
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**FORM S-8
REGISTRATION STATEMENT**
*Under
The Securities Act of 1933*

SINGULAR GENOMICS SYSTEMS, INC.
(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

81-2948451
(IRS Employer
Identification No.)

**10931 N. Torrey Pines Road
Suite#100
La Jolla, CA 92037
(858) 333-7830**
(Address of Principal Executive Offices)

**Singular Genomics Systems, Inc. 2021 Equity Incentive Plan
Singular Genomics Systems, Inc. 2016 Stock Plan**
(Full title of Plan)

**Andrew Spaventa
Chief Executive Officer
and Chairperson of the Board
Singular Genomics Systems, Inc.
10931 N. Torrey Pines Road
Suite #100
La Jolla, CA 92037**
(Name and address of agent for service)

(858) 333-7830
(Telephone number, including area code, of agent for service)

Copies to:

**Ryan J. Gunderson
Gunderson Dettmer Stough Villeneuve
Franklin & Hachigian, LLP
3570 Carmel Mountain Road, Suite 200
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(858) 436-8000**

**Dalen Meeter
Senior Vice President, Finance
Singular Genomics Systems, Inc.
10931 N. Torrey Pines Road
Suite#100
La Jolla, CA 92037
(858) 333-7830**

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 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 type="checkbox"/>
		Emerging growth company	<input checked="" 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.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.0001 par value per share	5,165,450 (2)	\$14.44(3)	\$74,589,098(3)	\$8,138

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended, or the Securities Act, this Registration Statement shall also cover any additional shares of Registrant's Common Stock as a result of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration that results in an increase to the number of outstanding shares of Registrant's Common Stock, as applicable.
- (2) Represents shares of restricted Common Stock issued to employees and directors of the Registrant pursuant to the Singular Genomics Systems, Inc. 2016 Stock Plan to be registered for resale. To the extent that shares of common stock issued upon early exercise of options granted under the 2016 Stock Plan are forfeited or expire after the date of this Registration Statement, such shares will become available for issuance under the Singular Genomics Systems, Inc. 2021 Equity Incentive Plan.
- (3) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(h) of the Securities Act based on the average of the high and low prices of the Registrant's Common Stock on August 20, 2021 as reported on the Nasdaq Global Select Market.
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EXPLANATORY NOTE

This Registration Statement on Form S-8 of Singular Genomics Systems, Inc., or the Registrant, has been prepared in accordance with the requirements of Form S-8 under the Securities Act to register for resale 5,165,450 shares of restricted Common Stock previously issued under the Singular Genomics Systems 2016 Stock Plan, or the 2016 Plan.

To the extent that shares of Common Stock issued upon early exercise of options granted under the 2016 Plan are forfeited or expire after the date of this Registration Statement, such shares will become available for issuance under the Singular Genomics Systems, Inc. 2021 Equity Incentive Plan, or the 2021 Plan. Any such repurchase or cancellation will decrease the number of shares previously issued and equally increase the number of shares reserved for future issuance.

This Registration Statement contains a “reoffer” prospectus prepared in accordance with Part I of Form S-3 (in accordance with Instruction C of the General Instructions to Form S-8). The reoffer prospectus permits reoffers and resales of certain shares referred to therein that constitute “restricted securities,” within the meaning of Form S-8, by certain of the Company’s stockholders, as more fully set forth therein. The reoffer prospectus relates to shares of Common Stock, \$0.0001 par value per share, the Registrant previously issued to certain employees, officers and directors of the Company pursuant to the 2016 Plan. As specified in General Instruction C of Form S-8, the amount of securities to be reoffered or resold under the reoffer prospectus by each Selling Stockholder and any other person with whom he or she is acting in concert for the purpose of selling the Registrant’s securities, may not exceed, during any three-month period, the amount specified in Rule 144(e) under the Securities Act.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information specified in Item 1 and Item 2 of Part I of this Registration Statement is omitted from this filing in accordance with the provisions of Rule 428 under the Securities Act and the introductory note to Part I of Form S-8. The documents containing the information specified in Part I will be delivered to plan participants as required by Rule 428(b)(1).

REOFFER PROSPECTUS

5,165,450 Shares



S I N G U L A R
G E N O M I C S

Common Stock

The individuals, or the Selling Stockholders, named in this reoffer prospectus, or Reoffer Prospectus, may offer and sell, from time to time, for their own accounts up to an aggregate of 5,165,450 shares of our common stock, \$0.0001 par value per share, which we refer to as our Common Stock, subject to certain restrictions described herein. We will not receive any proceeds from any sale of the shares pursuant to this Reoffer Prospectus. The Selling Stockholders acquired the shares pursuant to the Singular Genomics Systems, Inc. 2016 Stock Plan, or the 2016 Plan, an employee benefit plan as defined in Rule 405 under Regulation C of the Securities Act of 1933, as amended, or the Securities Act, and the Selling Stockholders may resell all, a portion, or none of the shares from time to time.

The shares are “restricted securities” under the Securities Act before their sale under this Reoffer Prospectus. This Reoffer Prospectus has been prepared for the purpose of registering the shares under the Securities Act to allow for future sales by the Selling Stockholders, on a continuous or delayed basis, to the public without restriction. Subject to the satisfaction of any conditions to vesting of the shares of Common Stock offered hereby pursuant to the terms of the relevant award agreements, and subject to the expiration of any lock-up agreements described herein and other restrictions that may be on the shares, the Selling Stockholders may from time to time sell, transfer or otherwise dispose of any or all of the shares of Common Stock covered by this Reoffer Prospectus through underwriters or dealers, directly to purchasers (or a single purchaser) or through broker-dealers or agents. If underwriters or dealers are used to sell the shares of Common Stock, we will name them and describe their compensation in a prospectus supplement. The shares of Common Stock may be sold in one or more transactions at fixed prices, prevailing market prices at the time of sale, prices related to the prevailing market prices, varying prices determined at the time of sale or negotiated prices. We do not know when or in what amount the Selling Stockholders may offer the shares of Common Stock for sale. The Selling Stockholders may sell any, all or none of the shares of Common Stock offered by this Reoffer Prospectus, provided that the amount of shares of Common Stock to be offered or resold under this Reoffer Prospectus by each Selling Stockholder or other person with whom he or she is acting in concert for the purpose of selling shares of Common Stock, may not exceed, during any three-month period, the amount specified in Rule 144(e) under the Securities Act. See “Plan of Distribution” beginning on page 10 for more information about how the Selling Stockholders may sell or dispose of the shares of Common Stock covered by this Reoffer Prospectus. The Selling Stockholders will bear all sales commissions and similar expenses. We will bear all expenses of registration incurred in connection with this offering, including any other expenses incurred by us in connection with the registration and offering that are not borne by the Selling Stockholders.

You should read this Reoffer Prospectus and any accompanying prospectus supplement carefully before you make your investment decision. The sales may occur in transactions on the Nasdaq Global Select Market, or Nasdaq, at prevailing market prices or in negotiated transactions. See “Plan of Distribution” beginning on page 10. We will not receive any proceeds from any of these sales. We are paying the expenses incurred in registering the shares, but all selling and other expenses incurred by each of the Selling Stockholders will be borne by that stockholder.

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Investing in our Common Stock involves risks. See “[Risk Factors](#)” beginning on page 8 for a discussion of the risks you should consider in connection with an investment in our Common Stock.

Our Common Stock is listed on the Nasdaq Global Select Market, under the trading symbol “OMIC.” The last reported sale price of our Common Stock on Nasdaq on August 24, 2021 was \$16.81 per share.

We are an “emerging growth company” under federal securities laws and are subject to reduced public company reporting requirements. Investing in our Common Stock involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading “[Risk Factors](#)” on page 8 of this Reoffer Prospectus and under similar headings in the documents that are incorporated by reference into this Reoffer Prospectus, as well as “[Cautionary Note Regarding Forward-Looking Statements](#)” on page 3 of this Reoffer Prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this Reoffer Prospectus. Any representation to the contrary is a criminal offense.

The date of this Reoffer Prospectus is August 25, 2021.

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You should rely only on the information contained or incorporated by reference in this Reoffer Prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor the Selling Stockholders are making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this Reoffer Prospectus is accurate only as of the date hereof. Additionally, any information we have incorporated by reference in this Reoffer Prospectus is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this Reoffer Prospectus or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since that date.

When used in this Reoffer Prospectus, unless context requires otherwise, references to “we,” “us,” “our,” “Singular,” or the “Company” refer to Singular Genomics Systems, Inc.

ABOUT THIS PROSPECTUS

This Reoffer Prospectus contains important information you should know before investing, including important information about the Company and the securities being offered. You should carefully read this Reoffer Prospectus, as well as the additional information contained in the documents described under “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” in this Reoffer Prospectus, and in particular the periodic and current reporting documents we file with the Securities and Exchange Commission, or the Commission. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This Reoffer Prospectus is not an offer to sell these securities, and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

You should not assume that the information in this Reoffer Prospectus or any documents we incorporate by reference herein or therein is accurate as of any date other than the date on the front of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other documents with the Commission under the U.S. Securities Exchange Act of 1934, as amended, or the Exchange Act. The Commission maintains a website that contains reports, proxy and information statements and other information regarding issuers, including the Company, that file electronically with the Commission. You may obtain copies of the registration statement and its exhibits and the other documents that we file with the Commission at www.sec.gov.

We also make these documents available on the investor relations portion of our website at www.singulargenomics.com. Our website and the information contained or connected to our website is not incorporated by reference in this Reoffer Prospectus, and you should not consider it part of this Reoffer Prospectus. Our principal executive office is located at 10931 N. Torrey Pines Road, Suite #100, La Jolla, California, 92037 and can be reached by telephone at (858) 333-7830.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The Commission rules permit us to incorporate by reference information in this Reoffer Prospectus. This means that we can disclose important information to you by referring you to another document filed separately with the Commission. The information incorporated by reference is considered to be part of this Reoffer Prospectus, except for information superseded by information contained in this Reoffer Prospectus itself or in any subsequently filed incorporated document. This Reoffer Prospectus incorporates by reference the documents set forth below that we have previously filed with the Commission, other than information in such documents that is deemed to be furnished and not filed. These documents contain important information about the Company and its business and financial condition.

- Amendment No. 2 to the Registrant’s Registration Statement on [Form S-1](#) filed with the Securities and Exchange Commission on May 24, 2021 (File No. 333-255912), or the Form S-1;
- the Registrant’s prospectus dated May 26, 2021 pursuant to Rule 424(b) under the Securities Act relating to the [Form S-1](#), which contains audited financial statements for the Registrant’s latest fiscal year for which such statements have been filed;
- the Quarterly Report on [Form 10-Q](#) for the quarter ended June 30, 2021, filed with the Securities and Exchange Commission on August 3, 2021;
- the Current Report on [Form 8-K](#) on Current Report filed on June 1, 2021; and
- the description of the Registrant’s Common Stock contained in the Registrant’s Registration Statement on [Form 8-A](#) (File No. 001-40443), filed with the SEC on May 25, 2021, including any amendments or reports filed for the purpose of updating such description.

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All other reports and documents filed by the Registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, subsequent to the filing 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 de-registers all securities then remaining unsold shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents. The Registrant is not, however, incorporating any documents or information that the Registrant is deemed to furnish and not file in accordance with SEC rules. Any statement contained in a document incorporated or deemed incorporated by reference in this Registration Statement will be deemed modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any subsequently filed document that also is deemed incorporated by reference in this Registration Statement modifies or supersedes that statement.

The Company undertakes to provide without charge to each person, including any beneficial owner, to whom a copy of this Reoffer Prospectus is delivered, upon written or oral request of any such person, a copy of any and all of the information that has been incorporated by reference in this Reoffer Prospectus but not delivered with this Reoffer Prospectus other than the exhibits to those documents, unless the exhibits are specifically incorporated by reference into the information that this Reoffer Prospectus incorporates. Documents incorporated by reference in this Reoffer Prospectus may be obtained by requesting them in writing or by telephone from us at:

Singular Genomics Systems, Inc.
10931 N. Torrey Pines Road
Suite #100
La Jolla, CA 92037
(858) 333-7830

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Reoffer Prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this Reoffer Prospectus, including statements regarding our future results of operations and financial position, future revenue, business strategy, prospects, products, research and development costs, timing and likelihood of success, as well as plans and objectives of management for future operations, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that are in some cases beyond our control and may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

The words “anticipate,” “believe,” “contemplate,” “continue” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “potential” “predict,” “project,” “should,” “target,” “will” or “would” or the negative of these terms or other similar expressions are intended to identify forward looking statements. Forward-looking statements contained in this Reoffer Prospectus include, but are not limited to, statements about:

- estimates of our addressable market, market growth, future revenue, expenses, capital requirements and our needs for additional financing;
- our ability to successfully implement our commercialization plan for our G4 Integrated Solution and planned PX Integrated Solution;
- the implementation of our business model and strategic plans for our G4 Integrated Solution and planned PX Integrated Solution;
- our expectations regarding the rate and degree of market acceptance of our G4 Integrated Solution and planned PX Integrated Solution;
- our ability to compete with competitive companies and technologies in our industry;
- our ability to manage and grow our business and commercialize our G4 Integrated Solution and planned PX Integrated Solution;
- our ability to develop and commercialize new products and development product enhancements;
- our ability to establish and maintain intellectual property protection for our products or avoid or defend claims of infringement;
- the performance of third-party manufacturers and suppliers;
- our ability to effectively manufacture our products;
- the potential effects of government regulation;
- our ability to hire and retain key personnel and to manage our future growth effectively;
- our ability to obtain additional financing in this or future offerings;
- the volatility of the trading price of our common stock;
- our expectations regarding use of proceeds from this offering;
- the impact of local, regional, and national and international economic conditions and events;
- the impact of COVID-19 on our business;
- our expectations about market trends; and
- our expectations regarding the period during which we will qualify as an emerging growth company under the JOBS Act.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in the section titled “Risk Factors” incorporated by reference into this reoffer prospectus. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this reoffer prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, advancements, discoveries, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. Except to the extent required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this reoffer prospectus to conform these statements to actual results or to changes in our expectations.

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You should read this Reoffer Prospectus, the documents that incorporated by reference herein, and the documents we have filed with the Commission as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

PROSPECTUS SUMMARY

This Reoffer Prospectus is part of a registration statement that we filed with the Commission. We have provided to you in this Reoffer Prospectus a general description of the Selling Stockholders and the distribution of the shares. To the extent there is a conflict between the information contained in this Reoffer Prospectus and any of our subsequent filings with the Commission, the information in the document having the later date shall modify or supersede the earlier statement.

As permitted by the rules and regulations of the Commission, the registration statement of which this Reoffer Prospectus forms part includes additional information not contained in this prospectus. You may read the registration statement and the other reports we file with the Commission at the Commission's website or at the Commission's offices described above under the heading "Incorporation of Certain Information by Reference" if necessary.

When used in this Reoffer Prospectus, unless context requires otherwise, references to "we," "us," "our," "Singular," or the "Company" refer to Singular Genomics Systems, Inc.

Overview

We are a life science technology company that is leveraging novel next generation sequencing, or NGS, and multiomics technologies to build products that empower researchers and clinicians. We developed a unique and proprietary NGS technology, which we refer to as our Sequencing Engine. This Sequencing Engine is the foundational platform technology that forms the basis of our products in development and our core product tenets: accuracy, speed, flexibility and scale. We are currently developing two integrated solutions that are purpose built to target specific applications in which these core product tenets matter most. Our first integrated solution is targeted at the NGS market and comprises an instrument, or the G4 Instrument, and an associated menu of consumable kits, which we refer to collectively as our G4 Integrated Solution. The G4 Instrument is a benchtop next generation sequencer designed to produce fast and accurate genetic sequencing results. The integrated purpose built kits that run on the G4 Instrument address specific applications in fast growing markets including oncology and immune profiling. We have completed our beta pilot program and anticipate initiating an early access program followed by a commercial launch of the G4 Integrated Solution by the end of 2021, with intentions for units to ship in the first half of 2022. Our second integrated solution in development comprises an instrument, or the PX Instrument, and an associated menu of consumable kits, which we refer to collectively as our PX Integrated Solution. Leveraging sequencing as a universal readout, the PX Integrated Solution combines single cell analysis, spatial analysis, genomics and proteomics in one integrated instrument providing a versatile multiomics solution. We anticipate commercial launch of the PX Integrated Solution in 2023.

The core of our Sequencing Engine is comprised of unique and proprietary chemistry, including novel chemical compounds, polymers and enzymes. This chemistry is designed to produce high sequencing accuracy and rapid cycle times that we believe can drive improvements in NGS. To take full advantage of the proprietary chemistry, we are developing purpose built instrumentation consisting of high speed, high resolution imaging and innovative fluidic design. We believe that our Sequencing Engine, together with our proprietary innovations in molecular biology techniques, will enable differentiated applications in fast growing markets. These innovations are supported by our intellectual property portfolio.

Each of our two integrated solutions in development consists of an instrument that incorporates our Sequencing Engine and associated consumables that are used exclusively on each instrument. The G4 Integrated Solution is designed to target the NGS market, in particular, applications that require accuracy, speed, flexibility and scale. We are focused on oncology where there is an increasing need for higher sensitivity technology such as rare variant detection in liquid biopsy. Another area of focus is immunology where there is a need to better understand and harness the immune system in infectious disease, autoimmune disorders and cancer immunotherapy. We aim to execute a three step commercialization plan for our G4 Integrated Solution consisting of: (1) collaborating with select partners to conduct beta pilot tests, which we have completed, (2) expanding collaborations with additional potential customers in an early access program and (3) offering our G4 Integrated Solution broadly to the market, with commercial launch by the end of 2021 and shipping units in the first half of 2022.

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The PX Integrated Solution is our second product in development and is a multiomics platform designed to target the markets for single cell, spatial analysis and proteomics. The PX Integrated Solution will leverage our Sequencing Engine as a readout mechanism to provide a high-resolution view of biology at the single cell and tissue level. We believe the PX Integrated Solution, when launched, will be a high-throughput, versatile platform capable of measuring levels of RNA transcription, protein expression and sequence specific information directly in cells and tissues. We believe the PX Integrated Solution will have broad application across many areas of biology. We are initially focused on applications in oncology and immunology, with future expansion into other applications such as neurology. We are currently in an advanced prototype development stage for the PX Integrated Solution and expect to begin an early access program in 2022 and full commercial launch in 2023. We believe that our G4 and PX Integrated Solutions can unleash the full power of sequencing as a universal reader of biology, and open new frontiers in research and medicine.

Corporate Information

We were incorporated in Delaware in 2016. Our principal executive offices are located at 10931 North Torrey Pines Road, Suite #100, La Jolla, California 92037. Our telephone number is (858) 333-7830. Our website address is www.singulargenomics.com. Information contained on the website is not incorporated by reference into this Reoffer Prospectus. We have included our website address in this Reoffer Prospectus solely as an inactive textual reference.

Singular Genomics, the Singular Genomics logo and our other registered or common law trademarks appearing in this prospectus are the property of Singular Genomics Systems, Inc. This prospectus contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ®, TM or SM 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 entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

The Offering

This Reoffer Prospectus relates to the public offering, which is not being underwritten, by the Selling Stockholders listed in this Reoffer Prospectus, of up to 5,165,450 shares of Common Stock issued to each Selling Stockholder pursuant to the exercise of stock options granted by the Company to the Selling Stockholder under the 2016 Plan. Subject to the satisfaction of any conditions to vesting of the shares of Common Stock offered hereby pursuant to the terms of the relevant award agreements, and subject to the expiration of any lock-up agreements described herein and other restrictions that may be on the shares, the Selling Stockholders may from time to time sell, transfer or otherwise dispose of any or all of the shares of Common Stock covered by this Reoffer Prospectus through underwriters or dealers, directly to purchasers (or a single purchaser) or through broker-dealers or agents. We will receive none of the proceeds from the sale of the shares of Common Stock by the Selling Stockholders. The Selling Stockholders will bear all sales commissions and similar expenses in connection with this offering. We will bear all expenses of registration incurred in connection with this offering, as well as any other expenses incurred by us in connection with the registration and offering that are not borne by the Selling Stockholders.

Summary Risk Factors:

Investing in our Common Stock involves substantial risk. The risks described in the section titled "Risk Factors" immediately following this summary may cause us to not realize the full benefits of our strengths or may cause us to be unable to successfully execute all or part of our strategy. Some of the more significant challenges include the following:

- Our limited operating history makes it difficult to evaluate our future prospects and the risks and challenges we may encounter.
- We have incurred significant losses since inception, we expect to incur significant losses in the future and we may not be able to generate sufficient revenue to achieve and maintain profitability.
- We are a pre-revenue life science technology company in the development stage and have no history commercializing our products or technology, which makes it difficult to evaluate our prospects and predict our future performance.
- The life sciences technology market is highly competitive. If we fail to compete effectively, our business and operating results will suffer.

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- If we are sued for infringing, misappropriating or otherwise violating intellectual property rights of third parties, such litigation could be costly and time consuming and could prevent or delay us from developing or commercializing our product candidates.
- If our products fail to achieve early customer and scientific acceptance, we may not be able to achieve broader market acceptance for our products, and our revenues and prospects may be harmed.
- We expect to be highly dependent upon revenue generated from the sale of our G4 Integrated Solution, and any delay or failure by us to finalize the development and to begin to commercialize our G4 Integrated Solution will have a substantial adverse effect on our business and results of operations.
- The COVID-19 pandemic and efforts to reduce its spread have adversely impacted, and are expected to continue to materially and adversely impact, our business and operations.
- Our business will depend significantly on research and development spending by academic institutions and other research institutions, and any reduction in spending could limit demand for our products and adversely affect our business, results of operations, financial condition and prospects.
- Our operating results may fluctuate significantly in the future, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or any guidance we may provide.
- We have not commercially launched any products, and we may not be able to successfully commercially launch our G4 Integrated Solution or planned PX Integrated Solution as planned.
- If we are unable to obtain and maintain sufficient intellectual property protection for our products and technology, or if the scope of the intellectual property protection obtained is not sufficiently broad, our competitors could develop and commercialize products similar or identical to ours, and our ability to successfully commercialize our products may be impaired.
- We may require substantial additional funding, which may not be available to us on acceptable terms, or at all, and, if not available, may require us to delay, scale back, or cease our product development programs or operations.

RISK FACTORS

Investing in shares of our Common Stock involves a high degree of risk. Investors should carefully consider the risks we have described under the section titled “Risk Factors” in our prospectus dated May 26, 2021 filed on May 28, 2021 pursuant to Rule 424(b) under the Securities Act relating to a Form S-1 and our quarterly report on Form 10-Q filed on August 3, 2021, together with all the other information appearing in or incorporated by reference into this Reoffer Prospectus, before deciding to invest in our Common Stock. If any of the events or developments we have described occur, our business, financial condition, or results of operations could be materially or adversely affected. As a result, the market price of our Common Stock could decline, and investors could lose all or part of their investment. The risks and uncertainties we have described are not the only risks and uncertainties that we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. The risks we have described also include forward-looking statements, and our actual results may differ substantially from those discussed in these forward-looking statements. See “Cautionary Note Regarding Forward-Looking Statements.”

DETERMINATION OF OFFERING PRICE

The Selling Stockholders will determine at what price they may sell the offered shares of Common Stock, and such sales may be made at prevailing market prices or at privately negotiated prices. See “Plan of Distribution” below for more information.

USE OF PROCEEDS

We will not receive any proceeds from the sale of shares of our Common Stock by the Selling Stockholders. All proceeds from the sale of the Shares will be for the account of the Selling Stockholders, as described below. See the sections titled “Selling Stockholders” and “Plan of Distribution” described below.

DESCRIPTION OF SECURITIES

The description of our Common Stock contained in our Registration Statement on Form 8-A (File No. 001-40443), filed with the SEC on May 25, 2021, including any amendments or reports filed for the purpose of updating such description

SELLING STOCKHOLDERS

The table below sets forth information concerning the resale of the shares by the Selling Stockholders. We will not receive any proceeds from the resale of the shares by the Selling Stockholders. The Selling Stockholders may sell any, all or none of the shares of Common Stock offered by this Reoffer Prospectus.

The table below sets forth, as of June 30, 2021 (the “Determination Date”): (i) the name of each person who is offering the resale of shares by this Reoffer Prospectus; (ii) the number of shares (and the percentage, if 1% or more) of Common Stock beneficially owned (determined in the manner described in footnote (1) to the table below) by each person; (iii) the number of shares that each Selling Stockholder may offer for sale from time to time pursuant to this Reoffer Prospectus, whether or not such Selling Stockholder has a present intention to do so; and (iv) the number of shares (and the percentage, if 1% or more) of Common Stock each person will own after the offering, assuming they sell all of the shares offered. Unless otherwise indicated, beneficial ownership is direct and the person indicated has sole voting and investment power. The address for each Selling Stockholder listed in the table below is 10931 N. Torrey Pines Road, Suite #100, La Jolla, California 92037.

Information concerning the Selling Stockholders may change from time to time and, if necessary, we will amend or supplement this prospectus accordingly. We cannot give an estimate as to the number of shares of Common Stock that will actually be held by the Selling Stockholders upon termination of this offering because the Selling Stockholders may offer none, some or all of their Common Stock under the offering contemplated by this prospectus or acquire additional shares of Common Stock. The total number of shares that may be sold hereunder will not exceed the number of shares offered hereby. Please read the section entitled “Plan of Distribution” in this Reoffer Prospectus.

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Selling Stockholder	Shares Beneficially Owned Prior to the Offering		Shares Being Offered	Shares Beneficially Owned After the Offering ⁽¹⁾	
	Shares	Percentage	Shares	Shares	Percentage
Andrew Spaventa ⁽²⁾	5,502,599	7.39%	1,428,571	4,074,028	5.47%
Eli Glezer ⁽³⁾	4,135,000	5.55%	1,210,000	2,925,000	3.93%
Vincent Brancaccio ⁽⁴⁾	44,270	*	32,500	11,770	*
David Daly ⁽⁵⁾	900,000	1.21%	900,000	—	*
Dalen Meeter ⁽⁶⁾	164,687	*	160,000	4,687	*
Jorge Velarde ⁽⁷⁾	344,166	*	340,000	4,166	*
Others ⁽⁸⁾	1,789,969	2.40%	1,094,379	695,590	*

- (1) Assumes that all of the Shares held by each Selling Stockholder and being offered under this prospectus are sold, and that no Selling Stockholder will acquire additional shares of common stock before the completion of this offering.
- (2) Consists of (i) 4,613,571 shares of common stock held directly by The Andrew K. Spaventa Living Trust dated April 9, 2014, of which Mr. Spaventa is a trustee and has voting and investment control with respect to these shares, and (ii) 889,028 shares of common stock held by Axon Ventures X, LLC. Mr. Spaventa is a managing partner of Axon Ventures X, LLC and in his capacity as such, Mr. Spaventa may be deemed to have shared voting and investment power over shares held by Axon Ventures X, LLC. Mr. Spaventa disclaims beneficial ownership of the shares held by Axon Ventures X, LLC except to the extent of his pecuniary interest in such shares.
- (3) Consists of 4,135,000 shares of common stock held directly by Dr. Glezer.
- (4) Consists of (i) 32,500 shares of common stock held directly by Mr. Brancaccio and (ii) 11,770 shares of common stock issuable pursuant to options held directly by Mr. Brancaccio vested and exercisable within 60 days of June 30, 2021.
- (5) Consists of 900,000 shares of common stock held directly by Mr. Daly.
- (6) Consists of (i) 160,000 shares of common stock held directly by Mr. Meeter and (ii) 4,687 shares of common stock issuable pursuant to options held directly by Mr. Meeter vested and exercisable within 60 days of June 30, 2021.
- (7) Consists of (i) 340,000 shares of common stock held directly by Mr. Velarde and (ii) 4,166 shares of common stock issuable pursuant to options held directly by Mr. Velarde vested and exercisable within 60 days of June 30, 2021.
- (8) Includes the following 82 named non-affiliate persons, each of whom beneficially owns at least 1,000 Shares: Ada Tong, Alexander Walborn, Allen Lipson, Allisen Williams, Andrew King, Anh-dao Tong, Anne Decker, Anson Hsu, Bandele Jeffrey-Coker, Brandon Brooks, Braulio Soto-Zavala, Bruna Kutche, Caleb Newman, Carleen Villarreal, Carson Blessinger, Christian Berrios, Christopher Frye, Christopher Underhill, Christopher Wei, Chrystal Day, Daniel Goodbody, Dave Daly, David Baranson, David Bennett, Diva Paramita, Duane Henry, Fedor Trintchouk, Filip Shumilo, Grant Davis, Hans Nussbaum, Hansana Ounnarath, Hu Cang, Hyunjin Hong, Iva Maxwell, Jaekyung Koh, James Holodak, James Kim, Jia-Hui Lim, Joseph Adams, Joshua Wang, Jyale Michel, Kaushika Vayyala, Kayla Ruggiero, Keith Bullion, Kyle Shumate, Laura Hale, Leah Metz, Lucia Demmitt, Megha Cila, Michael Dusenberry, Michael Krause, Michael Marshall, Michael Ouimet, Michelle Man, Mohammad Vatankhah, Molly Mosher, Oanh Dang, Parthivkumar Prajapati, Richard Que, Rodrigo Rodriguez, Ronald Graham, Russell Stewart, Ryan Shultzaberger, Sabrina Shore, Sandor Kovacs, Sarthak Duggal, Sasa Roksic, Shahed Kay, Sherine Cheung, Simon Romeo Mushi, Souad Naji, Stacey Wang, Terrence Murphy, Walter Fu, William Dempsey, William Lamb, Xinghua Chen, Youngjin Cho, Zhenmin Hong and Zachary Terranova.

Other Material Relationships with the Selling Stockholders

Employment Relationships

We entered into employment agreements with each of Andrew Spaventa, Eli Glezer, Vincent Brancaccio, David Daly, Dalen Meeter, Jorge Velarde and certain other named selling stockholders. Each of them have provided and continue to provide services to the Company commensurate with his or her role.

Indemnification Agreement

We have entered, and intend to continue to enter, into separate indemnification agreements with each of our directors and executive officers, in addition to the indemnification provided for in our restated certificate of incorporation and amended and restated bylaws. The indemnification agreements and our restated certificate of incorporation and amended and restated bylaws require us to indemnify our directors, executive officers and certain controlling persons to the fullest extent permitted by Delaware law.

Lock-Up Agreements

In connection with our initial public offering, we and each of our directors and officers and the holders of substantially all of our outstanding stock and stock options agreed with the underwriters in our initial public offering, subject to certain exceptions, not to, among other things, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, shares of our Common Stock or any securities convertible into or exchangeable for shares of our Common Stock or enter into any hedging, swap or other arrangement that transfers to another any of the economic consequences of ownership of our Common Stock during the period from the date of the final prospectus relating to our initial public offering and continuing through the date 180 days after the date of such prospectus, except with the prior written consent of J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC. These agreements are subject to certain exceptions, as set forth in the section titled "Underwriting."

In addition, substantially all other holders of our Common Stock, options and a warrant we issued previously entered into market stand-off agreements with us not to sell or otherwise transfer any of their Common Stock or securities convertible into or exchangeable for shares of Common Stock for a period that extends through 180 days after the date of such prospectus.

Certain of our employees, including our executive officers, and directors may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to our initial public offering.

PLAN OF DISTRIBUTION

The shares of Common Stock covered by this Reoffer Prospectus are being registered by us for the account of the Selling Stockholders. The shares of Common Stock offered may be sold from time to time directly by or on behalf of each Selling Stockholder in one or more transactions on the Nasdaq Global Select Market or any other stock exchange on which the Common Stock may be listed at the time of sale, in privately negotiated transactions, or through a combination of such methods, at market prices prevailing at the time of sale, at prices related to such prevailing market prices, at fixed prices (which may be changed) or at negotiated prices. The Selling Stockholders may sell shares through one or more agents, brokers or dealers or directly to purchasers. Such brokers or dealers may receive compensation in the form of commissions, discounts or concessions from the Selling Stockholders and/or purchasers of the shares or both. Such compensation as to a particular broker or dealer may be in excess of customary commissions. The amount of shares of Common Stock to be reoffered or resold under the Reoffer Prospectus by each Selling Stockholder and any other person with whom he or she is acting in concert for the purpose of selling shares of Common Stock, may not exceed, during any three-month period, the amount specified in Rule 144(e) under the Securities Act.

In connection with their sales, a Selling Stockholder and any participating broker or dealer may be deemed to be "underwriters" within the meaning of the Securities Act, and any commissions they receive and the proceeds of any sale of shares may be deemed to be underwriting discounts and commissions under the Securities Act. We are bearing all costs relating to the registration of the shares of Common Stock. Any commissions or other fees payable to brokers or dealers in connection with any sale of the shares will be borne by the Selling Stockholders or other party selling such shares. Sales of the shares must be made by the Selling Stockholders in compliance with all applicable state and federal securities laws and regulations, including the Securities Act. In addition to any shares sold hereunder, Selling

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Stockholders may sell shares of Common Stock in compliance with Rule 144. There is no assurance that the Selling Stockholders will sell all or a portion of the shares of Common Stock offered hereby. The Selling Stockholders may agree to indemnify any broker, dealer or agent that participates in transactions involving sales of the shares against certain liabilities in connection with the offering of the shares arising under the Securities Act. We have notified the Selling Stockholders of the need to deliver a copy of this Reoffer Prospectus in connection with any sale of the shares of Common Stock.

The anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares of Common Stock and activities of the Selling Stockholders, which may limit the timing of purchases and sales of any of the shares of Common Stock by the Selling Stockholders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of Common Stock to engage in passive market-making activities with respect to the shares of Common Stock. Passive market making involves transactions in which a market maker acts as both our underwriter and as a purchaser of shares of Common Stock in the secondary market. All of the foregoing may affect the marketability of the shares of Common Stock and the ability of any person or entity to engage in market-making activities with respect to the shares of Common Stock.

Once sold under the registration statement of which this Reoffer Prospectus forms a part, the shares of Common Stock will be freely tradable in the hands of persons other than our affiliates.

LEGAL MATTERS

Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP will issue an opinion regarding the legality of certain of the offered securities. Certain investment partnerships comprised of partners of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP, own an interest representing less than 1% of the shares of our Common Stock.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements included in our final prospectus filed pursuant to Rule 424(b) on May 28, 2021, in connection with the Registration Statement on Form S-1 (File No. 333-255912), as amended, as of December 31, 2019 and 2020 and for the years then ended, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

PART II

Information Required in the Registration Statement

Item 3. Incorporation of Documents by Reference

Singular Genomics Systems, Inc., or the Registrant, hereby incorporates by reference into this Registration Statement the following documents previously filed with the Commission:

- (a) Amendment No. 2 to the Registrant's Registration Statement on [Form S-1](#) filed with the Securities and Exchange Commission on May 24, 2021 (File No. 333-255912), or the Form S-1;
- (b) the Registrant's prospectus dated May 26, 2021 pursuant to Rule 424(b) under the Securities Act relating to the [Form S-1](#), which contains audited financial statements for the Registrant's latest fiscal year for which such statements have been filed;
- (c) the Quarterly Report on [Form 10-Q](#) for the quarter ended June 30, 2021, filed with the Securities and Exchange Commission on August 3, 2021;
- (d) the Current Report on [Form 8-K](#) on Current Report filed with the Securities and Exchange Commission on June 1, 2021; and

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- (e) the description of the Registrant's Common Stock contained in the Registrant's Registration Statement on [Form 8-A](#) (File No. 001-40443), filed with the SEC on May 25, 2021, including any amendments or reports filed for the purpose of updating such description.

All other reports and documents filed by the Registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, subsequent to the filing 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 de-registers all securities then remaining unsold shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents. The Registrant is not, however, incorporating any documents or information that the Registrant is deemed to furnish and not filed in accordance with SEC rules. Any statement contained in a document incorporated or deemed incorporated by reference in this Registration Statement will be deemed modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any subsequently filed document that also is deemed incorporated by reference in this Registration Statement modifies or supersedes that statement.

Item 4. Description of Securities

Not applicable.

Item 5. Interests of Named Experts and Counsel

Not applicable.

Item 6. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933, as amended, or the Securities Act.

As permitted by the Delaware General Corporation Law, our amended and restated certificate of incorporation and amended and restated bylaws contain provisions relating to the limitation of liability and indemnification of directors and officers. The amended and restated certificate of incorporation provides that our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- in respect of unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- for any transaction from which the director derives any improper personal benefit.

Our amended and restated certificate of incorporation also provides that if Delaware law is amended after the approval by our stockholders of the certificate of incorporation to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law.

Our amended and restated bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by Delaware law, as it now exists or may in the future be amended, against all expenses and liabilities reasonably incurred in connection with their service for or on our behalf. Our amended and restated bylaws provide that we shall advance the expenses incurred by a director or officer in advance of the final disposition of an action or proceeding, and permit us to secure insurance on behalf of any director, officer, employee, or other enterprise agent for any liability arising out of his or her action in that capacity, whether or not Delaware law would otherwise permit indemnification.

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We have entered into indemnification agreements with each of our directors and executive officers and certain other key employees. The form of agreement provides that we will indemnify each of our directors, executive officers and such other key employees against any and all expenses incurred by that director, executive officer, or other key employee because of his or her status as one of our directors, executive officers, or other key employees, to the fullest extent permitted by Delaware law, our restated certificate of incorporation and our amended and restated bylaws. In addition, the form agreement provides that, to the fullest extent permitted by Delaware law, we will advance all expenses incurred by our directors, executive officers and other key employees in connection with a legal proceeding.

We currently carry and intend to continue to carry liability insurance for our directors and officers.

Item 7. Exemption from Registration Claimed

The issuance of the Shares being offered by the Form S-8 reoffer prospectus were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act (or Regulation D or Regulation S promulgated thereunder), or Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer not involving any public offering or pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about the Registrant.

Item 8. Exhibits

The following exhibits are incorporated herein by reference.

EXHIBIT INDEX

Exhibit Number	Description	Incorporated by Reference			Filed Herewith	
		Form	File No.	Exhibit		
4.1	Specimen common stock certificate of the Registrant.		333 – 255912	4.1	5/24/2021	
4.2	Amended and Restated Certificate of Incorporation of Registrant.	S-1/A	333 – 255912	3.2	5/24/2021	
4.3	Amended and Restated Bylaws of Registrant.	S-1/A	333 – 255912	3.4	5/24/2021	
5.1	Opinion and Consent of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP.					X
23.1	Consent of Independent Registered Public Accounting Firm.					X
23.2	Consent of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP (contained in Exhibit 5.1).					X
24.1	Power of Attorney (contained in the signature page hereto).					X
99.1	2016 Stock Plan and forms of agreements thereunder.	S-1	333 - 255912	10.2	05/07/2021	
99.2	2021 Equity Incentive Plan and forms of agreements thereunder.	S-1/A	333 - 255912	10.3	05/24/2021	

Item 9. Undertakings

A. The undersigned Registrant hereby undertakes:

(1) to file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act,

(ii) to reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement, and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement; provided, however, that clauses A(1)(i) and A(1)(ii) above shall not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement;

(2) that, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; and

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the Registrant's offering.

B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions or otherwise, the Registrant has been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities

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Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 La Jolla, State of California on this 25th day of August, 2021.

SINGULAR GENOMICS SYSTEMS, INC.

By: /s/ Andrew Spaventa
Andrew Spaventa
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each person whose signature appears below constitutes and appoints Andrew Spaventa, Daralyn Durie and Dalen Meeter and each of them, his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this registration statement, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorney-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated.

Pursuant to the requirements of the Securities Act of 1933, 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/ Andrew Spaventa</u> Andrew Spaventa	Chief Executive Officer and Chair of the Board of Directors (Principal Executive Officer)	August 25, 2021
<u>/s/ Dalen Meeter</u> Dalen Meeter	Senior Vice President, Finance (Principal Financial Officer and Principal Accounting Officer)	August 25, 2021
<u>/s/ David Barker, Ph.D.</u> David Barker, Ph.D.	Director	August 25, 2021
<u>/s/ Kim Kamdar, Ph.D.</u> Kim Kamdar, Ph.D.	Director	August 25, 2021

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Michael Pellini, M.D.</u> Michael Pellini, M.D.	Lead Independent Director	August 25, 2021
<u>/s/ Jason Ryan</u> Jason Ryan	Director	August 25, 2021



SILICON VALLEY
ANN ARBOR
AUSTIN
BEIJING
BOSTON
LOS ANGELES
NEW YORK
SAN DIEGO
SAN FRANCISCO
SINGAPORE

August 25, 2021

Singular Genomics Systems, Inc.
10931 N. Torrey Pines Road, Suite #100
La Jolla, CA 92037

Ladies and Gentlemen:

We refer to the registration statement on Form S-8 (the "Registration Statement") to be filed by Singular Genomics Systems, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") in connection with the registration under the Securities Act of 1933, as amended (the "Act"), for the resale of up to 5,165,450 shares of the Company's common stock, \$0.0001 par value per share (the "Shares") that were issued upon the exercise of options granted under the Company's 2016 Stock Plan (the "Plan"). In connection with this opinion, we have examined and relied upon the Registration Statement, the related Prospectus, and the originals or copies certified to our satisfaction of such other documents, records, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. With your consent, we have relied upon certificates and other assurances of officers of the Company as to factual matters without having independently verified such factual matters. We have assumed the genuineness and authenticity of all documents submitted to us as originals, and the conformity to originals of all documents submitted to us as copies thereof and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as expressly stated herein with respect to the Shares. Our opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated. Our opinion herein is expressed solely with respect to the federal laws of the United States and the General Corporation Law of the State of Delaware (the "DGCL"). Our opinion is based on these laws as in effect on the date hereof, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

Based upon and subject to the foregoing, we advise you that, in our opinion, the Shares are validly issued, fully paid and nonassessable.

We hereby 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 Act or the rules and regulations of the Commission thereunder.

GUNDERSON DETTMER STOUGH VILLENEUVE FRANKLIN & HACHIGIAN, LLP
3570 CARMEL MOUNTAIN ROAD, SUITE 200, SAN DIEGO, CA 92130 / PHONE: 858.436.8000 / FAX: 877.381.9192

Sincerely,

/s/ Gunderson Dettmer Stough Villeneuve Franklin &
Hachigian, LLP

GUNDERSON DETTMER STOUGH VILLENEUVE
FRANKLIN & HACHIGIAN, LLP

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption “Experts” and the incorporation by reference in the Registration Statement (Form S-8) and related Prospectus pertaining to the Singular Genomics Systems, Inc. 2021 Equity Incentive Plan and the Singular Genomics Systems, Inc. 2016 Stock Plan of Singular Genomics Systems, Inc. of our report dated March 19, 2021, with respect to the financial statements of Singular Genomics Systems, Inc. included in Singular Genomics Systems, Inc.’s final prospectus filed pursuant to Rule 424(b) on May 28, 2021, in connection with the Registration Statement on Form S-1 (File No. 333-255912), as amended, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California
August 25, 2021