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Actinium's Leading Clinical, Preclinical, Production and IP Efforts Related to Actinium-225 Highlighted at Preeminent Targeted Alpha Therapy International Symposium

- Multiple company studies highlighted in symposium program including studies utilizing next-generation Actinium-225 produced via novel accelerator method developed by the U.S. Department of Energy

- Actinium continues to expand its research, intellectual property and know-how related to its AWE technology platform and Actinium-225 production and applications

NEW YORK, April 8, 2019 /PRNewswire/ --**Actinium Pharmaceuticals, Inc.** (NYSE AMERICAN: ATNM) today highlighted its broad presence at the 11th Targeted-Alpha-Therapy International Symposium (TAT) that was held on April 1 – 4, 2019 in Ottawa, Canada. Two oral and four poster presentations related to Actinium's AWE or Antibody Warhead Enabling technology platform and clinical programs were featured at the symposium while Actinium's Chief Scientific Officer, Dr. Dale Ludwig, participated in a panel titled, "The Renaissance of Radio Pharmaceuticals – A Commercial Perspective". Actinium has extensive experience with targeted alpha therapy including clinical data in over 100 patients from four clinical trials and extensive intellectual property, know-how and trade secrets related to Ac-225 or Actinium-225 applications and manufacturing.

Actinium utilizes Ac-225, a potent alpha-particle emitting isotope, for generating ARCs or Antibody Radiation Conjugates used in several clinical trials including its pivotal Actimab-MDS program and combination trials of Actimab-A with venetoclax. In addition, Ac-225 is an important radionuclide warhead used in Actinium's AWE technology platform that is being utilized in an ongoing collaboration research partnership with Astellas Pharma, Inc.

In the poster presentation at TAT, Actinium highlighted several studies that evaluated the feasibility of accelerator produced Ac-225 in comparison to "thorium cow" generator produced Ac-225 that is used most commonly today. Studies demonstrated that labeling efficiency for the anti-CD33 monoclonal antibody lintuzumab was comparable between accelerator and generator produced Ac-225. Further, radiochemical purity was determined to be comparable, at 98.5% for accelerator produced material and 98.7% for generator produced material. In addition to radiochemical purity, accelerator produced Ac-225 demonstrated comparable immunoreactivity, a critical quality attribute, to that of generator

produced Ac-225. Finally, comparable levels of anti-leukemic cell killing were observed irrespective of the Ac-225 source. Actinium has filed intellectual property related to the utilization of Ac-225 produced by an accelerator, which is in addition to granted patents related to the production of Ac-225 in a cyclotron.

Research commissioned by Actinium to evaluate the biodistribution of accelerator produced Ac-225 was presented in a separate poster presentation. The results of these studies using pharmacokinetic models determined that accelerator produced Ac-225 labeled to lintuzumab had a negligible impact in the context of therapy compared to generator produced Ac-225. In addition, an oral presentation highlighted Ac-225 labeled daratumumab, a CD38 antibody blockbuster therapy for patients with multiple myeloma that is marketed by Johnson & Johnson as Darzalex®. The studies featured in the oral presentation observed enhanced potency, cell killing and tumor control with Ac-225 labeled daratumumab compared to naked daratumumab alone.

Dr. Dale Ludwig, Actinium's Chief Scientific Officer, said, "It was exciting to have such broad representation of Actinium's alpha therapy efforts at TAT, as it is the leading conference for alpha particle-based therapies. Leveraging our AWE platform, we have significantly increased our research and development efforts and have worked to rapidly translate this work into the clinic as we have done with our combination trials with venetoclax and targeted Ac-225. As we look to the future, we are delighted to have the opportunity to work with next-generation Ac-225 from the DOE and demonstrate its feasibility for ARC applications. We plan to continue advancing the field of Ac-225 research and clinical development in several strategic areas including next-generation ARC's and combinations with other therapeutic modalities while continuing to expand our intellectual property estate in these applications."

Actinium recently announced that its patent portfolio now consists of 111 issued and pending patents in the U.S. and internationally, contained within 28 patent families, that cover key areas of Actinium's business including ARC generation, composition of matter, formulations, methods of administration for solid and liquid cancers and radionuclide production including the manufacturing of Ac-225.

Sandesh Seth, Actinium's Chairman and CEO, said, "Our broad presence at this year's TAT is emblematic of Actinium's commitment to leading the field of Actinium-225 based targeted alpha therapy. Recognizing the potential of alpha therapies, we strategically apply our research and development activities around our AWE technology platform and clinical development capabilities to advance novel ARC's for indications with unmet needs. Leveraging our extensive clinical experience with Ac-225, we are excited to have crafted an ARC pipeline encompassing targeted conditioning, combinations and targeted therapeutics across multiple patient populations. As a result, we are addressing a large cumulative patient population that we see as unmatched by other therapies. With our strong and growing IP portfolio, enhanced capabilities and integrated research and development capabilities I am confident in our ability to continue to build our leadership position in Ac-225 based therapies."

About Actinium Pharmaceuticals, Inc.

Actinium Pharmaceuticals Inc. is focused on improving patient access and outcomes to cellular therapies such as BMT or Bone Marrow Transplant and CAR-T with its proprietary, chemotherapy free, targeted conditioning technology. Actinium is the only company with a

multi-disease, multi-target, drug development pipeline focused on targeted conditioning. Its targeted conditioning technology is enabled by ARC's or Antibody Radiation-Conjugates that combine the targeting ability of monoclonal antibodies with the cell killing ability of radioisotopes. Actinium's pipeline of clinical-stage targeted conditioning ARC's are designed to target the antigens CD45 and CD33 for patients with a broad range of hematologic malignancies including AML or Acute Myeloid Leukemia, MDS or Myelodysplastic Syndrome and MM or Multiple Myeloma.

Iomab-B, Actinium's lead targeted conditioning product candidate, is currently enrolling patients in the pivotal Phase 3 SIERRA trial in patients age 55 and older, with active, relapsed or refractory AML. Iomab-B (Iodine-131 apamistamab), combines the anti-CD45 monoclonal antibody labeled with iodine-131 for myeloablation prior to a bone marrow transplant. CD45 is expressed on leukemia, lymphoma and normal immune cells. Iomab-B has been studied in over 300 patients in 10 clinical trials in numerous hematologic diseases. Actinium's Iomab-ACT program is an expansion of its CD45 program that is intended to be a universal, chemotherapy-free solution for targeted lymphodepletion prior to CAR-T. Through targeted lymphodepletion, the Iomab-ACT program is expected to improve CAR-T cell expansion, reduce CAR-T related toxicities and expand patient access to CAR-T treatment and potentially other adoptive cell therapies. Due to its lower payload dose, lymphodepletion with the Iomab-ACT program may be accomplished through a single outpatient infusion. Actinium intends to advance its Iomab-ACT program with CAR-T focused collaborators from academia and industry.

Actinium's pipeline also includes a potentially best-in-class CD33 program with its ARC comprised of the anti-CD33 antibody lintuzumab labeled with the alpha-particle emitter actinium-225. Its CD33 program is currently being studied in multiple Phase 1 clinical trials for targeting conditioning, in combinations and as a therapeutic in multiple diseases and indications including AML, MDS and MM. Notable trials include the planned pivotal program for Actimab-MDS for targeted conditioning prior to a BMT for patients with high-risk MDS, that is expected to initiate in 2019, and two Actimab-A venetoclax combination trials including the initiated Phase 1 doublet trial and the planned triplet trial with a hypomethylating agent.

Actinium is also developing its proprietary AWE or Antibody Warhead Enabling technology platform which utilizes radioisotopes including iodine-131 and the highly differentiated actinium-225 coupled with antibodies to target a variety of antigens that are expressed in hematological and solid tumor cancers. The AWE technology enables Actinium's internal pipeline and with the radioisotope Actinium-225 is being utilized in a collaborative research partnership with Astellas Pharma, Inc. Actinium's clinical programs and AWE technology platform are covered by a portfolio of over 110 patents covering composition of matter, formulations, methods of use and also methods of manufacturing the radioisotope Actinium-225 in a cyclotron.

More information is available at www.actiniumpharma.com and our Twitter feed @ActiniumPharma, www.twitter.com/actiniumpharma.

Forward-Looking Statements for Actinium Pharmaceuticals, Inc.

This press release contains "forward-looking statements" within the meaning of the "safe-harbor" provisions of the private securities litigation reform act of 1995 regarding future

events or the future performance of Actinium which Actinium undertakes no obligation to update. These statements are based on management's current expectations and are subject to risks and uncertainties that may cause actual results to differ materially from the anticipated or estimated future results, including the risks and uncertainties associated with preliminary study results varying from final results, estimates of potential markets for drugs under development, clinical trials, actions by the Food and Drug Administration and other governmental agencies, regulatory clearances, responses to regulatory matters, the market demand for and acceptance of Actinium's products and services, performance of clinical research organizations and other risks detailed from time to time in Actinium's filings with the Securities and Exchange Commission, including without limitation its annual report on Form 10-K for the period ended December 31, 2018, subsequent quarterly reports on Form 10-Q and current reports on Form 8-K, each as amended and supplemented from time to time.

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