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Actinium Further Strengthens Patent Portfolio with International IP Covering the Composition and Methods of Administration of Iomab-B Antibody Radiation Conjugate in the EU and Japan

- International patents complement issued patents in the United States covering composition and methods of administration into 2037 and 2036, respectively

- Issued patent in the EU and granted patent in Japan expected to have a useful life through 2036

NEW YORK, June 17, 2021 /PRNewswire/ --**Actinium Pharmaceuticals, Inc.** (NYSE AMERICAN: ATNM) ("Actinium" or the "Company") today announced that its intellectual property portfolio around its lead Phase 3 candidate, Iomab-B, has been further strengthened internationally. In the EU, Actinium has been issued a patent covering the composition and methods administration of Iomab-B, an Antibody Radiation Conjugate (ARC) comprised of apamistamab, a CD45 targeting antibody, and the radioisotope iodine-131. The issued patent in the EU is expected to have a useful life through 2036. In addition, Actinium has been granted a patent covering the same composition and methods of administration claims in Japan.

Dr. Dale Ludwig, Actinium's Chief Scientific Officer, said, "We are excited to expand our already robust patent portfolio with these key patents in the EU and Japan. As the only CD45 ARC for targeting conditioning in clinical development, these international patents, together with our U.S. patents lay the foundation for aggressive development of Iomab-B for BMT conditioning and Iomab-ACT for conditioning prior to cell and gene therapies. Iomab-B is well characterized and supported by extensive clinical data across multiple clinical trials and indications. Our ARC approach has significant advantages over other approaches such as monoclonal antibodies or antibody drug conjugates that require payload internalization,

making them impractical for targeting CD45. We look forward to continuing to build our leadership position in targeted conditioning led by Iomab-B and remaining at the forefront of innovation in targeted radiotherapy."

Actinium owns issued or pending patents within the United States and globally covering composition of matter, formulation, methods of use, and methods of administration with potential coverage for 19 years or longer. Importantly, Actinium owns an issued patent in the US covering composition of matter, for which the Company expects validity until 2037. In addition, the Company owns a second issued US patent that further covers composition of matter, methods of use, and methods of administration for Iomab-B.

Sandesh Seth, Actinium's Chairman and CEO, said, "We are delighted to now have wholly-owned issued patents in the U.S. and EU and a granted patent in Japan covering the composition and methods of Iomab-B, as these three regions represent an overwhelming majority of the global addressable market for Iomab-B. We have been aggressively building our patent portfolio and it is a major accomplishment to have IP protection on our lead asset into 2036 and 2037. In addition to IP protection, we also have orphan drug designation for Iomab-B in the U.S. and EU, providing potential market exclusivity. As we look to the future, our IP portfolio gives us great confidence in our ability to build the leading, multi-indication strategic business unit for the large and growing targeted conditioning market on a global scale."

About Actinium Pharmaceuticals, Inc.

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 seventy-five percent enrolled and positive single-agent, feasibility and safety data has been highlighted at ASH, TCT, ASCO and SOHO annual meetings. More information on this Phase 3 clinical trial can be found at sierratrial.com. I-131 apamistamab will also be studied as a targeted conditioning agent in a Phase 1 study with a CD19 CAR T-cell Therapy and Phase 1/2 anti-HIV stem cell gene therapy with UC Davis. 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.

Investors:
Hans Vitzthum
LifeSci Advisors, LLC
Hans@LifeSciAdvisors.com
(617) 430-7578

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