

Abstract Highlighting New Data from the Iomab-B Pivotal Phase 3 SIERRA Trial to be Presented at 2019 ASCO Annual Meeting

- First analysis demonstrating the single agent activity of Iomab-B in the SIERRA trial
- Poster presentation to highlight the rapid reduction in peripheral blasts following Iomab-B administration leading to significantly lower circulating leukemia burden in patients prior to their bone marrow transplant

NEW YORK, May 16, 2019 /PRNewswire/ --Actinium Pharmaceuticals, Inc. (NYSE AMERICAN: ATNM) ("Actinium") today announced that an abstract pertaining to its lead product candidate, Iomab-B, which is being studied in the pivotal Phase 3 SIERRA study, will be presented via poster at the 2019 ASCO or American Society of Clinical Oncology Annual Meeting that is being held from May 31st – June 4th at McCormick Place, in Chicago. The data to be presented at ASCO is a new analysis from the first 25% of patients enrolled in the SIERRA trial highlighting that by day 3 after Iomab-B administration, patients had a 98% median reduction in peripheral blasts and 100% reduction in blasts by day 8. This significant and rapid reduction in blasts occurred with patients receiving only a single therapeutic infusion of Iomab-B and no other pre-transplant conditioning. As a result, patients had significantly lower circulating leukemia burden prior to their BMT or Bone Marrow Transplant with all patients that received a therapeutic infusion of Iomab-B having robust engraftment despite active disease prior to Iomab-B conditioning.



Details of the presentation are as follows:

Title: Rapid reduction of peripheral blasts in older patients with refractory acute myeloid leukemia (AML) using reinduction with single agent anti-CD45 targeted iodine (¹³¹I) apamistamab [Iomab-B] radioimmunotherapy in the phase III SIERRA trial

Presenter: Ben Kent Tomlinson, MD, Adult Hematologic and Stem Cell Transplant Section, Seidman Cancer Center, University Hospitals Case Medical Center (Cleveland, OH)

Date: Monday, June 3, 2019

Time: 8:00 AM – 11:00 AM Central Daylight Time

Location: Hall A, Poster Board #423, Abstract #7048

Dr. Mark Berger, Actinium's Chief Medical Officer, said, "We are pleased to have the opportunity to present additional information on our lead candidate lomab-B at ASCO. lomab-B is an important therapeutic candidate and the SIERRA trial is the only Phase 3 trial to offer potentially curative BMT for older patients with active, relapsed or refractory acute myeloid leukemia. While lomab-B has the potential to be a best-in-class bridge to transplant its profound anti-leukemic and re-induction capabilities must also be noted. Importantly, for the first time, this poster will demonstrate lomab-B's effect as a single agent to reduce patients' circulating leukemia burden, which we find highly encouraging and link to the successful engraftment rates that have been observed in the SIERRA trial to date."

The abstract, which can be accessed on the ASCO iPlanner website ([click here](#)), presents data on 16 patients that had circulating peripheral blasts including 7 patients originally randomized to receive lomab-B and 9 patients who crossed over from the control arm to receive lomab-B after conventional care (salvage chemotherapy) failed to produce a complete remission. As reported in an oral presentation at ASH 2018 ([click here](#)) and a late-breaking oral presentation TCT 2019 ([click here](#)), all patients receiving a therapeutic dose of lomab-B in the SIERRA trial, either directly or via crossover, achieved successful engraftment without delay and donor chimerism by day 100 post-transplant without delay.

About lomab-B

lomab-B is an ARC or Antibody Radiation-Conjugate comprised of the anti-CD45 antibody apamistamab and the radioisotope iodine-131 that is intended to be a re-induction and conditioning agent prior to a BMT or bone marrow transplant. lomab-B was developed at the Fred Hutchinson Cancer Research Center and has been studied in over 300 patients in multiple hematologic indications across 12 clinical trials in addition to the ongoing SIERRA study in older patients with active, relapsed or refractory AML or Acute Myeloid Leukemia prior to patients receiving an allogeneic BMT or bone marrow transplant. lomab-B is Actinium's lead targeting conditioning ARC in its multi-target, multi-indication targeted conditioning pipeline that includes the lomab-B and Actimab-MDS programs for BMT and the lomab-ACT program that will study a lower dose of lomab-B for lymphodepletion prior to CAR-T and other cellular therapies.

About Actinium Pharmaceuticals, Inc.

Actinium Pharmaceuticals, Inc. is a clinical-stage biopharmaceutical company focused on improving patient access and outcomes to cellular therapies such as BMT or Bone Marrow Transplant and CAR-T with its proprietary ARC or Antibody Radiation-Conjugate targeted conditioning technology. 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 indications. It is developing a multi-disease, multi-target pipeline of clinical-stage ARC's targeting the antigens CD45 and CD33 for targeting conditioning and as a therapeutic either in combination with other therapeutic modalities or as a single agent for patients with a broad range of hematologic malignancies including Acute Myeloid Leukemia (AML), Myelodysplastic Syndrome (MDS) and Multiple Myeloma (MM). Actinium's lead product candidate, Iomab-B, is in a pivotal Phase 3 trial for re-induction and conditioning prior to a BMT for patients with active relapsed or refractory AML or Acute Myeloid Leukemia. BMT is the only curative treatment option for this patient population and currently no standard of care exists. Actimab-MDS is its second pivotal program for targeted conditioning that will study the ARC comprised of the anti-CD33 monoclonal antibody lintuzumab linked to the radioisotope actinium-225 in patients with high-risk MDS in combination with RIC or Reduced Intensity Conditioning prior to a BMT. Its Iomab-ACT program utilizes a lower dose of Iomab-B (CD45 – I-131) that is intended to be used for targeted conditioning or lymphodepletion prior to CAR-T and adoptive cell therapies as a replacement to non-optimized chemotherapies, such as Flu/Cy or fludarabine and cyclophosphamide, that is used in standard practice today. Actinium also has multiple clinical trials ongoing, in startup phase, or in planning, to use its CD33 ARC in combination with other therapeutic modalities such as chemotherapy, targeted agents or immunotherapy. It has initiated several combination trials, including a doublet combination trial with its CD33 ARC and venetoclax, a BCL-2 inhibitor, for patients with relapsed or refractory AML, a triplet combination trial with venetoclax and an HMA or hypomethylating agent and in combination with the salvage chemotherapy regimen CLAG-M (cladribine, cytarabine, filgrastim and mitoxantrone) for patients with relapsed or refractory AML. Actinium is also studying its CD33 ARC as single agent for patients with penta-refractory multiple myeloma. Its AWE technology platform 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, the DOTA linker technology for actinium-225 applications and methods of manufacturing the actinium-225 radioisotope in a cyclotron.

Forward-Looking Statements for Actinium Pharmaceuticals, Inc.

The information in this press release contains forward-looking statements regarding future events, including statements about Actinium's expectations regarding the terms of the offering or completion of the offering. Actinium intends such forward-looking statements to be covered by the safe harbor provisions contained in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Actual results or developments may differ materially from those projected or implied in these forward-looking statements. Factors that may cause such a difference include, without limitation, risks and uncertainties related to market and other conditions, the satisfaction of customary closing conditions related to the offering and the impact of general economic, industry or political conditions in the United States or internationally. There can be no assurance that Actinium will be able to complete the offering on the anticipated terms, or at all. More information about the risks and uncertainties faced by Actinium are more fully detailed under the heading "Risk Factors" in Actinium's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this press release. Except as required by law, Actinium assumes no obligation to update publicly any forward-

looking statements, whether as a result of new information, future events or otherwise.

Contacts:

Actinium Pharmaceuticals, Inc.

Steve O'Loughlin

Principal Financial Officer

investorrelations@actiniumpharma.com

Hans Vitzthum

LifeSci Advisors, LLC

Hans@LifeSciAdvisors.com

(617) 535-7743

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