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Actinium Pharmaceuticals, Inc. Expands R&D Capabilities with New Research Facility to Enhance Development of Next Generation Antibody Radiation Conjugates Leveraging Its Proprietary AWE Platform

NEW YORK, Oct. 14, 2020 /PRNewswire/ --**Actinium Pharmaceuticals, Inc.** (NYSE AMERICAN: ATNM) ("Actinium" or the "Company") today announced the launch of its new research and development lab facility in New York City. This new research facility expands Actinium's internal R&D capabilities and will be focused on developing novel Antibody Radiation Conjugate (ARC) candidates, ARC therapeutic combination strategies, and supporting AWE platform research collaborations. Actinium's R&D efforts will employ a multidisciplinary approach leveraging its team's expertise and experience in cancer cell biology, radiochemistry, radiation sciences, immunology and oncology drug development. The proprietary AWE technology platform, protected by over one hundred and twenty-five patents, is the foundation for Actinium's R&D and exploits multiple different radioisotope payloads including the potent alpha-emitter, Actinium-225.

This new research facility will function under the guidance of Dr. Dale Ludwig, Ph.D. the Company's Chief Scientific & Technology Officer, who has over twenty-five years of oncology discovery research and development experience, including supporting the development and launch of Erbitux®, Cyramza™, Portrazza®, and Lartruvo™ as well as the clinical advancement of at least 10 additional therapeutic antibodies and Antibody Drug Conjugates while at Eli Lilly and, previously, ImClone Systems Inc. The research facility will be managed and staffed by Ph.D. level scientists who will contribute their respective expertise in areas of drug discovery, radiation chemistry, and translational research to advance novel ARC programs and investigations into combination therapeutic strategies.

"Our new research facility will allow us to significantly accelerate our preclinical and clinical development of novel ARC programs and investigate mechanistic ARC therapeutic combinations, which utilize our expertise in radioimmunobiology, our AWE Technology Platform capabilities, and know-how," said Dale Ludwig. "The establishment of an internal

research facility was a priority for Actinium's long-term strategy, as we look to deliver on our pipeline development activities, as well as expand our portfolio of promising product candidates through partnerships and collaborations. Furthermore, in both preclinical and clinical studies, we have shown mechanistic synergies when our ARCs are combined with novel and approved therapeutic agents in treating cancer. The addition of this R&D facility will enable more rapid investigation of novel mechanistic drug combinations that can be effectively translated into clinical testing."

Over the last eighteen months, Actinium has advanced its research and discovery activities in three key areas —the development of next generation ARCs, therapeutic combinations with ARCs, and improved targeted conditioning treatments for adoptive cell therapies such as CAR-T. As presented at the 2018 AACR Annual Meeting, cell death improved as much as thirty-fold and cell death occurred in treatment resistant cell lines when daratumumab, an anti-CD38 directed antibody approved for the treatment of multiple myeloma (MM), was labeled with Ac-225 using Actinium's AWE Technology Platform. The power and potency of Actinium's AWE Technology Platform is also demonstrated in an ongoing Actimab-A combination study with CLAG-M in difficult to treat R/R AML patients. Patients treated with a sub-therapeutic dose of Actimab-A combined with CLAG-M had improved response rates by over 60% versus CLAG-M treatment alone. In September, preclinical data supporting Iomab-ACT as a viable and effective method for achieving targeted lymphodepletion prior to an adoptive cell therapy such as CAR-T was published in the journal *Oncotarget* (https://www.oncotarget.com/archive/v11/i39/). Leveraging the new laboratory facility, Actinium intends to further its research activities in these areas which will aid in developing next generation targeted conditioning agents and exploring therapeutic combinations with ARCs and of proven oncology and immunooncology agents.

The Company intends to focus on generating novel ARCs, building on its existing intellectual property, evaluating assets for in-licensing to complement existing clinical pipeline, as well as securing collaborations and partnerships with other biopharmaceutical companies. By adding research and development capabilities to its clinical development and clinical supply chain capabilities, Actinium will be positioned to enable the rapid translation of radioimmunotherapies into the clinic. The Company's AWE platform intellectual property covers various methods of use for ARCs in multiple diseases, including indication, dose and scheduling, radionuclide warhead, and therapeutic combinations. Actinium's AWE technology patent portfolio includes 29 patent families comprised of over 130 issued or pending global patent applications, of which 10 are issued and 31 pending in the United States.

Sandesh Seth, Chairman and Chief Executive Officer of Actinium, said, "The opening of our R&D facility is an important milestone that will support both internal and collaborative efforts at advancing the field of ARCs. Our growing and highly talented R&D team is focused on harnessing the power of our AWE Technology Platform to enhance our clinical pipeline and drive current and additional collaborations. Having these capabilities in house will allow us to more efficiently execute on our multi-disciplinary research efforts and continue to innovate and extend our leadership position in the growing field of ARCs."

About Actinium Pharmaceuticals, Inc. (NYSE: ATNM)

Actinium Pharmaceuticals, Inc. is a clinical-stage biopharmaceutical company developing ARCs or Antibody Radiation-Conjugates, which combine the targeting ability of antibodies

with the cell killing ability of radiation. Actinium's lead application for our ARCs is targeted conditioning, which is intended to selectively deplete a patient's disease or cancer cells and certain immune cells prior to a BMT or Bone Marrow Transplant, Gene Therapy or Adoptive Cell Therapy (ACT) such as CAR-T to enable engraftment of these transplanted cells with minimal toxicities. With our ARC approach, we seek to improve patient outcomes and access to these potentially curative treatments by eliminating or reducing the non-targeted chemotherapy that is used for conditioning in standard practice currently. Our lead product candidate, I-131 apamistamab (Iomab-B) is being studied in the ongoing pivotal Phase 3 Study of Iomab-B in Elderly Relapsed or Refractory Acute Myeloid Leukemia (SIERRA) trial for BMT conditioning. The SIERRA trial is over fifty percent enrolled and positive single-agent, feasibility and safety data has been highlighted at ASH, TCT, ASCO and SOHO annual meetings. I-131 apamistamab will also be studied as a targeted conditioning agent in a Phase 1/2 anti-HIV stem cell gene therapy with UC Davis and is expected to be studied with a CAR-T therapy in 2020. In addition, we are developing a multi-disease, multi-target pipeline of clinical-stage ARCs targeting the antigens CD45 and CD33 for targeted 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, myelodysplastic syndrome and multiple myeloma. Ongoing combination trials include our CD33 alpha ARC, Actimab-A, in combination with the salvage chemotherapy CLAG-M and the Bcl-2 targeted therapy venetoclax. Underpinning our clinical programs is our proprietary AWE (Antibody Warhead Enabling) technology platform. This is where our intellectual property portfolio of over 100 patents, know-how, collective research and expertise in the field are being leveraged to construct and study novel ARCs and ARC combinations to bolster our pipeline for strategic purposes. Our AWE technology platform is currently being utilized in a collaborative research partnership with Astellas Pharma, Inc. Website: https://www.actiniumpharma.com/

Forward-Looking Statements for Actinium Pharmaceuticals, Inc.

This press release may contain projections or other "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 financial performance of the Company which the Company 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 FDA 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 (the "SEC"), including without limitation its most recent annual report on form 10-K, subsequent quarterly reports on Forms 10-Q and Forms 8-K, each as amended and supplemented from time to time.

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