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

SCHEDULE 13D/A

Under the Securities Exchange Act of 1934
(Amendment No. 6)*

MOLECULAR TEMPLATES, INC.

(Name of Issuer)

Common Stock, \$0.001 par value per share
(Title of Class of Securities)

608550 109
(CUSIP Number)

Patrick G. Enright
Managing Member
Longitude Capital Partners III, LLC
2740 Sand Hill Road, 2nd Floor
Menlo Park, CA 94025
(650) 854-5700

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

April 25, 2024
(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box .

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(Continued on following pages)

1	NAMES OF REPORTING PERSONS Longitude Capital Partners III, LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (see instructions) OO	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 309,819 (1)(2)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 309,819 (1)(2)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 309,819 (1)(2)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11 4.6% (3)	
14	TYPE OF REPORTING PERSON (see instructions) OO	

- (1) All of such securities are held of record by Longitude Venture III (as defined in the Explanatory Note below). Longitude Capital III (as defined in the Explanatory Note below) is the general partner of Longitude Venture III and may be deemed to have voting, investment and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of Longitude Capital III and may each be deemed to share voting, investment and dispositive power with respect to these securities.
- (2) Consists of (a) 213,268 outstanding shares of Common Stock, and (b) 96,551 shares of Common Stock issuable upon exercise of Warrants.
- (3) The percentage was calculated based on 6,680,431 shares of Common Stock, as follows: (a) 6,583,880 shares of Common Stock outstanding as of April 22, 2024 as reported by the Issuer in its Annual Report on Form 10-K/A as filed with the Securities and Exchange Commission on April 25, 2024 (the "Form 10-K"); plus (b) 96,551 shares of Common Stock issuable upon exercise of the Warrants held of record by Longitude Venture III.

1	NAMES OF REPORTING PERSONS Longitude Venture Partners III, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (see instructions) OO	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 309,819 (1)(2)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 309,819 (1)(2)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 309,819 (1)(2)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11 4.6% (3)	
14	TYPE OF REPORTING PERSON (see instructions) PN	

- (1) All of such securities are held of record by Longitude Venture III. Longitude Capital III is the general partner of Longitude Venture III and may be deemed to have voting, investment and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of Longitude Capital III and may each be deemed to share voting, investment and dispositive power with respect to these securities.
- (2) Consists of (a) 213,268 outstanding shares of Common Stock, and (b) 96,551 shares of Common Stock issuable upon exercise of Warrants.
- (3) The percentage was calculated based on 6,680,431 shares of Common Stock, as follows: (a) 6,583,880 shares of Common Stock outstanding as of April 22, 2024 as reported by the Issuer in its Form 10-K; *plus* (b) 96,551 shares of Common Stock issuable upon exercise of the Warrants held of record by Longitude Venture III.

1	NAMES OF REPORTING PERSONS Patrick G. Enright	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (see instructions) OO	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 233 (1)
	8	SHARED VOTING POWER 309,819 (2)(3)
	9	SOLE DISPOSITIVE POWER 233 (1)
	10	SHARED DISPOSITIVE POWER 309,819 (2)(3)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 310,052 (1)(2)(3)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11 4.6% (4)	
14	TYPE OF REPORTING PERSON (see instructions) IN	

- (1) These shares are held by a limited partnership (the "Partnership") of which the general partner is a trust (the "Enright Trust"). Mr. Enright is the Trustee of the Enright Trust and may be deemed to share voting, investment and dispositive power over the shares held by the Partnership.
- (2) All of such securities are held of record by Longitude Venture III. Longitude Capital III is the general partner of Longitude Venture III and may be deemed to have voting, investment and dispositive power with respect to these securities. Patrick G. Enright and Juliet Tammenoms Bakker are the managing members of Longitude Capital III and may each be deemed to share voting, investment and dispositive power with respect to these securities.
- (3) Consists of (a) 213,268 outstanding shares of Common Stock and (b) 96,551 shares of Common Stock issuable upon exercise of Warrants.
- (4) The percentage was calculated based on 6,680,431 shares of Common Stock, as follows: (a) 6,583,880 shares of Common Stock outstanding as of April 22, 2024 as reported by the Issuer in its Form 10-K; *plus* (b) 96,551 shares of Common Stock issuable upon exercise of the Warrants held of record by Longitude Venture III.

1	NAMES OF REPORTING PERSONS Juliet Tammenoms Bakker	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (see instructions) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (see instructions) OO	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 309,819 (1)(2)
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 309,819 (1)(2)
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 309,819 (1)(2)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (see instructions) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11 4.6% (3)	
14	TYPE OF REPORTING PERSON (see instructions) IN	

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- (2) Consists of (a) 213,268 outstanding shares of Common Stock and (b) 96,551 shares of Common Stock issuable upon exercise of Warrants.
- (3) The percentage was calculated based on 6,680,431 shares of Common Stock, as follows: (a) 6,583,880 shares of Common Stock outstanding as of April 22, 2024 as reported by the Issuer in its Form 10-K; *plus* (b) 96,551 shares of Common Stock issuable upon exercise of the Warrants held of record by Longitude Venture III.

Explanatory Note:

This joint statement on Schedule 13D/A is filed with respect to the common stock, par value \$0.001 per share ("Common Stock"), of Molecular Templates, Inc., a Delaware corporation (the "Issuer").

This Amendment No. 6 to Schedule 13D ("Amendment No. 6") amends and supplements the Schedule 13D initially filed with the Securities and Exchange Commission (the "Commission") on September 18, 2017, as amended by Amendment No. 1 filed with the Commission on September 26, 2018 ("Amendment No. 1"), Amendment No. 2 filed with the Commission on December 5, 2019 ("Amendment No. 2"), Amendment No. 3 filed with the Commission on June 5, 2020 ("Amendment No. 3"), Amendment No. 4 filed with the Commission on February 14, 2023 ("Amendment No. 4") and Amendment No. 5, filed with the Commission on October 24, 2023 ("Amendment No. 5" and together with Amendment No. 1, Amendment No. 2, Amendment No. 3, Amendment No. 4 and Amendment No. 5, the "Original Schedule 13D"). This Amendment No. 6 is being filed to update the aggregate percentage of the Issuer's Common Stock owned by the Reporting Persons due to dilution caused by, among other things, the Issuer's sales of additional shares of its Common Stock from time to time since the date of the filing of the Original Schedule 13D and not in connection with a disposition of any shares by the Reporting Persons. Such dilution resulted in a decrease of over one percent (1%) in the aggregate percentage ownership reported by the Reporting Persons in the Original Schedule 13D. Only those items that are hereby reported are amended; all other items reported in the Original Schedule 13D 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 have the meanings ascribed to them in the Original Schedule 13D.

Item 5. Interest in Securities of the Issuer.

Item 5 of the Original Schedule 13D is hereby amended to add the following language:

(a) and (b) See Items 7-11 of the cover pages of this Amendment and Item 2 above.

(c) On April 25, 2024, each of the Reporting Persons ceased to be the beneficial owner of more than five percent of the outstanding shares of Common Stock.

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.

Dated: April 29, 2024.

LONGITUDE VENTURE PARTNERS III, L.P.
By: LONGITUDE CAPITAL PARTNERS III, LLC
Its: General Partner

By: /s/ Cristiana Blauth Oliveira
Cristiana Blauth Oliveira, Authorized Signatory

LONGITUDE CAPITAL PARTNERS III, LLC

By: /s/ Cristiana Blauth Oliveira
Cristiana Blauth Oliveira, Authorized Signatory

/s/ Cristiana Blauth Oliveira, as attorney-in-fact for Patrick G. Enright
Patrick G. Enright

/s/ Cristiana Blauth Oliveira, as attorney-in-fact for Juliet Tammenoms Bakker
Juliet Tammenoms Bakker