June 23, 2022

Christopher Stewart Chief Financial Officer Bionano Genomics, Inc. 9540 Towne Centre Drive Suite 100 San Diego, CA 92121

Re: Bionano Genomics,

Inc.

Fiscal Year Ended December 31, 2021

Form 8-K filed on

October 19, 2021

File No. 001-38613

Form 10-K for the

Dear Mr. Stewart:

 $\label{eq:weak_problem} \mbox{We have limited our review of your filing to the financial statements and related}$

disclosures 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 these comments within ten business days by providing the requested $% \left(1\right) =\left(1\right) +\left(1\right$

information or advise us as soon as possible when you will respond. If you do not believe our $% \left(1\right) =\left(1\right) +\left(1$

comments apply to your facts and circumstances, please tell us why in your response.

 $\hbox{ After reviewing your response to these comments, we may have additional comments.}$

Form 10-K for the Fiscal Year Ended December 31, 2021

Item 9A. Controls and Procedures
Evaluation of Disclosure Controls and Procedures, page 106

1. Consistent with Item
307 or Regulation S-K, please amend your filing to disclose the
conclusions of your
principal executive and principal financial officers regarding the
effectiveness of your
disclosure controls and procedures as of the end of the period
covered by the report -

i.e., December 31, 2021. Christopher Stewart

Bionano Genomics, Inc.

June 23, 2022

Page 2

Form 8-K filed on October 19, 2021

Exhibits

2. We note from Item 9.01 that you acquired BioDiscovery, LLC for \$75 million in October

 $2021.\ \mbox{Please}$ provide to us your significance calculations under Rule 3-05 of Regulation

 $\vec{S-X}$ for this acquisition. To the extent that separate financial statements are required to be

included under Rule 3-05 of Regulation S-X, please revise to include these financial

statements and the related pro forma financial statements under ${\tt Article}\ 11$ of Regulation

S-X.

In closing, we remind you that the company and its management are responsible for the $% \left(1\right) =\left(1\right) +\left(1$

accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left$

absence of action by the staff.

You may contact Gary Newberry at (202) 551-3761 or Tara Harkins, Senior Accountant, at (202) 551-3639 with any questions.

FirstName LastNameChristopher Stewart Comapany NameBionano Genomics, Inc.

Corporation Finance June 23, 2022 Page 2 Sciences FirstName LastName Sincerely,

Division of

Office of Life