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 26-1756290 (State or other jurisdiction of incorporation or organization) (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. 2020 Inducement Plan (Full titles of the plan)

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. Cooley LLP 4401 Eastgate Mall 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

(858) 550-6000		San Diego, California (858) 888-7600	
Indicate by check mark whether the Registrant is reporting company or an emerging growth compreporting company," and "emerging growth com	oany. See the d	efinitions of "large accelerated filer," "acc	
Large accelerated filer		Accelerated filer	
Non-accelerated filer	\boxtimes	Smaller reporting company	\boxtimes
Emerging growth company	\boxtimes		
If an emerging growth company, indicate by che complying with any new or revised financial acc □		•	-

CALCULATION OF REGISTRATION	N	FFE
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		Proposed	Proposed	
	Amount	Maximum	Maximum	Amount of
Title of Securities	to be	Offering Price	Aggregate	Registration
to be Registered	Registered ⁽¹⁾	Per Share ⁽²⁾	Offering Price ⁽²⁾	Fee
Common Stock, par value \$0.0001 per share	1,000,000(3)	\$5.25	\$5,250,000	\$486.68

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement 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 2020 Inducement Plan, as amended (the "Inducement Plan"), by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration which results in an increase in the number of outstanding shares of Common Stock.
- (2) This estimate is made pursuant to Rule 457(h)(1) and Rule 457(c) of the Securities Act solely for purposes of calculating the registration fee. The proposed maximum offering price per share and proposed maximum aggregate offering price are based upon the average of the high and low sale prices of the Common Stock on November 1, 2021, as reported on the Nasdaq Capital Market.
- (3) Represents an increase in the number of shares of Common Stock reserved for issuance under the Inducement Plan pursuant to an amendment to the Inducement Plan approved by the Board of Directors of the Registrant on October 6, 2021.

INCORPORATION OF DOCUMENTS BY REFERENCE

This Registration Statement is being filed for the purpose of increasing the number of securities of the same class as other securities for which a Registration Statement of the Registrant on Form S-8 relating to the same employee benefit plan is effective.

The Registrant previously registered shares of its Common Stock for issuance under the Inducement Plan under Registration Statements on Form S-8 filed with the Securities and Exchange Commission (the "*Commission*") on <u>August 28, 2020 (File No. 333-248468)</u>. Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Registration Statement referenced above.

ITEM 8. EXHIBITS.

Exhibit	
Number	Description
<u>4.1(1)</u>	Amended and Restated Certificate of Incorporation of the Registrant, as amended.
<u>4.2(2)</u>	Amended and Restated Bylaws of the Registrant.
<u>4.3(3)</u>	Form of Common Stock Certificate of the Registrant.
<u>5.1</u>	Opinion of Cooley LLP.
<u>23.1</u>	Consent of BDO USA LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Deloitte & Touche LLP, Independent Registered Public Accounting Firm.
<u>23.3</u>	Consent of Cooley LLP. Reference is made to Exhibit 5.1.
<u>24.1</u>	Power of Attorney. Reference is made to the signature page hereto.
<u>99.1(4)</u>	Bionano Genomics, Inc. 2020 Inducement Plan, as amended.
<u>99.2(5)</u>	Form of Stock Option Grant Notice and Stock Option Agreement under the Bionano Genomics, Inc. 2020 Inducement Plan.

- (1) Incorporated by reference to the Registrant's Annual Report on Form 10-K, filed with the SEC on March 23, 2021.
- (2) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on August 24, 2018.
- (3) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-225970), as amended.
- (4) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on October 12, 2021.
- (5) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on August 24, 2020.

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 November 4, 2021.

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 R. Erik Holmlin, Ph.D. 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.

Signature	Title	Date
/s/ R. Erik Holmlin,Ph.D.	President, Chief Executive Officer and Director	November 4, 2021
R. Erik Holmlin, Ph.D.	(Principal Executive Officer)	
/s/ Christopher Stewart	Chief Financial Officer	November 4, 2021
Christopher Stewart	(Principal Financial and Accounting Officer)	
/s/ David L. Barker, Ph.D.	Director	November 4, 2021
David L. Barker, Ph.D.		
/s/ Yvonne Linney, Ph.D.	Director	November 4, 2021
Yvonne Linney, Ph.D.		
/s/ Albert A. Luderer, Ph.D.	Director	November 4, 2021
Albert A. Luderer, Ph.D.		
/s/ Hannah Mamuszka	Director	November 4, 2021
Hannah Mamuszka		
/s/ Christopher Twomey	Director	November 4, 2021
Christopher Twomey		
/s/ Kristiina Vuori, M.D., Ph.D.	Director	November 4, 2021
Kristiina Vuori, M.D., Ph.D.		



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

November 4, 2021

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

Re: Registration Statement and Form S-8

Ladies and Gentlemen:

You have requested our opinion, as counsel to Bionano Genomics, Inc., a Delaware corporation (the "*Company*"), with respect to certain matters 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, covering the offering of an aggregate of up to 1,000,000 shares (the "*Shares*") of the Company's Common Stock, \$0.0001 par value per share (the "*Common Stock*"), issuable pursuant to the Company's 2020 Inducement Plan (the "*Plan*").

In connection with this opinion, we have examined and relied upon the Registration Statement and related prospectuses, the Plan, the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, each as currently in effect, and originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other 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 where authorization, execution and delivery are prerequisites to the effectiveness of such documents. 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 issued and sold in accordance with the Plan, the Registration Statement and the prospectus, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements under the Plan, which will be fully paid and nonassessable when such deferred payments are made in full).

Cooley LLP 4401 Eastgate Mall San Diego, CA 92121 t: (858) 550-6000 f: (858) 550-6420 cooley.com



November 4, 2021 Page Two

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Thomas A. Coll
Thomas A. Coll

Cooley LLP 4401 Eastgate Mall San Diego, CA 92121 t: (858) 550-6000 f: (858) 550-6420 cooley.com

Exhibit 23.1

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 23, 2021, relating to the consolidated financial statements of Bionano Genomics, Inc., appearing in the Annual Report on Form 10-K of Bionano Genomics, Inc. for the year ended December 31, 2020.

/s/ BDO USA, LLP

San Diego, California November 4, 2021

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 10, 2020 relating to the financial statements of Bionano Genomics, Inc. for the year ended December 31, 2019, appearing in Annual Report on Form 10-K of Bionano Genomics, Inc. for the year ended December 31, 2020.

/s/ DELOITTE & TOUCHE LLP

San Diego, CA November 4, 2021