

May 19, 2021

Robert Spignesi
President and Chief Executive Officer
Rapid Micro Biosystems, Inc.
1001 Pawtucket Boulevard West, Suite 280
Lowell, MA 01854

Biosystems, Inc.

Statement on Form S-1
2021

Re: Rapid Micro

Amendment No. 1 to
Draft Registration

Submitted May 7,

CIK No. 0001380106

Dear Mr. Spignesi:

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

Our Market, page 6

1. We note the disclosure added in response to our prior comment 4. Please provide details regarding Health Advances LLC and the company's relationship thereto, including whether or not any studies were commissioned in connection with the registration statement. If so, please consider the application of Securities Act Rule 436. Management's Discussion and Analysis, page 62
Critical accounting policies and significant judgments and estimates, page 79

2. We have read your response to comment 8 in our letter dated April 19, 2021. Please

Robert Spignesi
Rapid Micro Biosystems, Inc.
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further clarify how, if the System will accept only your Consumables to complete ongoing testing and orders for such Consumables are typically placed separately from that of the System, your customers benefit from the use of the System "[u]pon purchase". Please clarify if orders for Consumables are typically placed only after the completion of validation services. Finally, in the cases when a customer purchases the System and Consumables at the same time, confirm, if true, whether you allocate the contract s transaction price to each performance obligation on a relative

standalone selling price
basis, as you have indicated you do when the LIMS connection software is
purchased as
part of the initial System sale.

Business
Intellectual property, page 109

3. We note your response to prior comment 10. Please further revise your
disclosure to
include:

the type of patent protection for the patents issued or applied for
(i.e., composition of
matter, use or process);
the expiration year of each patent or pending patent application on
an individual
basis;
the identity of the European countries in which you have issued
patents with respect
to your (i) your technology related to rapid detection of
replicating cells and (ii) your
cassette for sterility testing.

In this regard, it may be useful to provide tabular disclosure.

License Agreement, page 109

4. We note your response to our prior comment 9. Please provide more
specificity around the

fixed dollar royalty range. As drafted, a range of "the low to mid
thousands of dollars"

may be widely interpreted and could mean \$1,000 to \$5,000 or \$1,000 to
\$50,000. Please

revise.

You may contact Jenn Do at 202-551-3743 or Daniel Gordon at 202-551-3486

if you
have questions regarding comments on the financial statements and related
matters. Please
contact David Gessert at 202-551-2326 or Laura Crotty at 202-551-7614 with any
other
questions.

Sincerely,

FirstName LastNameRobert Spignesi

Division of

Corporation Finance
Comapany NameRapid Micro Biosystems, Inc.

Office of Life

Sciences

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cc: Wesley C. Holmes

FirstName LastName