May 10, 2021

Andrew Spaventa Chief Executive Officer Singular Genomics Systems, Inc. 10931 N. Torrey Pines Road Suite #100 La Jolla, CA 92037

Re: Singular Genomics

Systems, Inc.

Amendment No. 1 to

Draft Registration Statement on Form S-1

Submitted April 26,

2021

CIK No. 0001850906

Dear Mr. Spaventa:

We have reviewed your amended draft registration statement and have the following

comments. In some of our comments, we may ask you to provide us with information so we

may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting

an amended draft registration statement or publicly filing your registration statement on

EDGAR. If you do not believe our comments apply to your facts and circumstances or do not

believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your

amended draft registration statement or filed registration statement, we may have additional

comments.

Amendment No. 1 to Draft Registration Statement on Form S-1

Intellectual Property Columbia University License Agreement , page 114

We note your response to prior comment 13 and revised disclosure. Please revise to disclose whether the G4 Integrated Solution and the PX Integrated Solution are classified as Patent Products or Other Products. To the extent that the G4 Integrated Solution and the PX Integrated Solution are covered by the license agreement, please revise the Prospectus Summary to discuss the

license agreement and any associated risks.

Andrew Spaventa

Singular Genomics Systems, Inc.

May 10, 2021

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In addition, provisions providing the contracting party the right to terminate the agreement

for failure to meet milestone events are material to investors, please expand your

disclosures to describe the milestone events and the dates by which you are required to

achieve them.

You may contact Ibolya Ignat at 202-551-3636 or Lynn Dicker at 202-551-3616 if you

have questions regarding comments on the financial statements and related matters. Please

contact Alan Campbell at 202-551-4224 or Jeff Gabor at 202-551-2544 with any other questions.

FirstName LastNameAndrew Spaventa

Corporation Finance Comapany NameSingular Genomics Systems, Inc.

Sciences May 10, 2021 Page 2 cc: Ryan J. Gunderson FirstName LastName Sincerely, Division of

Office of Life