March 16, 2023

Actinium to Showcase First-In-Class Targeted Radiotherapies in Two Presentations at the 2023 AACR Annual Meeting

- First ever data demonstrating the novel application of Actimab-A to enhance antitumor immune activity by depleting MDSCs, a population of highly immunosuppressive cells closely associated with poor clinical outcomes in cancer

- New solid tumor program data including the first exploration of the effects of targeting HER3 with either alpha (225Ac)- or beta (177Lu)- emitting radiotherapeutics in ovarian and colorectal cancer models, demonstrating potent anti-cancer activity

NEW YORK, March 16, 2023 /PRNewswire/ -- Actinium Pharmaceuticals, Inc. (NYSE AMERICAN: ATNM) (Actinium or the Company), a leader in the development of targeted radiotherapies, announced today that two abstracts have been accepted for presentation at the American Association for Cancer Research (AACR) 2023 Annual Meeting being held April 14 - 19, 2023 in Orlando, Florida. The abstracts highlight the multifaceted anti-cancer activity of CD33-targeted clinical-stage asset Actimab-A and enhanced anti-tumor effect of HER3-targeted, radiotherapy being developed in collaboration with AVEO Oncology, an LG Chem Company.

Accepted presentations will feature data that continue to support potent anti-tumor activity of Actinium's first-in-class HER3 radiotherapy in preclinical models of cancers with unmet therapeutic needs, as well as new data evaluating novel applications of Actimab-A to selectively deplete CD33+ myeloid-derived suppressor cells (MDSCs), a highly immunosuppressive cell type that is a major component of the tumor microenvironment.

"Actinium is applying our significant experience in developing and advancing clinical-stage targeted radiotherapeutics to further bolster our R&D leadership position in the field. We are excited to highlight new data from our HER3 targeting radiotherapy program as well as our novel strategy utilizing Actimab-A to deplete MDSCs, reactivating T cell responses in the tumor microenvironment at this year's AACR annual meeting.", said Sandesh Seth, Actinium's Chairman & Chief Executive Officer. Mr. Seth continued, "These exciting new data demonstrate Actinium's focus on being at the leading edge of targeted radiotherapy

innovation and working to develop differentiated therapies to address unmet medical needs. With our recently signed CRADA with the NCI, we have secured broad support for Actimab-A that could include trials focused on MDSC depletion in a number of disease indications given the broad, mutation agnostic applicability of Actimab-A, while our creative approach to collaborating has allowed us to advance our HER3 initiative rapidly."

The abstracts are available on AACR's website. Actinium's presentation details are as follows:

Abstract Title: **Targeting myeloid-derived suppressor cells with actinium-225 lintuzumab, a CD33 antibody radioconjugate to enhance antitumor immunity**
Session Category: Clinical Research Excluding Trials
Session Title: Immunomodulatory Agents and Interventions
Session Date and Time: Tuesday Apr 18, 2023: 9:00 AM - 12:30 PM
Location: Poster Section 40
Poster Board Number: 7
Published Abstract Number: 4421

Abstract Title: **Novel HER3 targeting antibody radioconjugates, 225Ac-HER3 ARC and 177Lu-HER3 ARC, exhibit potent antitumor efficacy in HER3-positive solid tumors**
Session Category: Experimental and Molecular Therapeutics
Session Title: Theranostics and Radionuclides / Pharmacologic Approaches
Session Date and Time: Tuesday Apr 18, 2023: 1:30 PM - 5:00 PM
Location: Section 19
Poster Board Number: 7
Abstract Presentation Number: 5040

About Actinium Pharmaceuticals, Inc.
Actinium Pharmaceuticals, Inc. is a clinical-stage biopharmaceutical company developing targeted radiotherapies to deliver cancer-killing radiation with cellular level precision to treat patients with high unmet needs. Actinium's clinical pipeline is led by targeted radiotherapies that are being applied to targeted conditioning, which is intended to selectively deplete a patient's disease or cancer cells and certain immune cells prior to a bone marrow transplant (BMT), gene therapy or adoptive cell therapy, such as CAR-T, to enable engraftment of these transplanted cells with minimal toxicities. Our lead product candidate, Iomab-B (I-131 apamistamab) has been studied in over four hundred patients, including the pivotal Phase 3 Study of Iomab-B in Elderly Relapsed or Refractory Acute Myeloid Leukemia (SIERRA) trial for BMT conditioning. The SIERRA trial was positive with Iomab-B meeting the primary endpoint of durable Complete Remission of 6-months with high statistical significance ($p<0.0001$). Iomab-B enabled 100% of patients to access a BMT and produced higher rates of post-BMT CR. Iomab-B produced positive results for the secondary endpoints of the SIERRA trial including reducing the probability of an event by 78% resulting in an Event-Free Survival (EFS) Hazard Ratio of 0.22 ($p<0.0001$), doubled 1-year survival and median overall survival. Iomab-ACT, low dose I-131 apamistamab, is being studied as a targeted conditioning agent in a Phase 1 study with a CD19 CAR T-cell Therapy with Memorial Sloan Kettering Cancer Center with NIH funding. Actimab-A, our second most advanced product candidate has been studied in approximately 150 patients with Acute Myeloid Leukemia or AML, including in combination trials with the chemotherapy regimen CLAG-M and with venetoclax, a targeted therapy. Actimab-A or lintuzumab-Ac225 is an Actinium-225 based

antibody radiation conjugate targeting CD33, a validated target in AML. Actinium has entered into a Cooperative Research and Development Agreement (CRADA) with the National Cancer Institute (NCI) to develop Actimab-A as a single agent or combination with chemotherapy, targeted agents or immunotherapy in Phase 1, 2 or 3 trials. The NCI will fund clinical trial expenses under the CRADA while Actinium will supply Actimab-A. The NCI is currently accepting proposals for non-clinical and clinical studies with Actimab-A. Actinium is a pioneer and leader in the field of Actinium-225 alpha therapies with an industry leading technology platform comprising over 190 patents and patent applications including methods of producing the radioisotope AC-225. Our technology and expertise have enabled collaborative research partnerships with Astellas Pharma, Inc. for solid tumor theranostics, with AVEO Oncology Inc., an LG Chem Company, to create an Actinium-225 and Lutetium-177 HER3 targeting radiotherapy for solid tumors, and with EpicentRx, Inc. to create targeted radiotherapy combinations with their novel, clinical stage small molecule CD47-SIRPα inhibitor. More information is available on Actinium's website: https://www.actiniumpharma.com/.

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