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# Major Bone Marrow Transplant Event Drives Significant Interest Among Leading Transplant Physicians for Upcoming Pivotal Trial of Iomab-B

## Plenary Discussions by Leading Bone Marrow Transplant Experts Provide Additional Validation of Iomab-B Clinical Development Path and Unmet Medical Need

NEW YORK, NY -- (Marketwired) -- 02/23/15 -- Actinium Pharmaceuticals, Inc. (NYSE MKT: ATNM) ("Actinium" or "the Company"), a biopharmaceutical company developing innovative targeted payload immunotherapeutics for the treatment of advanced cancers, announced today a positive reception of its Iomab-B drug candidate by leading clinicians representing high volume bone marrow transplant centers, at a variety of meetings held February 11-14 in San Diego. Leaders in the field of bone marrow transplantation had convened for annual scientific, organizational and other conferences, held in parallel.

In a well-attended scientific session entitled *"What is the Optimal Conditioning Regimen?"*, Frederick Appelbaum, MD cited the strong historical safety and efficacy of Iomab-B, and brought the upcoming trial to the attention of a wide audience. He is a world expert in blood cancers and is Executive Vice President and Deputy Director, External Affairs at Fred Hutchinson Cancer Research Center, an institution considered to be the birthplace of bone marrow transplant. At a separate scientific session entitled *"Transplanting Relapsed Refractory Acute Leukemia: Why We Should Continue"*, Iomab-B (an "Anti CD45 radioconjugate") was featured in the presentation by Sergio Giral, MD of Memorial Sloan Kettering Cancer Center as having "very intriguing data" when discussing various potential improvements to HSCT (hematopoietic stem cell transplantation) outcomes in this patient population.

The Company has confirmed interest in participation in this clinical trial from a number of major academic cancer centers, with high volumes of bone marrow transplant patients. By informing additional centers about the trial, the Company aims to expand the participation of leading sites, in order to maximize the breadth and quality of clinical development experience and support the pace of subject enrollment upon commencement of the trial.

John Pagel, MD, PhD, Chairman of Actinium's Scientific Advisory Board and head of the Swedish Cancer Institute Hematologic Malignancies Program in Seattle, along with Dragan Cicic, MD, the Company's Chief Medical Officer, discussed the potential of Iomab-B and its upcoming Phase 3 clinical trial with key bone marrow transplanters from major medical centers throughout North America. This drug candidate may address significant unmet medical need in older acute myeloid leukemia (AML) patients.

Dragan Cicic, MD, Chief Medical Officer of Actinium stated, "We are very pleased with the high level of interest in our upcoming pivotal trial of lomab-B, a critical step on the path toward potential commercialization of this drug candidate. Based on the strong Phase 1/2 data which demonstrated significant survival and safety benefits when compared to conventional therapy, we remain committed to bringing this potentially lifesaving therapy to market, subject to the successful completion of the Phase 3 trial and FDA approval. We believe lomab-B addresses a significant unmet need for thousands of elderly AML patients who cannot tolerate current myeloablative conditioning regimens and therefore are unable to receive a potentially curative bone marrow transplant, limiting their life expectancy to only a few months."

The upcoming Phase 3 study in hematopoietic stem cell transplant (often referred to as bone marrow transplant) will address the serious unmet medical need in older refractory and relapsed AML patients. The Phase 3 trial builds upon a Phase 1/2 trial with lomab-B in advanced AML and high risk MDS patients which demonstrated successful engraftment by day 28, the achievement of transfusion independent complete response and overall survival of 30% at 1 year and 19% at 2 years.

### ***About Bone Marrow Transplant:***

Bone marrow transplants (BMT) are most commonly used to treat leukemia and lymphoma, conditions incurred when a blood or immune cell, respectively, becomes cancerous and proliferates. Together, these diseases account for some 50,000 to 75,000 new cases annually in the United States. BMT involves first clearing a patient's body of his or her own immune cells and then transplanting bone marrow, the source of all blood- and immune-forming cells, from a tissue-matched donor. The new cells, which are free of cancer, repopulate the patient's bone marrow and eventually give rise to a functioning set of blood and immune cells, providing a lifelong cure. BMT offers the chance of a "curative" outcome (2+ year survival), and therefore can play a central role in the treatment of AML. The impact of BMT on AML continues to increase with AML being the most common and fastest growing indication for allogeneic BMT, comprising 25% to 30% of all BMT recipients. There are currently over 100,000 BMT survivors across all indications and this number is expected to increase to 250,000 by 2020 and 500,000 by 2030, with 25% of them over age 60.

### ***About lomab-B***

lomab-B will be used in preparing patients for hematopoietic stem cell transplantation (HSCT), the fastest growing hospital procedure in the U.S. The Company established an agreement with the FDA that the path to a Biologics License Application (BLA) submission could include a single, pivotal Phase 3 clinical study if it is successful. The trial population in this two arm, randomized, controlled, multicenter trial will be refractory and relapsed Acute Myeloid Leukemia (AML) patients over the age of 55. The trial size was set at 150 patients with 75 patients per arm. The primary endpoint in the pivotal Phase 3 trial is durable complete remission, defined as a complete remission lasting at least 6 months and the secondary endpoint will be overall survival at one year. There are currently no effective treatments approved by the FDA for AML in this patient population and there is no defined standard of care. lomab-B has completed several physician sponsored clinical trials examining its potential as a conditioning regimen prior to HSCT in various blood cancers including the Phase 1/2 study in relapsed and/or refractory AML patients. The results of these studies in over 300 patients have demonstrated the potential of lomab-B to create a

new treatment paradigm for bone marrow transplants by: expanding the pool to ineligible patients who do not have any viable treatment options currently; enabling a shorter and safer preparatory interval for HSCT; reducing post-transplant complications; and showing a clear survival benefit including curative potential.

Iomab-B is a radioimmunoconjugate consisting of BC8, a novel murine monoclonal antibody, and iodine-131 radioisotope. BC8 has been developed by Fred Hutchinson Cancer Research Center to target CD45, a pan-leukocytic antigen widely expressed on white blood cells. This antigen makes BC8 potentially useful in targeting white blood cells in preparation for hematopoietic stem cell transplantation in a number of blood cancer indications, including acute myeloid leukemia (AML), chronic myeloid leukemia (CML), acute lymphoblastic leukemia (ALL), chronic lymphocytic leukemia (CLL), Hodgkin's disease (HD), Non-Hodgkin lymphomas (NHL) and multiple myeloma (MM). When labeled with radioactive isotopes, BC8 carries radioactivity directly to the site of cancerous growth and bone marrow while avoiding effects of radiation on most healthy tissues.

### ***About Actinium Pharmaceuticals***

Actinium Pharmaceuticals, Inc. ([www.actiniumpharma.com](http://www.actiniumpharma.com)) is a New York-based biopharmaceutical company developing innovative targeted payload immunotherapeutics for the treatment of advanced cancers. Actinium's targeted radiotherapy products are based on its proprietary delivery platform for the therapeutic utilization of alpha-emitting actinium-225 and bismuth-213 and certain beta emitting radiopharmaceuticals in conjunction with monoclonal antibodies. The Company's lead radiopharmaceutical product candidate Iomab-B is designed to be used, upon approval, in preparing patients for hematopoietic stem cell transplant, commonly referred to as bone marrow transplant. The Company plans to conduct a single, pivotal, multicenter Phase 3 clinical study of Iomab-B in refractory and relapsed AML patients over the age of 55 with a primary endpoint of durable complete remission. The Company's second product candidate, Actimab-A, is continuing its clinical development in a Phase 1/2 trial for newly diagnosed AML patients over the age of 60 in a single-arm multicenter trial.

### ***Forward-Looking Statement for Actinium Pharmaceuticals, Inc.***

This news release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act of 1995. These statements are based on management's current expectations and involve risks and uncertainties, which may cause actual results to differ materially from those set forth in such statements. The forward-looking statements may include statements regarding product development, product potential or financial performance. No forward-looking statement can be guaranteed and actual results may differ materially from those projected. Actinium undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

Contact:

Actinium Pharmaceuticals, Inc.  
Evan Smith, CFA  
VP Investor Relations and Finance  
(646) 840-5442

[esmith@actiniumpharma.com](mailto:esmith@actiniumpharma.com)

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