UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 12b-25

NOTIFICATION OF LATE FILING

(Check one):

☐ Form 10-K	☐ Form 20-F	☐ Form 11-K		
☒ Form 10-Q	☐ Form 10-D	☐ Form N-CEN	☐ Form N-CSR	

For the Period Ended: September 30, 2026

☐ Transition Report on Form 10-K

☐ Transition Report on Form 20-F

☐ Transition Report on Form 11-K

☐ Transition Report on Form 10-Q

For the Transition Period Ended:

Read Instruction (on back page) Before Preparing Form. Please Print or Type.
Nothing in this Form shall be construed to imply that the Commission has verified any information contained herein.

If the notification relates to a portion of the filing checked above, identify the Item(s) to which the notification relates:

PART I - REGISTRANT INFORMATION

RAPID MICRO BIOSYSTEMS, INC.
(Full Name of Registrant)

(Former Name if Applicable)

25 Hartwell Avenue
(Address of Principal Executive Office (Street and Number))

Lexington, MA 02421
(City, State and Zip Code)

PART II — RULES 12b-25(b) AND (c)

If the subject report could not be filed without unreasonable effort or expense and the registrant seeks relief pursuant to Rule 12b-25(b), the following should be completed. (Check box if appropriate)

☒ (a) The reason described in reasonable detail in Part III of this Form could not be eliminated without unreasonable effort or expense;

(b) The subject annual report, semi-annual report, transition report on Form 10-K, Form 20-F, Form 11-K, Form N-CEN or Form N-CSR, or portion thereof, will be filed on or before the fifteenth calendar day following the prescribed due date; or the subject quarterly report or transition report on Form 10-Q or subject distribution report on Form 10-D, or portion thereof, will be filed on or before the fifth calendar day following the prescribed due date; and

(c) The accountant's statement or other exhibit required by Rule 12b-25(c) has been attached if applicable.

PART III - NARRATIVE

State below in reasonable detail why Forms 10-K, 20-F, 11-K, 10-Q, 10-D, N-CEN, N-CSR, or the transition report or portion thereof, could not be filed within the prescribed time period.

Rapid Micro Biosystems, Inc. (the "Company"), is unable to file its Quarterly Report on Form 10-Q for the quarter ended September 30, 2026 (the "Form 10-Q") by the required deadline without unreasonable effort and expense. Recently, the Company has been devoting a significant amount of time and other Company resources to the evaluation of (i) potential financing opportunities to provide additional capital and improve our liquidity and (ii) potential strategic transactions. These resources would normally be devoted to the preparation of the Form 10-Q and related matters. Furthermore, earlier today, the Company announced that it has entered into a definitive agreement to be acquired by Merck KGaA, Darmstadt, Germany. This transaction will require significant disclosure updates to the Form 10-Q.

The Company expects to be in a position to file the Form 10-Q on or before November 23, 2026, the prescribed due date under the five calendar day extension period provided under Rule 12b-25 under the Securities Exchange Act of 1934 (the "Exchange Act").

As a result of the Company's limited liquidity, the Form 10-Q will indicate that there is substantial doubt about the Company's ability to continue as a going concern one year from the issuance date of the Form 10-Q, as there can be no assurance that its acquisition by Merck KGaA, Darmstadt, Germany will be consummated.

PART IV -- OTHER INFORMATION

(1) Name and telephone number of person to contact in regard to this notification

Sean Wirtjes	978	349-3200
(Name)	(Area Code)	(Telephone Number)

(2) Have all other periodic reports required under Section 13 or 15(d) of the Securities Exchange Act of 1934 or Section 30 of the Investment Company Act of 1940 during the preceding 12 months or for such shorter period that the registrant was required to file such report(s) been filed? If answer is no, identify report(s). ☒ Yes ☐ No

(3) Is it anticipated that any significant change in results of operations from the corresponding period for the last fiscal year will be reflected by the earnings statements to be included in the subject report or portion thereof? ☒ Yes ☐ No

If so, attach an explanation of the anticipated change, both narratively and quantitatively, and, if appropriate, state the reasons why a reasonable estimate of the results cannot be made.

The Company expects to report $9.5 million of total revenue for the quarter ended September 30, 2026, an increase of 21.6% from $7.8 million for the quarter ended September 30, 2025.

The Company expects to report gross margin of $2.4 million for the quarter ended September 30, 2026, compared to $0.7 million for the quarter ended September 30, 2025.

The Company expects to report $13.0 million of operating expenses for the quarter ended September 30, 2026, compared to $12.1 million for the quarter ended September 30, 2025.

The financial results presented above for the quarter ended September 30, 2026 reflect a preliminary estimate and anticipated change for the corresponding prior period as of the date of the filing of the Form 12b-25. This estimate is subject to change upon the completion of the reporting process and review of the Company's financial statements, and actual results may vary from this estimate.

For further discussion of the significant changes in the Company's results of operations from the corresponding period for the corresponding prior period, please refer to the Company's earnings release furnished as Exhibit 99.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on November 16, 2026.

Cautionary Note Regarding Forward-Looking Statements

This Form 12b-25 includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Exchange Act, including statements regarding the estimated timing of the filing of the Form 10-Q, expectations regarding the Company's ability to continue as a going concern, statements regarding the Company's preliminary financial results for the quarter ended September 30, 2026; statements regarding the transaction with Merck KGaA, Darmstadt, Germany and any other statements regarding the Company's future expectations, beliefs, plans, objectives, financial conditions, assumptions or future events or performance that are not historical facts. These forward-looking statements are not guarantees of future performance and involve risks, uncertainties and other factors that might cause the actual performance of the Company to differ materially from those expressed or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to: the risk that the completion and filing of the Form 10-Q will take longer than expected and will not be completed by the extension period provided by Rule 12b-25 of the Exchange Act; and other risks discussed under the "Risk Factors" section in the Company's most recently filed periodic reports on Form 10-K and Form 10-Q and subsequent filings. These forward-looking statements speak only as of the date hereof, and the Company assumes no obligation to update any such forward-looking statements.

Rapid Micro Biosystems, Inc.

(Name of Registrant as Specified in Charter)

has caused this notification to be signed on its behalf by the undersigned hereunto duly authorized.

RAPID MICRO BIOSYSTEMS, INC.

Date: November 16, 2026

By: /s/ Sean Wirtjes

Sean Wirtjes

Chief Financial Officer