March 26, 2024

Actinium Announces Clinical Trial to Study Iomab-ACT Targeted Radiotherapy Conditioning with Leading FDA Approved Commercial CAR T-Cell Therapy

- Potential blockbuster opportunity for next-generation targeted radiotherapy conditioning with CAR T-cell therapy a multi-billion market with six FDA approved therapies totaling sales over $3.5 billion in 2023 and cell and gene therapies forecasted to reach over ninety-thousand patients annually by 2030
- Iomab-ACT is the first targeted radiotherapy agent intended to be used to condition patients for cell and gene therapies to replace the need for non-targeted chemotherapy
- Iomab-ACT clinical data to date shows CAR T-cell persistence and ability to deplete targeted immune cells including lymphocytes resulting in negligible rates of CAR-T toxicities ICANS and CRS

NEW YORK, March 26, 2024 /PRNewswire/ -- **Actinium Pharmaceuticals, Inc.** (NYSE AMERICAN: ATNM) (Actinium or the Company), a leader in the development of Antibody Radiation Conjugates (ARCs) and other targeted radiotherapies, today announced that the University of Texas Southwestern Medical Center (UT Southwestern) will lead a clinical trial studying Actinium's Iomab-ACT, a targeted radiotherapy conditioning agent prior to patients receiving an FDA approved commercial CAR T-cell therapy. UT Southwestern will start recruiting patients following FDA's review and clearance of the study. CAR T-cell therapy utilizes patients' own immune cells called T-cells, which are engineered to include a chimeric antigen receptor and then reinfused into the patient to recognize and destroy cancer cells. Currently, there are six CAR-T therapies approved to treat patients with leukemias, lymphomas and multiple myeloma that collectively reached sales in 2023 exceeding $3.5 billion.

Actinium developed Iomab-ACT with the goal of replacing the chemotherapy conditioning regimens currently used prior to cell and gene therapies. Early clinical data with Iomab-ACT conditioning prior to CAR-T demonstrates its ability to produce targeted lymphodepletion along with negligible incidences of immune effector cell-associated neurotoxicity syndrome (ICANS) or cytokine release syndrome (CRS), which are the major toxicities observed with

the current chemotherapy based conditioning regimens, which are suboptimal and can limit patients from CAR-T access and may result in poor outcomes.

Sandesh Seth, Actinium's Chairman and CEO, stated, "This is a pivotal moment for our Iomab-ACT program that presents the opportunity to produce potential practice changing clinical data. Cellular therapies such as CAR-T and gene therapies represent a multi-billion market opportunity with an expectation of nearly doubling to reach approximately 93,000 patients annually in the U.S. alone by 2030. We believe Iomab-ACT can be a universal conditioning regimen based on its potential to reduce CAR-T related toxicities such as ICANS and CRS, as evidenced by our early clinical work with a novel CD19 CAR T-cell therapy and may improve patient access and outcomes by eliminating the need for the non-targeted chemotherapy-based conditioning that are currently required prior to CAR-T therapies. This trial is a clear demonstration of Actinium's commitment to being at the forefront of applying targeted radiotherapy to innovative applications and novel indications."

Dr. Avinash Desai, Actinium's Chief Medical Officer, added, "Cellular therapies like CAR-T have transformed outcomes for tens of thousands of patients but clinicians continue to be frustrated with the need to use chemotherapy for conditioning. We are excited to be collaborating with the team at UT Southwestern on this first ever trial to study Iomab-ACT with a commercial CAR-T. Given the extensive data with CAR-T therapies, results from this study can allow us to show the impact of Iomab-ACT on reducing CAR-T related toxicities such as ICANS and CRS and improving efficacy including persistence of CAR-T cells, rates of response, and other efficacy outcomes. Based on the initial results from our clinical trial with Memorial Sloan Kettering's CD19 CAR-T therapy, we are looking forward to initiating this study and delivering clinical proof of concept data with a commercial CAR-T."

Ongoing Iomab-ACT Phase 1 CAR-T Conditioning Results

Actinium presented results from its ongoing phase 1 trial using Iomab-ACT as conditioning prior to CD19 CAR-T therapy for patients with relapsed or refractory B-cell Acute Lymphoblastic Leukemia (B-ALL) or Diffuse Large B-cell Lymphoma (DLBCL) at the Tandem Meetings I Transplantation & Cellular Therapy Meetings of ASTCT and CIBMTR the combined annual meetings of the American Society for Transplantation and Cellular Therapy (ASTCT) and the Center for International Blood & Marrow Transplant Research (CIBMTR) in February 2024. Importantly, no patients (0/4) developed immune effector cell-associated neurotoxicity syndrome (ICANS) of any grade, a major safety measure of the study, as ICANS is observed in 25% or more of pts w/ R/R B-ALL and DLBCL treated with various CAR T-cell products and minimal CRS. Iomab-ACT demonstrated transient depletion of peripheral blood lymphocytes and monocytes. Persistence of CAR T-cells up to 8 weeks and minimal non-hematologic toxicities have been observed to date.

Targeted Radiotherapy Conditioning Opportunity

The opportunity exists for better conditioning in other areas of cellular therapy, such as CAR-T as well as gene therapies. The pipeline of CAR-T and gene therapies has rapidly expanded, with the addressable patient population expected to nearly double and reach approximately 93,000 patients in the U.S. by 2030 based on the current pipeline of cellular therapies. The CAR-T market size in terms of revenue is estimated to grow at a CAGR of approximately 11% over the next 5 plus years. Currently, there are six CAR T-cell therapies approved by the FDA that are used to treat patients with lymphomas, leukemia, and multiple

myeloma, which collectively had total sales of over $3.5 billion in 2023. The addressable market for Iomab-ACT is in line with the patient population for cell and gene therapies as all patients receive conditioning of some type prior to these treatments. We will continue to develop Iomab-ACT, our next-generation conditioning program for rapidly growing cell and gene therapies based on early promising results, ultimately with the value proposition of improving overall access and outcomes for patients who need cellular or gene therapies. A potential blockbuster revenue opportunity exists for Iomab-ACT assuming it can provide one or more clinical benefits related to lower CRS, less ICANS, longer duration of response or a higher overall success rate of cellular therapy due to benefits of targeted conditioning.

About Actinium Pharmaceuticals, Inc.

Actinium develops targeted radiotherapies to meaningfully improve survival for people who have failed existing oncology therapies. Advanced pipeline candidates Iomab-B (pre-BLA & MAA (EU)), an induction and conditioning agent prior to bone marrow transplant, and Actimab-A (National Cancer Institute CRADA pivotal development path), a therapeutic agent, have demonstrated potential to extend survival outcomes for people with relapsed and refractory acute myeloid leukemia. Actinium plans to advance Iomab-B for other blood cancers and next generation conditioning candidate Iomab-ACT to improve cell and gene therapy outcomes. Actinium holds more than 220 patents and patent applications including several patents related to the manufacture of the isotope Ac-225 in a cyclotron.

For more information, please visit: https://www.actiniumpharma.com/

Forward-Looking Statements

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:
investorrelations@actiniumpharma.com

View original content to download multimedia:https://www.prnewswire.com/news-releases/actinium-announces-clinical-trial-to-study-iomab-act-targeted-radiotherapy-conditioning-with-leading-fda-approved-commercial-car-t-cell-therapy-302098890.html

SOURCE Actinium Pharmaceuticals, Inc.