a Registration Statement of the Registrant on Form S-8 relating to the 2018 Plan and the 2018 ESPP are effective. The Registrant previously registered shares of its Common Stock for issuance under the 2018 Plan and 2018 ESPP under Registration Statements on Form S-8 as noted below.

The following documents filed by the Registrant with the SEC are incorporated by reference into this Registration Statement:

- (a) The contents of the earlier registration statements on Form S-8 filed with the SEC on [August 28, 2018](#) (File No. 333-227073), [March 29, 2019](#) (File No. 333-230589), [March 11, 2020](#) (File No. 333-237069), [August 14, 2020](#) (File No. 333-245764), [March 24, 2021](#) (File No. 333-254654), [March 1, 2022](#) (File No. 333-263176), and [March 9, 2023](#) (File No. 333-270430);
- (b) The Registrant’s Annual Report on Form 10-K for the year ended December 31, 2023, which included audited financial statements for the Registrant’s latest fiscal year, filed with the SEC on [March 5, 2024](#);
- (c) The Registrant’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, filed with the SEC on [May 8, 2024](#);
- (d) The Registrant’s Current Reports on Form 8-K filed with the SEC on [February 28, 2024](#), [March 5, 2024](#), [April 5, 2024](#), [April 8, 2024](#), and [May 8, 2024](#); and
- (e) The description of the Registrant’s Common Stock contained in a registration statement on Form 8-A filed with the SEC on [July 31, 2018](#) (File No. 001-38613) under the Securities Exchange Act of 1934, as amended (the “*Exchange Act*”), including any amendment or report filed for the purpose of updating such description including [Exhibit 4.5](#) of the Company’s Annual Report on Form 10-K for the year ended December 31, 2023, filed with the SEC on [March 5, 2024](#).

All reports and other documents subsequently filed by the Registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, other than Current Reports or portions thereof furnished under Item 2.02 or Item 7.01 or any related Item 9.01 of Form 8-K and exhibits furnished on such form that relate to such items and other portions of documents that are furnished but not filed or are otherwise not incorporated into registration statements pursuant to the applicable rules promulgated by the SEC, after the date of this registration statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities offered hereby then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this registration statement from the date of filing such reports and documents.

Any statement contained in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes that statement. Any such statement so modified or superseded shall not constitute a part of this registration statement, except as so modified or superseded.

Item 8. Exhibits.

Exhibit Number	Description
4.1(1)	Amended and Restated Certificate of Incorporation of the Registrant, as amended.
4.2(2)	Amended and Restated Bylaws of the Registrant.
4.3(3)	Amendment to Amended and Restated Bylaws.
4.4(4)	Form of Common Stock Certificate of the Registrant.
5.1	Opinion of Cooley LLP.
23.1	Consent of BDO USA, P.C., Independent Registered Public Accounting Firm.
23.2	Consent of Cooley LLP. Reference is made to Exhibit 5.1.
24.1	Power of Attorney. Reference is made to the signature page hereto.
99.1(5)	Bionano Genomics, Inc. 2018 Equity Incentive Plan, as amended.
99.1A(6)	Forms of grant notice, stock option agreement and notice of exercise under the 2018 Plan.
99.1B(7)	Forms of director grant notice, stock option agreement and notice of exercise under the 2018 Plan.
99.1C(8)	Forms of double-trigger grant notice, stock option agreement and notice of exercise under the 2018 Plan.
99.1D(9)	Forms of international grant notice, stock option agreement and notice of exercise under the 2018 Plan.
99.1E(10)	Forms of restricted stock unit grant notice and restricted stock unit award agreement under the 2018 Plan.
99.2(11)	Bionano Genomics, Inc. 2018 Employee Stock Purchase Plan.
107	Filing Fee Table.

- (1) Incorporated by reference to Exhibit 3.1 of the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on November 8, 2023.
 - (2) Incorporated by reference to Exhibit 3.2 of the Registrant's Current Report on Form 8-K, filed with the SEC on August 24, 2018.
 - (3) Incorporated by reference to Exhibit 3.2 of the Registrant's Current Report on Form 8-K, filed with the SEC on April 14, 2023.
 - (4) Incorporated by reference to Exhibit 4.1 of the Registrant's Annual Report on Form 10-K, filed with the SEC on March 5, 2024.
 - (5) Incorporated by reference to Exhibit 99.1 of the Registrant's Registration Statement on Form S-8 (File No. 333-245764), filed with the SEC on August 13, 2020.
 - (6) Incorporated by reference to Exhibit 10.2A of the Registrant's Annual Report on Form 10-K, filed with the SEC on March 9, 2023.
 - (7) Incorporated by reference to Exhibit 10.2B of the Registrant's Annual Report on Form 10-K, filed with the SEC on March 9, 2023.
 - (8) Incorporated by reference to Exhibit 10.2C of the Registrant's Annual Report on Form 10-K, filed with the SEC on March 9, 2023.
 - (9) Incorporated by reference to Exhibit 10.5 of the Registrant's Registration Statement on Form S-1 (File No. 333-225970), as amended, filed with the SEC on August 17, 2018.
 - (10) Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q, filed with the SEC on August 4, 2021.
 - (11) Incorporated by reference to Exhibit 99.5 of the Registrant's Registration Statement on Form S-8 (File No. 333-227073), filed with the SEC on August 28, 2018.
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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on May 8, 2024.

BIONANO GENOMICS, INC.

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

R. Erik Holmlin, Ph.D.

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints each of R. Erik Holmlin, Ph.D. and Gülsen Kama as his or her true and lawful attorney-in-fact and agent, with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this Registration Statement (including post-effective amendments), and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ R. Erik Holmlin, Ph.D.</u> R. Erik Holmlin, Ph.D.	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	May 8, 2024
<u>/s/ Gülsen Kama</u> Gülsen Kama	Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	May 8, 2024
<u>/s/ David L. Barker, Ph.D.</u> David L. Barker, Ph.D.	Director	May 8, 2024
<u>/s/ Yvonne Linney, Ph.D.</u> Yvonne Linney, Ph.D.	Director	May 8, 2024
<u>/s/ Albert A. Luderer, Ph.D.</u> Albert A. Luderer, Ph.D.	Director	May 8, 2024
<u>/s/ Hannah Mamuszka</u> Hannah Mamuszka	Director	May 8, 2024
<u>/s/ Aleksandar Rajkovic, M.D., Ph.D.</u> Aleksandar Rajkovic, M.D., Ph.D.	Director	May 8, 2024
<u>/s/ Christopher Twomey</u> Christopher Twomey	Director	May 8, 2024
<u>/s/ Kristiina Vuori, M.D., Ph.D.</u> Kristiina Vuori, M.D., Ph.D.	Director	May 8, 2024
<u>/s/ Vincent Wong, J.D., M.B.A.</u> Vincent Wong, J.D., M.B.A.	Director	May 8, 2024



Thomas A. Coll
+1 858 550 6013
collta@cooley.com

May 8, 2024

Bionano Genomics, Inc.
9540 Towne Centre Drive, Suite 100
San Diego, CA 92121

Ladies and Gentlemen:

We have acted as counsel to Bionano Genomics, Inc., a Delaware corporation (the "**Company**"), in connection with the filing by the Company of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission (the "**Commission**") covering the offering of up to 2,507,580 shares (the "**Shares**") of the Company's Common Stock, par value \$0.0001 per share ("**Common Stock**"), consisting of (a) 2,287,580 shares of Common Stock issuable pursuant to the Company's 2018 Equity Incentive Plan, as amended (the "**Incentive Plan**"), and (b) 22,000 shares of Common Stock issuable pursuant to the Company's 2018 Employee Stock Purchase Plan (the "**ESPP**") (together with the Incentive Plan, the "**Plans**").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and the related prospectuses, (b) the Plans, (c) the Company's certificate of incorporation and bylaws, each as currently in effect, and (d) such other records, documents, opinions, certificates, memoranda and instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plans, the Registration Statement and the related prospectuses, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

This opinion is limited to the matters expressly set forth in this letter, and no opinion should be implied, or may be inferred, beyond the matters expressly stated. This opinion speaks only as to law and facts in effect or existing as of the date hereof and we have no obligation or responsibility to update or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

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We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Commission thereunder.

Sincerely,

Cooley LLP

By: /s/ Thomas A. Coll

Thomas A. Coll

Cooley LLP 10265 Science Center Drive San Diego, CA 92121
t: (858) 550-6000 f: (858) 550-6420 cooley.com

Consent of Independent Registered Public Accounting Firm

Bionano Genomics, Inc.
San Diego, California

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 5, 2024, relating to the consolidated financial statements of Bionano Genomics, Inc.'s (the "Company") appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2023. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/BDO USA, P.C.

San Diego, CA

May 8, 2024

Calculation of Filing Fee Table

Form S-8
(Form Type)

Bionano Genomics, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Unit ⁽²⁾	Maximum Aggregate Offering Price ⁽²⁾	Fee Rate	Amount of Registration Fee
Equity	2018 Equity Incentive Plan, as amended Common Stock, \$0.0001 par value per share	Other ⁽²⁾	2,287,580 ⁽³⁾	\$ 0.98	\$ 2,241,828.40	.00014760	\$ 330.90
Equity	2018 Employee Stock Purchase Plan Common Stock, \$0.0001 par value per share	Other ⁽²⁾	22,000 ⁽⁴⁾	\$ 0.98	\$ 21,560.00	.00014760	\$ 3.19
Total Offering Amounts					\$ 2,263,388.40		—
Total Fees Previously Paid							—
Total Fee Offsets							—
Net Fee Due							\$ 334.09

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “*Securities Act*”), this Registration Statement on Form S-8 shall also cover any additional shares of common stock, par value \$0.0001 per share (“*Common Stock*”), of Bionano Genomics, Inc. (the “*Registrant*”) that become issuable under the Registrant’s 2018 Equity Incentive Plan, as amended (the “*2018 Plan*”) and the Registrant’s 2018 Employee Stock Purchase Plan (the “*2018 ESPP*”) by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) and 457(h) of the Securities Act using the average of the high and low prices of the Common Stock as reported on the Nasdaq Capital Market on May 3, 2024.
- (3) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the 2018 Plan on January 1, 2024 pursuant to an “evergreen” provision contained in the 2018 Plan. Pursuant to such provision, on January 1st of each year through (and including) January 1, 2028, the number of shares authorized for issuance under the 2018 Plan will be automatically increased by the lesser of: (a) 5% of the total number of shares of capital stock of the Registrant outstanding on December 31 of the preceding calendar year; or (b) such lesser number of shares of Common Stock as the Registrant’s board of directors (the “*Board*”) may designate prior to the applicable January 1st.
- (4) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the 2018 ESPP on January 1, 2024 pursuant to an “evergreen” provision contained in the 2018 ESPP. Pursuant to such provision, on January 1st of each year through (and including) January 1, 2028, the number of shares authorized for issuance under the 2018 ESPP will be automatically increased by a number equal to the lesser of: (a) 1% of the total number of shares of capital stock outstanding on December 31 of the preceding calendar year; (b) 22,000 shares; or (c) such lesser number of shares of Common Stock as the Board may designate prior to the applicable January 1st.