

Molecular Templates to Present at the AACR 101st Annual Meeting

Presentations will include a report on the development of a novel targeted toxin-based therapeutic library for oncology drug development and new preclinical data on MTI-SAM3

GEORGETOWN, Tex. - April 13, 2010 - Molecular Templates, Inc., a biopharmaceutical company focused on the discovery and development of novel targeted toxin-based therapeutics for oncology, announced today that it has been selected for two poster presentations at the 101st American Association for Cancer Research (AACR) annual meeting in Washington D.C. during April 19-21, 2010. In a presentation, entitled "Novel toxin library for the discovery of oncology therapeutics," the company will report the development of a unique targeted toxin-based therapeutic drug development platform. Researchers at Molecular Templates have created a vast library of toxin-based molecules, each with specifically directed cell-kill activity. This proprietary library is currently being used by the company to rapidly screen against a series of targets and disease-states to identify and advance novel targeted oncology therapies toward the clinic. In a separate poster presentation, researchers will present preclinical proof-of-concept of the toxin-based platform demonstrating the identification of a pre-clinical candidate for melanoma, MTI-SAM3, using an etiology-based screen in which the target was not *a priori* identified.

"Our proprietary drug development platform allows us to rapidly screen for promising oncology drug candidates based on target-specific direct cell-kill activity," said Eric Poma, president and chief executive officer of Molecular Templates. "The toxin scaffold confers a host of unique properties that differentiate it among traditional antibody and small molecule platforms. We believe we have created a novel platform to discover and develop a new class of targeted biologics and we're excited to showcase this research at this year's AACR Annual Meeting."

The schedule for the poster presentations is as follows:

Date & Time:	Tuesday, April 20, 2010 – 2:00 to 5:00 PM
Poster Title:	Discovery of a novel single chain ribosome inactivating protein that selectively kills human melanoma cells
Abstract:	4507
Location:	Exhibit Hall A-C, Poster Section 25
Session Title:	Targeting Cell Signaling
Session Category:	Experimental and Molecular Therapeutics
Date & Time:	Wednesday, April 21, 2010 – 8:00 to 11:00 AM
Poster Title:	Novel toxin library for the discovery of oncology therapeutics
Abstract:	5506
Location:	Exhibit Hall A-C, Poster Section 25
Session Title:	Novel Drug Delivery and Assay Technologies
Session Category:	Experimental and Molecular Therapeutics

Additional details of the presentations can be found on the AACR website at <http://www.aacr.org/>.

About MTI-SAM3

MTI-SAM3 is a novel ribosome-inactivating protein with specific cell-kill activity against melanoma. Given its unique mechanism of action and kinetics profile, Molecular Templates believes that MTI-SAM3 represents a new class of biologics that can be synergistically combined with other standard and targeted therapies in oncology.

About Molecular Templates

Molecular Templates is a private biopharmaceutical company focused on the discovery and development of novel targeted biologic therapies for oncology and infectious disease. Molecular Templates has introduced embedded random targeting domains into ribosome-inhibiting toxins. This strategy has resulted in a library of toxin variants that numbers in the billions. Each of these toxin variants has a distinct binding affinity but retains the parent toxin's ribosome-inhibiting properties and pharmacokinetics. These variants can be screened in a high throughput fashion for direct cell-kill activity to identify promising therapeutic candidates. For more information, please visit www.moleculartemplates.com.

CONTACT

Jason Kim

info@moleculartemplates.com

512-961-8479