August 2, 2017

Molecular Templates Completes Merger with Threshold Pharmaceuticals and Private Placements

- Combined Company Has a Unique Biological Platform with a Differentiated Mechanism of Action in Oncology and Two Clinical-Stage Candidates, MT-3724 and Evofosfamide
- Combined Company to Commence Trading on The Nasdaq Capital Market on August 2, 2017 under Ticker Symbol "MTEM"
- Approximately $75.0 Million in Cash on Balance Sheet Following Closing of Merger and Private Placements to Advance Molecular Templates' Portfolio

AUSTIN, Texas, Aug. 02, 2017 (GLOBE NEWSWIRE) -- Molecular Templates, Inc., (Nasdaq:MTEM) a clinical stage biopharmaceutical company focused on the discovery and development of Engineered Toxin Bodies (ETBs), a new class of targeted biologic therapies that possess unique mechanisms of action in oncology, today announced the completion of its previously announced merger with Threshold Pharmaceuticals, Inc. (NASDAQ: THLD, through August 1, 2017), effective as of August 1, 2017. Following the completion of the merger, Molecular Templates completed a previously announced $40.0 million equity financing led by venture capital firm Longitude Capital, which invested $20.0 million in the combined company, with an additional $20.0 million from CAM Capital, BVF, Perceptive Advisors and others, including certain affiliates of Molecular Templates. In addition, following the completion of the merger and the Longitude-led financing, the combined company closed a $20.0 million equity investment from Takeda Pharmaceutical Company Ltd. made in connection with Molecular Templates' entry into a collaboration and license agreement with Takeda. Together with pre-merger cash on Threshold's balance sheet, and giving effect to the private placements, the combined company has a cash balance of approximately $75.0 million for use in funding its research and development activities.

The holders of shares of Molecular Templates common stock outstanding immediately prior to the merger received 7.7844 shares of Threshold common stock in exchange for each share of Molecular Templates common stock in the merger. The exchange ratio reflects a 1-for-11 reverse stock split effected by Threshold prior to the completion of the merger. Following the completion of the merger and the equity financings, the combined company has approximately 26,880,899 shares of common stock outstanding.

Following the completion of the merger, Threshold changed its name to Molecular Templates, Inc. The combined company will commence trading on August 2, 2017 on The Nasdaq Capital Market under the ticker symbol "MTEM."

"The completion of these transactions is an exciting step in the evolution of Molecular Templates as we enter the public markets," said Eric Poma, Ph.D., President, Chief Executive Officer and Chief Scientific Officer of Molecular Templates. "We are now well-

funded and have the resources to further the development of our lead ETB product candidate, MT-3724, with new clinical efficacy and safety data from an MTD expansion study in relapsed/refractory DLBCL patients expected in 2018, and to develop our pipeline of drug candidates based on our next generation ETBs, the first of which is expected to enter the clinic in 2018. We are also committed to exploring Threshold's evofosfamide (formerly TH-302), which is currently in a Phase 1 clinical trial in combination with ipilimumab in advanced solid tumors."

"I want to express my gratitude to the Threshold stockholders for supporting the merger with Molecular Templates, whose technology and clinical candidates we believe are differentiated with great promise for addressing significant unmet needs in the treatment of patients living with cancer," said Harold ("Barry") E. Selick, Ph.D., Threshold's former Chief Executive Officer and chairman of the Board of Directors of the combined company. "I am looking forward to supporting the success of the combined organization."

Following the completion of the merger, Threshold moved its corporate headquarters to Austin, Texas. The combined company operates under the leadership of Molecular Templates' management, including Eric E. Poma, Ph.D., as Chief Executive Officer and Chief Scientific Officer, and Jason Kim, President and Chief Operating Officer. In addition to Dr. Selick continuing as chairman, the Board of Directors of the combined company will include Dr. Poma, Kevin M. Lalande of Santé Ventures, David Hirsch M.D, Ph.D. of Longitude Capital, Scott Morenstein of CAM Capital, David R. Hoffmann of DRH Consulting and Michael Broxson of Takeda Pharmaceuticals.

Threshold's financial advisor for the transaction is Ladenburg Thalmann & Co. Inc., and Threshold's legal counsel is Cooley LLP. Molecular Templates' legal counsel is Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

About MT-3724
MT-3724 is Molecular Templates' lead drug candidate. MT-3724 is in a Phase 1 clinical trial in heavily pre-treated non-Hodgkin's lymphoma patients at the Memorial Sloan-Kettering Cancer Center, the MD Anderson Cancer Center, and the University of Arizona. An expansion arm of the Phase 1 study focused on relapsed and refractory diffuse large lymphoma patients is set to commence enrollment. More information is available at clinicaltrials.gov.

About MT-4019
MT-4019 is Molecular Templates' preclinical drug candidate targeting CD38. MT-3724 has been awarded a $15.2 million grant from the Cancer Prevention and Research Institute of Texas (CPRIT) to fund development. MT-4019 represents the second generation of Engineered Toxin Bodies (ETBs) that incorporate a proprietarily de-immunized scaffold.

About Evofosfamide
Evofosfamide (formerly TH-302) is an investigational hypoxia-activated prodrug of a bis-alkylating agent that is preferentially activated under severe hypoxic tumor conditions, a feature of many solid tumors. Areas of low oxygen levels (hypoxia) in solid tumors are due to insufficient blood vessel supply. Similarly, the bone marrow of patients with hematological malignancies has also been shown, in some cases, to be severely hypoxic. A Phase 1 clinical trial evaluating evofosfamide in combination with the immune checkpoint antibody, ipilimumab, is currently ongoing at the M.D. Anderson Cancer Center in Houston Texas. At

the same time, while the PMDA has just indicated that the current analysis of the MAESTRO data is not sufficient to support the submission of a New Drug Application (NDA) in Japan, Molecular Templates is in ongoing discussions with the PMDA to clarify the scope of an additional study, the results of which may then support the submission of an NDA for evofosfamide in Japan.

About Molecular Templates
Molecular Templates is focused on the discovery, development and commercialization of next-generation immunotoxins called Engineered Toxin Bodies (ETBs) for the treatment of cancers and other serious diseases. For additional information, please visit Molecular Templates' website at www.mtem.com.

Forward-Looking Statements
This press release contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statement of historical facts, included in this press release regarding Molecular Templates' strategy, future operations and plans are forward-looking statements. Examples of such statements include, but are not limited to, statements relating to the development, potential benefits and uses of and markets for Molecular Templates' product candidates, including MT-3724, MT-4019 and evofosfamide, and anticipated clinical trials, including timing and potential results. Actual results or events could differ materially from the plans, intentions, expectations and projections disclosed in the forward-looking statements. Various important factors could cause actual results or events to differ materially from the forward-looking statements that Molecular Templates makes, including, but not limited to, the risk that trials and studies may be delayed and may not have satisfactory outcomes, potential adverse effects arising from the testing or use of MT-3724, MT-4019 and evofosfamide and other risks described in the "Risk Factors" section of the proxy statement/prospectus/information statement filed by Threshold with the SEC on June 30, 2017. Molecular Templates does not assume any obligation to update any forward-looking statements, except as required by law.

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