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UPDATE - Actinium Announces Selection of Zevacor Pharma, Inc. for Clinical Production and Supply of Iomab-B for Pivotal Phase 3 SIERRA Trial

Selection of Leading Radiopharmaceutical Manufacturer and Distributor Signifies Additional Progress to Pivotal Phase 3 SIERRA Trial Launch

NEW YORK, NY -- (Marketwired) -- 04/12/16 -- 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 that the Company has entered into an agreement with Zevacor Pharma, Inc. (formerly IBA Molecular North America, Inc.) for the clinical production and supply of Iomab-B for the upcoming pivotal Phase 3 SIERRA trial. Pursuant to the agreement, Zevacor Pharma, Inc. will perform the Good Manufacturing Practices (GMP) manufacturing, testing, releasing and distribution of Iomab-B for Actinium's pivotal Phase 3 SIERRA trial. Iomab-B is a radioimmunotherapy intended to be an induction and conditioning agent prior to a bone marrow transplant for Acute Myeloid Leukemia (AML) patients over the age of 55. Actinium's Iomab-B has received orphan drug designation from the U.S. Food and Drug Administration (FDA) and the pivotal Phase 3 SIERRA trial is expected to enroll 150 patients.

Kaushik J. Dave, Ph.D., MBA, Actinium's Chief Executive Officer said, "We are delighted to have Zevaor as our manufacturing and supply partner for Iomab-b and the Phase 3 SIERRA trial. Zevacor is a leading radiopharmaceutical company and it was apparent to us that they possess the knowledge, experience and capabilities to execute on our behalf, which led us to their selection. We look forward to working with the Zevacor team on the execution of the SIERRA trial."

Sandesh Seth, Executive Chairman of Actinium Pharmaceuticals stated, "The selection of Zevacor marks an important milestone for our Iomab-B program and complements the capabilities of our clinical development team and contract research organization, Medpace. Actinium and our partners are intensely focused on the pivotal Phase 3 SIERRA trial and we are confident in our capabilities. We look forward to initiating the SIERRA trial and enrolling patients that can benefit from Iomab-B and a bone marrow transplant. "

About Zevacor Pharma, Inc.

Zevacor Pharma, Inc. (formerly IBA Molecular North America, Inc.) is a leading developer, manufacturer, and distributor of radiopharmaceutical products and educational services used in nuclear medicine and molecular imaging in the United States. Zevacor has a unique product portfolio of tracers that are aimed at improving patient care through the better

diagnosis and treatment of disease. Zevacor also provides investigative and custom radiolabeling services to pharmaceutical, biotech, and research institutions nationwide helping them develop the next generation of molecular imaging and therapeutic products. Zevacor Pharma, Inc. is an affiliate of Zevacor Molecular, a PET and SPECT radiopharmaceutical firm based in Noblesville, Indiana and both are a subsidiary of Illinois Health and Science (IHS), a non-profit healthcare system that specializes in enhancing patient care through strategic investments in healthcare-related opportunities. The Zevacor family takes pride in role helping fulfill IHS's mission to enhance longevity and the quality of human life through improved patient care and outcomes. For more information, please visit www.zevacor.com.

About the SIERRA trial

Iomab-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 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. Iomab-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 almost 300 patients have demonstrated the potential of Iomab-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.

About Iomab-B

Iomab-B is a radioimmunoconjugate consisting of BC8, a novel murine monoclonal antibody, and iodine-131 radioisotope. BC8 has been developed by the 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) 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 Statements 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 the 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 Pharmaceuticals undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise.

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