SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

(Amendment No. 3)*

Rapid Micro Biosystems, Inc.

(Name of Issuer)

Class A common stock, $0.01 par value per share

(Title of Class of Securities)

(CUSIP Number)

10/15/2026

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- ☐ Rule 13d-1(b)
- ☐ Rule 13d-1(c)
- ☑ Rule 13d-1(d)

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Longitude Capital Partners II, LLC	
2	Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☑ (b)	
3	Sec Use Only	
4	Citizenship or Place of Organization DELAWARE	

Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 0.00
	6	Shared Voting Power 1,514,245.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power 1,514,245.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person 1,514,245.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐
11		Percent of class represented by amount in row (9) 3.3 %
12		Type of Reporting Person (See Instructions) OO

Comment for Type of Reporting Person: All such shares are held of record by LVPII (as defined in the Explanatory Note below). LCPII (as defined in the Explanatory Note below) is the general partner of LVPII and may be deemed to have voting and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of LCPII and may each be deemed to share voting and dispositive power with respect to these securities. Based on 45,660,027 shares of Class A Common Stock, outstanding as of July 31, 2026, as reported by the Issuer (as defined in Item 1(a) below) in its quarterly report filed with the United States Securities and Exchange Commission (the Commission) on August 7, 2026 (the Form 10-Q).

SCHEDULE 13G

CUSIP No.

1		Names of Reporting Persons Longitude Venture Partners II, L.P.
2		Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☑ (b)
3		Sec Use Only
4		Citizenship or Place of Organization DELAWARE
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 0.00
	6	Shared Voting Power 1,514,245.00
	7	Sole Dispositive Power 0.00
	8	Shared Dispositive Power

		1,514,245.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person	1,514,245.00
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)	☐
11	Percent of class represented by amount in row (9)	3.3 %
12	Type of Reporting Person (See Instructions)	PN

Comment for Type of Reporting Person: All such shares are held of record by LVPII. LCPII is the general partner of LVPII and may be deemed to have voting and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of LCPII and may each be deemed to share voting and dispositive power with respect to these securities. Based on 45,660,027 shares of Class A Common Stock, outstanding as of July 31, 2026, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons	Patrick G. Enright
2	Check the appropriate box if a member of a Group (see instructions)	☐ (a) ☑ (b)
3	Sec Use Only	
4	Citizenship or Place of Organization	UNITED STATES
Number of Shares Beneficially Owned by Each Reporting Person With:	5 Sole Voting Power	82,035.00
	6 Shared Voting Power	1,514,245.00
	7 Sole Dispositive Power	82,035.00
	8 Shared Dispositive Power	1,514,245.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person	1,596,280.00
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)	☐
11	Percent of class represented by amount in row (9)	3.5 %
12	Type of Reporting Person (See Instructions)	

IN

Comment for Type of Reporting Person: Consists of (i) 1,514,245 shares of Class A common stock held of record by LVPII and (ii) 82,035 shares of Class A common stock held of record by Patrick G. Enright. LCPII is the general partner of LVPII and may be deemed to have voting and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of LCPII and may each be deemed to share voting and dispositive power with respect to these securities. Based on 45,660,027 shares of Class A Common Stock, outstanding as of July 31, 2026, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13G

CUSIP No.

1	Names of Reporting Persons Juliet Tammenoms Bakker	
2	Check the appropriate box if a member of a Group (see instructions) ☐ (a) ☑ (b)	
3	Sec Use Only	
4	Citizenship or Place of Organization UNITED STATES	
Number of Shares Beneficially Owned by Each Reporting Person With:	5	Sole Voting Power 65,628.00
	6	Shared Voting Power 1,514,245.00
	7	Sole Dispositive Power 65,628.00
	8	Shared Dispositive Power 1,514,245.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person 1,579,873.00	
10	Check box if the aggregate amount in row (9) excludes certain shares (See Instructions) ☐	
11	Percent of class represented by amount in row (9) 3.5 %	
12	Type of Reporting Person (See Instructions) IN	

Comment for Type of Reporting Person: Consists of (i) 1,514,245 shares of Class A common stock held of record by LVPII and (ii) 65,628 shares of Class A common stock held of record by Juliet Tammenoms Bakker. LCPII is the general partner of LVPII and may be deemed to have voting and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of LCPII and may each be deemed to share voting and dispositive power with respect to these securities. Based on 45,660,027 shares of Class A Common Stock, outstanding as of July 31, 2026, as reported by the Issuer in the Form 10-Q.

SCHEDULE 13G

Item 1.

(a) Name of issuer:

Rapid Micro Biosystems, Inc.

(b) Address of issuer's principal executive offices:

25 Hartwell Avenue, Lexington, MA 02421

Item 2.

(a) Name of person filing:

Explanatory Note: This Amendment No. 3 ("Amendment No. 3") amends and supplements the Schedule 13G initially filed with the Commission on February 15, 2022, as amended by Amendment No. 1 filed with the Commission on February 14, 2023 and Amendment No. 2 filed with the Commission on May 15, 2026 (the "Original Schedule 13G") and is being filed by Longitude Capital Partners II, LLC ("LCPII"), Longitude Venture Partners II, L.P. ("LVPII" and together with LCPII, the "Reporting Entities") and Patrick G. Enright and Juliet Tammenoms Bakker (together, the "Reporting Individuals"). The Reporting Entities and the Reporting Individuals are collectively referred to as the "Reporting Persons." The agreement among the Reporting Persons to file jointly in accordance with the provisions of Rule 13d-1(k)(1) under the Act is filed as Exhibit 1 to the Original Schedule 13G. Only those items that are hereby reported are amended; all other items reported in the Original Schedule 13G remain unchanged. Information given in response to each item shall be deemed incorporated by reference in all other items, as applicable. Capitalized terms not defined in this Amendment No. 3 have the meanings ascribed to them in the Original Schedule 13G.

(b) Address or principal business office or, if none, residence:

The address of the principal business office of each Reporting Person is 2740 Sand Hill Road, 2nd Floor, Menlo Park, CA 94025.

(c) Citizenship:

LCPII is a limited liability company organized under the laws of the State of Delaware. LVPII is a limited partnership organized under the laws of the State of Delaware. Each of the Reporting Individuals is a citizen of the United States of America.

(d) Title of class of securities:

Class A common stock, $0.01 par value per share

(e) CUSIP No.:

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

(a) ☐ Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);

(b) ☐ Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);

(c) ☐ Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);

(d) ☐ Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);

(e) ☐ An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);

(f) ☐ An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);

(g) ☐ A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);

(h) ☐ A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);

(i) ☐ A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);

(j) ☐ A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J),
please specify the type of institution:

(k) ☐ Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

(a) Amount beneficially owned:

See Row 9 of the cover page for each Reporting Person and the corresponding footnotes. Except to the extent of his, her or its pecuniary interest therein, each Reporting Person disclaims beneficial ownership of such shares of Class A Common Stock, except for the shares, if any, such Reporting Person holds of record.

(b) Percent of class:

See Row 11 of the cover page for each Reporting Person and the corresponding footnotes. Except to the extent of his, her or its pecuniary interest therein, each Reporting Person disclaims beneficial ownership of such shares of Class A Common Stock, except for the shares, if any, such Reporting Person holds of record. %

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote:

See Row 5 of the cover page for each Reporting Person and the corresponding footnotes. Except to the extent of his, her or its pecuniary interest therein, each Reporting Person disclaims beneficial ownership of such shares of Class A Common Stock, except for the shares, if any, such Reporting Person holds of record.

(ii) Shared power to vote or to direct the vote:

See Row 6 of the cover page for each Reporting Person and the corresponding footnotes. Except to the extent of his, her or its pecuniary interest therein, each Reporting Person disclaims beneficial ownership of such shares of Class A Common Stock, except for the shares, if any, such Reporting Person holds of record.

(iii) Sole power to dispose or to direct the disposition of:

See Row 7 of the cover page for each Reporting Person and the corresponding footnotes. Except to the extent of his, her or its pecuniary interest therein, each Reporting Person disclaims beneficial ownership of such shares of Class A Common Stock, except for the shares, if any, such Reporting Person holds of record.

(iv) Shared power to dispose or to direct the disposition of:

See Row 8 of the cover page for each Reporting Person and the corresponding footnotes. Except to the extent of his, her or its pecuniary interest therein, each Reporting Person disclaims beneficial ownership of such shares of Class A Common Stock, except for the shares, if any, such Reporting Person holds of record.

Item 5. Ownership of 5 Percent or Less of a Class.

☑ Ownership of 5 percent or less of a class

Item 6. Ownership of more than 5 Percent on Behalf of Another Person.

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

Under certain circumstances set forth in the limited partnership agreement of LVPII and the limited liability company agreement of LCPII, the general and limited partners or members, as the case may be, of each of such entities may be deemed to have the right to receive dividends from, or the proceeds from, the sale of securities of the Issuer owned by each such entity of which they are a partner or member, as the case may be.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications:

Not Applicable

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Longitude Capital Partners II, LLC

Signature: /s/ Cristiana Blauth Oliveria
Name/Title: Cristiana Blauth Oliveria, Authorized Signatory
Date: 11/16/2026

Longitude Venture Partners II, L.P.

Signature: /s/ Cristiana Blauth Oliveria

Name/Title: Cristiana Blauth Oliveria, Authorized Signatory
Date: 11/16/2026

Patrick G. Enright

Signature: /s/ Cristiana Blauth Oliveria
Name/Title: Cristiana Blauth Oliveria, as attorney-in-fact for Patrick G. Enright
Date: 11/16/2026

Juliet Tammenoms Bakker

Signature: /s/ Cristiana Blauth Oliveria
Name/Title: Cristiana Blauth Oliveria, as attorney-in-fact for Juliet Tammenoms Bakker
Date: 11/16/2026