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Actinium Pharmaceuticals Issues Mid-Year Letter to Shareholders Providing Update on Company Progress and Anticipated Milestones

NEW YORK, NY -- (Marketwired) -- 08/04/16 --

- *Iomab-B Pivotal Phase 3 Trial Initiation Signals Transformation of Company Profile to Later-Stage Development*
- *Actimab-A Progressing into Phase 2 Clinical Trial with Impetus from Phase I Results and Peripheral Blast Burden Hypothesis Directing To Competitively Higher Response Rates*

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 issued a mid-year letter to shareholders highlighting Actinium's recent progress and anticipated corporate milestones. The recent progress and anticipated milestones below were featured in the shareholder letter:

Key Achievements To-Date in 2016

- ***Later-stage development focus attained with initiation of the pivotal Phase 3 SIERRA clinical trial for Iomab-B***
 - Conducted successful Iomab-B Investigator Meeting with over 80 attendees representing 25 of the top bone marrow transplant centers in the US and Canada
 - Selected Zevacor Pharma, Inc. as our clinical production and supply partner for the SIERRA trial
 - Selected Medpace, Inc. as our Clinical Research Organization (CRO) for the SIERRA trial
 - Further strengthened the clinical development team with new hires in clinical operations, nursing support and clinical trial management in order to ensure efficient trial execution
- ***On track to initiate the Phase 2 trial for Actimab-A with impetus from strong Phase I results that imply potential for a best in class CD33 asset***
 - Hosted webinar featuring key scientific luminaries discussing the Peripheral Blast (PB) Burden Hypothesis, a key discovery from our HuM195-Alpha program
 - Reached agreement with the FDA on certain protocol changes that are expected to facilitate enrollment
- ***Continued to strengthen competitive position via regulatory and patent related***

actions

- Procured assignment of provisional patent applications from Memorial Sloan Kettering related to the Alpha Particle Immunotherapy Technology (APIT) platform and drug preparation methods
- Filed provisional patent application related to commercial scale labeling of lomab-B
- Received Orphan Drug Designation from the FDA for lomab-B
- Initiated pursuit of Orphan Drug Designation in the EU for lomab-B

Positive Outlook for the Remainder of 2016 and Beyond

Actinium's strategy over the next two years is to be laser focused on executing both the lomab-B and Actimab-A clinical trials and achieve clinical milestones in order to pave the way for regulatory approvals and, where appropriate, facilitate corporate partnerships for these assets. With the pivotal Phase 3 SIERRA trial for lomab-B initiated and the Phase 2 portion of the Actimab-A trial imminent, we expect to continue to evolve into a later-stage development company. To that end, we intend to continue our work to build shareholder value by targeting the following objectives and milestones for the remainder of 2016 and beyond:

- Continue to activate leading transplant BMT centers as SIERRA trial sites
- Work closely with SIERRA clinical trial sites to drive patient recruitment and enrollment
- Initiate the Phase 2 clinical trial for Actimab-A
- Provide end of year Actimab-A Phase 2 clinical trial update around ASH
- Continue to pursue Orphan Drug Designation for lomab-B and Actimab-A in the EU
- Identify and pursue strategic initiatives for the APIT technology platform
- Initiate additional clinical trials as appropriate
- Continue to pursue opportunities for licensing, partnerships and other collaborations as appropriate
- Reach patient enrollment in the SIERRA trial as quickly as possible to initiate first DMC report
- Generate interim data for Actimab-A Phase 2 trial
- Host educational and informational events targeted at physicians, investors, etc.
- Perform analysis of interim data to determine go-forward development strategy of Actimab-A
- Reach next patient enrollment milestone in the SIERRA trial to initiate second DMC report
- Complete enrollment in Actimab-A Phase 2 study
- Reach third patient enrollment milestone in the SIERRA trial to initiate the third DMC report
- Report topline data from Actimab-A Phase 2 study
- Complete patient enrollment in the SIERRA trial

The shareholder letter can be accessed via the investor relations section of Actinium's website <http://ir.actiniumpharma.com/shareholder-letters>.

Sandesh Seth, Actinium's Executive Chairman, stated, "Actinium set out to make 2016 a transformational year for the Company following the clearance of our IND for lomab-B at the end of 2015 and I think it is safe to say that we were successful. Reflecting on the first half of 2016, I could not be more pleased with all that we have accomplished, particularly the

initiation of the pivotal Phase 3 clinical trial for lomab-B and the many opportunities that lie ahead for Actinium such as the Actimab-A Phase 2 clinical trial. The remainder of 2016 will be focused on advancing our clinical programs, leveraging our technology platform and driving shareholder value through continued and consistent execution of milestones."

About lomab-B

lomab-B is a radioimmunotherapy 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. lomab-B is being studied in the pivotal Phase 3 SIERRA trial and is designed to be used, upon approval, in preparing relapsed or refractory patient AML patients over the age of 55 patients for hematopoietic stem cell transplant, commonly referred to as bone marrow transplant.

About the SIERRA trial

The SIERRA (**Study of lomab-B in Elderly Relapsed or Refractory AML**) trial is a multi-center, randomized, controlled pivotal Phase 3 study of lomab-B in patients with relapsed or refractory Acute Myeloid Leukemia (AML) who are over the age of 55. The Company established an agreement with the FDA that the path to a Biologics License Application (BLA) submission could include the SIERRA trial, if it is successful. 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 almost 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.

About Actimab-A

Actimab-A, Actinium's most advanced alpha particle immunotherapy (APIT) program, is currently in a single arm, multicenter trial Phase 1/2 trial for patients newly diagnosed with AML over the age of 60. Actimab-A is being developed as a first-line therapy and it has attracted support from some of the leading experts at the most prestigious cancer treatment hospitals due to the potential of its safety and efficacy profile. Actimab-A consists of the monoclonal antibody, HuM195, and the radioisotope, actinium-225. Actinium-225 decays by giving off high-energy alpha particles, which kill cancer cells. When actinium decays, it produces a series of daughter atoms, each of which gives off its own alpha particle,

increasing the chances that the cancer cell will be destroyed. HuM195 is the humanized version of M195 and is a monoclonal antibody that targets CD33, which is abundantly found on myeloid leukemia cells. Both the alpha particle technology and HuM195 were initially developed at Memorial Sloan Kettering Cancer Center. Actimab-A is a second-generation therapy from the Company's HuM195-Alpha program, which has now been studied in over 85 patients in four clinical trials.

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 radioimmunotherapy 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 lomab-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 is conducting a single, pivotal, multicenter Phase 3 clinical study of lomab-B in refractory or 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 patients newly diagnosed with AML 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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