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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event Reported): August 12, 2019

Molecular Templates, Inc.
(Exact Name of Registrant as Specified in Charter)

Delaware	**001-32979**	**94-3409596**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(I.R.S. Employer Identification Number)

9301 Amberglen Blvd, Suite 100, Austin, TX 78729
(Address of Principal Executive Offices) (Zip Code)

(512) 869-1555
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

[ ] Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
[ ] Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
[ ] Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
[ ] Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2). Emerging growth company [ ]

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. [ ]

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.001 Par Value Per Share	MTEM	The Nasdaq Capital Market

Item 2.02. Results of Operations and Financial Condition.

On August 12, 2019, Molecular Templates, Inc. (the "Company") announced its financial results for the second quarter of 2019 ended June 30, 2019. The full text of the press release issued in connection with the announcement is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information contained in this Item 2.02 and in the press release furnished as Exhibit 99.1 to this Current Report on Form 8-K shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended or Sections 11 and 12(a)(2) of the Securities Act of 1933, as amended. The information contained in this Item 2.02 and in the press release furnished as Exhibit 99.1 to this current report on Form 8-K shall not be incorporated by reference into any filing with the U.S. Securities and Exchange Commission made by the Company whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Item 9.01. Financial Statements and Exhibits.

Exhibit 99.1. Press release dated August 12, 2019

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Molecular Templates, Inc.

Date: August 12, 2019

By: /s/ Eric E. Poma, Ph.D.
Eric E. Poma, Ph.D.
Chief Executive Officer

EXHIBIT 99.1

Molecular Templates, Inc. Reports Second Quarter 2019 Financial Results

AUSTIN, Texas, Aug. 12, 2019 (GLOBE NEWSWIRE) -- Molecular Templates, Inc. (Nasdaq: MTEM, "Molecular," "Molecular Templates" or "MTEM"), a clinical-stage biopharmaceutical company focused on the discovery and development of the company's proprietary engineered toxin bodies (ETBs), which are differentiated, targeted, biologic therapeutics for cancer, today reported financial results for the second quarter of 2019. As of June 30, 2019, MTEM's cash and investments totaled $72.3 million, and is expected to fund operations into the first half of 2021.

"Updated data from our Phase I/Ib study of MT-3724 in DLBCL continue to show promising activity in heavily pretreated patients. In our three ongoing Phase II studies with MT-3724, we hope to replicate the monotherapy activity in a larger patient population as well as show the utility and safety of combination dosing in the separate chemotherapy and Revlimid combination studies," said Eric Poma, Ph.D., Molecular Templates' Chief Executive and Scientific Officer. "Investigational New Drug Applications (INDs) have been accepted for both MT-5111 (HER2 targeted ETB) and TAK-169 (CD38 ETB) with Phase I dosing expected to begin soon for both programs. We look forward to providing study updates on the three ongoing MT-3724 Phase II studies and the MT-5111 Phase I study by the end of the year."

Company Highlights and Upcoming Milestones

TAK-169

- Takeda and MTEM announced the acceptance of the IND for TAK-169 (CD38 targeted ETB) in June 2019. Dosing in the trial is expected to start in 2H19.
- As presented at the American Association for Cancer Research annual meeting in April 2019, TAK-169 is more potent than MT-3724 (our CD20 targeted ETB) and was also well tolerated at much higher doses than was MT-3724 in non-human primates.
- The starting dose for the dose escalation for TAK-169 is 50 mcg/kg, which is the MTD for MT-3724. The protocol includes once weekly and once every two-week dosing schedules.

MT-3724

- The Phase I/Ib monotherapy study of MT-3724 completed enrollment in 1Q19. Final data from this study are expected to be presented at a medical conference. A total of 27 patients were treated in this study across a range of doses (5 mcg/kg-100mcg/kg); 50 mcg/kg was identified as the maximum tolerated dose (MTD).
    - Thirteen of these patients with diffuse large B-cell lymphoma (DLBCL) were relapsed/refractory DLBCL patients (including transformed and composite histology), with assay-negative levels of serum rituximab.
        - Results for these thirteen patients were:
            - Five patients had responses (1 complete response, 1 complete metabolic response, 3 partial responses) for a 38% response rate. The median number of prior therapies in the responders was 3; four of the responders were primary R-CHOP refractory.
            - Three patients had stable disease (including two patients with 49% and 47% tumor reductions).
            - Five patients had progressive disease.
    - Five of these thirteen patients were treated at the MTD of 50 mcg/kg. Three of these five patients responded (1 CR, 2 PRs).
        - The patient with a CR has left the study for personal reasons after 5 cycles while still in a complete response.
        - One of the other patients with a PR remains in response and is currently in their 9th cycle of dosing.
        - The remaining patient, who had heterogeneous CD20 status at enrollment, had a partial response and then progressed after approximately 5 cycles.
        - The 50 mcg/kg dose has been generally well-tolerated; no life-threatening toxicities have been observed at any dose of MT-3724.
- MTEM is conducting a Phase II monotherapy study of MT-3724 in relapsed/refractory DLBCL. This study has the potential to serve as a registration study. MTEM expects to provide an update on this study in 4Q19.
- MTEM is also conducting two Phase II studies in earlier lines of DLBCL; one with MT-3724 in combination chemotherapy (gemcitabine and oxaliplatin) and the other with MT-3724 in combination with Revlimid. The Company expects to report an update on both MT-3724 combination studies in 4Q19.

MT-5111

- MTEM announced the acceptance of its IND filing for MT-5111, its ETB targeting HER2, in April 2019. The Phase I study in patients with HER2 positive solid tumors is expected to start dosing in 3Q19. MTEM expects to report an update on this study in 4Q19.

Research

- MTEM expects to file an IND application for MT-6035, its ETB targeting PD-L1 (with antigen seeding), in 4Q19.
- Several other ETB candidates are in preclinical development, targeting both solid and hematological cancers.

Takeda Multi-Target Collaboration

- Takeda and MTEM are conducting lead optimization for ETBs against two undisclosed targets selected by Takeda under the collaboration. Should Takeda exercise its option to license ETBs for both targets, MTEM would receive $25.0 million and would be eligible to receive up to $547.0 million in milestone payments and tiered royalties on sales.

Financial Results

The net loss attributable to common shareholders for the second quarter of 2019 was $9.2 million, or $0.25 per basic and diluted share. This compares with a net loss attributable to common shareholders of $9.7 million, or $0.36 per basic and diluted share, for the same period in 2018.

Revenues for the second quarter of 2019 were $5.4 million, compared to $1.4 million for the same period in 2018. Revenues for the second quarter of 2019 were comprised of revenues from collaborative research and development agreements with Takeda, and grant revenue from CPRIT. Total research and development expenses for the second quarter of 2019 were $10.2 million, compared with $7.7 million for the same period in 2018.

Total general and administrative expenses for the second quarter of 2019 were $4.6 million, compared with $3.7 million for the same period in 2018.

About Molecular Templates

Molecular Templates is a clinical stage biopharmaceutical company focused on the discovery and development of differentiated, targeted, biologic therapeutics for cancer. We believe our proprietary biologic drug platform technology, referred to as engineered toxin bodies, or ETBs, provides a differentiated mechanism of action that may address some of the limitations associated with currently available cancer therapeutics. ETBs utilize a genetically engineered form of Shiga-like Toxin A subunit, or SLTA, a ribosome inactivating bacterial protein, that can be targeted to specifically destroy cancer cells. Additional information about Molecular Templates can be obtained at http://www.mtem.com.

Forward-Looking Statements

This press release contains forward-looking statements for purposes of the Private Securities Litigation Reform Act of 1995 (the "Act"). Molecular Templates disclaims any intent or obligation to update these forward-looking statements, and claims the protection of the Act's Safe Harbor for forward-looking statements. All statements, other than statements of historical facts, included in this press release regarding strategy, future operations, future financial position, future revenue, projected expenses, prospects, plans and objectives of management are forward-looking statements. In addition, when or if used in this press release, the words "may," "could," "should," "anticipate," "believe," "estimate," "expect," "intend," "plan," "predict" and similar expressions and their variants, as they relate to Molecular Templates may identify forward-looking statements. Examples of such statements include, but are not limited to, statements relating to the development of the Company's lead program, MT-3724, and the replication of monotherapy activity in the Phase II studies with MT-3724; the expected timing of submitting various IND applications, conducting studies, dosing patients, and reporting additional updates on studies or data from various studies; and the Company's belief that its proprietary biologic drug platform technology, or ETBs, provides for a differentiated mechanism of action that may address some of the limitations associated with currently available cancer therapeutics.

Forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual events or results may differ materially from those discussed in the forward-looking statements as a result of various factors including, but not limited to, the uncertainties inherent in the preclinical and clinical development process; whether the Company's cash resources will be sufficient to fund its continuing operations for the periods and/or trials anticipated; the ability of the Company to protect its intellectual property rights; and legislative, regulatory, political and economic developments, as well as those risks identified under the heading "Risk Factors" in the Company's filings with the SEC. Any forward-looking statements contained in this press release speak only as of the date hereof, and the Company specifically disclaims any obligation to update any forward-looking statement, whether because of new information, future events or otherwise.

Contact:
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Molecular Templates, Inc.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share data)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Research and development revenue – from related party	$ 5,211	$ 932	$ 11,624	$ 1,095
Research and development revenue – other	—	12	—	80
Grant revenue	236	423	831	674
Total revenue	5,447	1,367	12,455	1,849
Operating expenses:				
Research and development	10,243	7,662	18,697	14,350
General and administrative	4,605	3,718	9,540	6,627
Total operating expenses	14,848	11,380	28,237	20,977
Loss from operations	9,401	10,013	15,782	19,128
Interest and other income, net	543	118	1,053	200
Interest expense	(301)	(98)	(594)	(393)
Change in fair value of warrant liabilities	6	298	2	912
Net loss attributable to common shareholders	$ 9,153	$ 9,695	$ 15,321	$ 18,409
Net loss per share attributable to common shareholders:				
Basic and diluted	$ 0.25	$ 0.36	$ 0.42	$ 0.68
Weighted average number of shares used in net loss per share calculations:				
Basic and diluted	36,819,846	27,062,440	36,779,638	27,026,263

Molecular Templates, Inc.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	June 30, 2019	December 31, 2018
	(unaudited)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 16,795	$ 87,721
Marketable securities, current	55,529	10,234
Prepaid expenses	2,258	2,244
Grants revenue receivable	5,160	4,329
Accounts receivable from related party	—	240
Other current assets	98	95
Total current assets	79,840	104,863
Operating lease right-of-use assets, non-current	10,796	—
Property and equipment, net	9,151	6,851
In-process research and development	26,623	26,623
Other assets	4,737	1,821
Total assets	$ 131,147	$ 140,158
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 2,577	$ 780
Accrued liabilities	7,120	5,357
Deferred revenue, current	14,561	26,231
Other current liabilities	1,435	141
Total current liabilities	25,693	32,509
Deferred revenue, long term	1,664	2,670
Long-term debt, non-current, net	3,075	3,254
Operating lease liabilities, non-current	10,707	—
Other liabilities	748	819
Total liabilities	41,887	39,252
Total stockholders' equity	89,260	100,906
Total liabilities and stockholders' equity	$ 131,147	$ 140,158