November 14, 2017

Actinium Pharmaceuticals Launches the AWE Program aka Actinium Warhead Enabling Program to Enable Collaborations Based on Its Actinium-225 Technology Platform

- AWE Program launched post successful demonstration of Actinium's "Biobetter" capabilities as evidenced by superior experimental results with actinium-225 labeled daratumumab when compared to unlabeled daratumumab, a blockbuster antibody therapy targeting CD38 in patients with multiple myeloma

- AWE Program will leverage Actinium's intellectual property, know-how and expertise around its Actinium Warhead Enabling (AWE) Technology Platform

NEW YORK, Nov. 14, 2017 (GLOBE NEWSWIRE) -- **Actinium Pharmaceuticals, Inc.** (NYSE American:ATNM) **("Actinium" or "the Company")**, a clinical-stage biopharmaceutical company focused on developing and commercializing targeted therapies for safer myeloablation and conditioning of the bone marrow prior to a bone marrow transplant and for the targeting and killing of cancer cells, announced today that the Company has launched its AWE Program or Actinium Warhead Enabling Program. The AWE Program is designed to provide biopharmaceutical companies with access to the Company's proprietary AWE technology platform in order to allow development of actinium-225 enabled conjugates wherein targeting agents are labeled with the alpha particle emitting radioisotope, actinium-225. Utilizing the AWE Technology Platform, the cell-killing power of targeting agents such as antibodies, peptides, Fab fragments, nanobodies etc. can potentially be improved via labeling with actinium-225. In addition to increased efficacy, these actinium-225 enhanced targeting agents can offer optimized dosing or administration and in the case of approved targeting agents, provide an opportunity to extend intellectual property protection by the creation of "Biobetters" or improved versions of the approved agent. Actinium is currently conducting a Phase 2 clinical trial for its drug candidate Actimab-A and a Phase 1 clinical trial for its drug candidate Actimab-M, both of which are fruits of the AWE Technology Platform and are comprised of actinium-225 labeled to an antibody that targets the antigen CD33 in patients with acute myeloid leukemia and multiple myeloma, respectively.

Recently, Actinium announced that it successfully labeled the anti-CD38 monoclonal antibody daratumumab, a blockbuster therapy for patients with multiple myeloma, with actinium-225. Stability and target engagement was similar between the unlabeled and actinium-225 labeled antibody, demonstrating that the Company's AWE Technology can successfully label a CD38 targeting agent without disrupting binding. *In-vitro* experiments

with both the labeled and unlabeled antibody were performed in the same cell lines that initially established daratumumab's proof of concept. In each CD-38 expressing cell line, improved cell killing was observed with the actinium-225 enabled daratumumab. The previous maximum reported cell killing was 62% with the naked daratumumab. However, at 1/10 of that antibody concentration the cell killing was 97% with the actinium-225 enabled daratumumab. Additionally, the cell-killing effect demonstrated both a time and concentration dependency. Importantly, specificity is demonstrated as no cell killing was observed when a cell line that does not express the target CD38 was treated with the actinium-225 labeled daratumumab. Data from this study were accepted as an abstract for poster presentation at the upcoming 59th American Society of Hematology (ASH) Meeting Annual which can be viewed in the following link: https://ash.confex.com/ash/2017/webprogram/Paper105329.html.

Sandesh Seth, Actinium's Chairman and CEO said, "The element actinium-225 is tremendously potent yet highly specific given its short path length, making it the ideal warhead for oncology indications when labeled to monoclonal antibodies. Through the development of our drug candidates, we have gained significant expertise and know-how in the application of actinium-225 and we look forward to providing our proprietary technology and highly specialized know how and supply chain capabilities to potential partners via our AWE Program. This expertise is evidenced by the recent results showing that actinium-225 increased the cell killing power of the blockbuster multiple myeloma antibody therapy daratumumab at 10-fold lower antibody concentration in Daudi cells. We are currently utilizing our technology toward generating potential "Biobetters" of selected commercial targeting agents and believe that our technology can be applied to a significant number of antibodies, peptides, Fab fragments or other targeting moieties. We look forward to working in collaboration via the AWE Program with biopharmaceutical companies that would like to increase the efficacy of their commercial or development stage antibodies to improve patient outcomes and also to better manage the lifecycle of their commercial antibodies."

About Our Actinium Warhead Enabling Technology Platform

The Actinium Warhead Enabling (AWE) Technology Platform enables a highly potent and selective form of targeted therapy that combines the powerful alpha-emitting radioisotope actinium-225 with targeting agents, which are designed to seek out cancer cells in the body that express particular markers. Actinium-225 emits significant alpha radiation making it a potent treatment modality against targeted cancer cells while limiting damage to healthy tissues as its radiation travels extremely short distances in the body. When labeled to targeting agents, actinium-225 can be delivered directly to cancer cells where the high linear energy transfer resulting from the emission of alpha particles results in irreparable DNA double stranded breaks and ultimately cancer cell death. Despite this superior cell killing power, actinium-225 when delivered in a targeted manner is sparing of the surrounding environment in the body due to the short path length of its alpha-particle radiation and can result in a superior safety profile. Actinium Pharmaceuticals owns or has licensed the rights to several issued and pending patents that pertain to its AWE Technology Platform including technology to manufacture actinium-225 in a cyclotron. In addition, the Company obtains actinium-225 from various sources such as the U.S. Department of Energy at Oak Ridge National Laboratories and has developed considerable know-how, expertise and validated processes related to production of radioimmunoconjugates, management of the supply chain and dealing with various regulatory bodies. The AWE Technology Platform can be

utilized to potentially improve the cell-killing power of targeting agents such as antibodies, peptides, Fab fragments, nanobodies etc. via labeling with actinium-225. In addition to increased efficacy, these actinium-225 enhanced targeting agents can offer optimized dosing or administration and in the case of approved targeting agents provide an opportunity to extend intellectual property protection by the creation of “Biobetters” or improved versions of the approved agent. The Company’s Actinium Warhead Enabling (AWE) Program can be accessed by biopharmaceutical companies that are interested in creating Biobetters through the utilization of the AWE Platform Technology. To learn more about the AWE Technology Platform or the AWE Program please contact Keisha Thomas, Ph.D., Corporate Development at kthomas@actiniumpharma.com.

About Actinium Pharmaceuticals, Inc.

Actinium Pharmaceuticals is a clinical-stage biopharmaceutical company focused on developing and commercializing targeted therapies for safer myeloablation and conditioning of the bone marrow prior to a bone marrow transplant and for the targeting and killing of cancer cells. We are currently conducting clinical trials for our three product candidates, Iomab-B, Actimab-A and Actimab-M, as well as performing research on other potential drug candidates utilizing our proprietary actinium-225 technology platform. Our most advanced product candidate, Iomab-B, is comprised of an anti-CD45 monoclonal antibody labeled with iodine-131. We are currently conducting a pivotal Phase 3 trial of Iomab-B for myeloablation and conditioning of the bone marrow prior to a bone marrow transplant for patients with relapsed or refractory acute myeloid leukemia (AML) age 55 and older. A bone marrow transplant is a potentially curative treatment option for patients with AML and other blood cancers including leukemias, lymphomas and multiple myeloma as well as certain blood disorders. Upon successful completion of our Phase 3 clinical trial for Iomab-B we intend to submit this candidate for marketing approval in the U.S. and European Union. Our most advanced alpha-particle based therapy, Actimab-A, is an anti-CD33 monoclonal antibody conjugated with the alpha-particle actinium-225 (Ac-225). Actimab-A is currently in a Phase 2 clinical trial for patients over the age of 60 who are newly diagnosed with AML and ineligible for standard induction chemotherapy. Actimab-M, our third product candidate, is the same anti-CD33 monoclonal antibody conjugated to Ac-225 administered at a different dose and dosing regimen. Actimab-M, is being studied in a Phase 1 trial for patients with refractory multiple myeloma. We expect our AWE Technology Platform will generate additional drug candidates that we will progress in clinical trials ourselves and or out-license. More information available at www.actiniumpharma.com and Twitter feed @ActiniumPharma, www.twitter.com/actiniumpharma.

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.

Contact:

Actinium Pharmaceuticals, Inc.
Steve O'Loughlin
Principal Financial Officer
soloughlin@actiniumpharma.com

Investor Relations
Marek Ciszewski, J.D.
949.574.3860
ATNM@liolios.com

Source: Actinium Pharmaceuticals