LATHAM & WATKINS LLP

June 25, 2021

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United States Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549-6010

Attention: David Gessert

> Laura Crotty Jenn Do Daniel Gordon

Rapid Micro Biosystems, Inc. Re:

Amendment No. 2 to

Draft Registration Statement on Form S-1

Submitted June 10, 2021 CIK No. 0001380106

Ladies and Gentlemen:

On behalf of Rapid Micro Biosystems, Inc. (the "Company"), we are writing in response to the comment letter from the staff of the Commission (the "Staff") to Robert Spignesi, the Company's Chief Executive Officer, dated June 22, 2021, relating to the above-referenced registration statement (the "Draft Registration Statement"). The letter is being submitted with the Company's Registration Statement on Form S-1 (the "Registration Statement"), which reflects revisions made to the Draft Registration Statement in response to the comment letter.

For ease of review, we have set forth below the comment from your letter in bold type followed by the Company's response thereto.

Prospectus Summary Our market, page 6

We note your revised disclosure on pages 7 and 95 that opportunities in adjacent markets and upstream/downstream workflow processes could increase your TAM by a combined \$18 billion to \$32 billion. Please revise to disclose whether these estimates are based on the study you commissioned from Health Advances LLC. If not, describe the basis for these estimates.

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Additionally, please expand your disclosure to describe how you are currently positioned to expand into adjacent markets and launch products addressing workflow processes not currently addressed by your Growth Direct MQC solution.

Response: The Company acknowledges the Staff's comment and has revised the disclosure on pages 7 and 98 of the Registration Statement.

* * *

We hope the foregoing answers are responsive to your comments. Please do not hesitate to contact me by telephone at (617) 948-6027 with any questions or comments regarding this correspondence.

Very truly yours,

/s/ Wesley C. Holmes

Wesley C. Holmes of LATHAM & WATKINS LLP

cc: Robert Spignesi, Rapid Micro Biosystems, Inc. Sean Wirtjes, Rapid Micro Biosystems, Inc. Jonathan Paris, Rapid Micro Biosystems, Inc. Stephen W. Ranere, Latham & Watkins LLP Edwin M. O'Connor, Goodwin Procter LLP