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Actinium Pharmaceuticals Highlights Data at the American Society of Hematology Annual Meeting Showing CD33 Expression in a Significant Number of Multiple Myeloma Patients Supporting the Rationale for Actimab-M

Analysis of patient data from a large U.S. library revealed that twenty-five percent of Multiple Myeloma patients have CD33 expression on their multiple myeloma cells supporting the rational for targeting this antigen

Actimab-M remains the only CD33 targeting drug candidate for patients with multiple myeloma

NEW YORK, Dec. 11, 2017 (GLOBE NEWSWIRE) -- **Actinium Pharmaceuticals, Inc.** (NYSE American:ATNM) **("Actinium" or "the Company")** announced results from an analysis performed on a large U.S. library of samples from 865 multiple myeloma patients which showed that twenty-five percent of patients had CD33 expression on their multiple myeloma cells. Actinium is currently conducting a Phase 1 clinical trial for its Actimab-M drug candidate in patients with refractory multiple myeloma. Actinium is the first and only company thus far to have a CD33 targeted therapy for multiple myeloma and the results from this analysis provide further rationale for the Company's myeloma initiative.

This analysis was the first of its kind to analyze such a large, U.S. based patient sample library as previous studies exploring CD33 expression in multiple myeloma looked at significantly smaller sample sizes from established multiple myeloma cell lines. Patient samples at initial diagnosis were assessed for CD33 expression and CD33 expression was stratified with CD33 expression greater than 40% considered high and greater than 60% very high. The analysis showed that 61.6% of patients in the dataset had high CD33 expression and 41% of patients had very high CD33 expression which translates to approximately fifteen percent of the overall multiple myeloma sample population.

The online abstract can accessed through the following link:
http://www.bloodjournal.org/content/130/Suppl_1/5378

Dr. Mark Berger, Actinium's Chief Medical Officer said, "It is generally believed that expression of CD33 on multiple myeloma plasmocytes is in line with the low levels of expression in cells of the lymphoid lineage. The results from this study confirm that CD33 is

expressed in a significant sub-set of multiple myeloma patients. Given that CD33 expression levels have been found to be high or very high in a large percentage of patients that do express the antigen, we have great confidence that our Actimab-M drug candidate, which uses an anti-CD33 antibody, can have a beneficial impact on these patients. In a disease like multiple myeloma, which remains incurable, we believe it is important to explore new therapeutic modalities and use of our CD33 targeting ARC or Antibody Radio-Conjugate is supported by these results. Additionally, myeloma cells are sensitive to radiation and targeting them using an ARC like Actimab-M may provide further advantages."

Patients that relapsed were also assessed for CD33 expression and 27.1% of relapsed patients were found to have CD33 expression with 58.3% of these patients having very high expression at initial diagnosis and relapse.

About Actimab-M

Actimab-M is being investigated in patients with refractory multiple myeloma. Multiple myeloma is a currently incurable cancer of plasma cells, which are white blood cells that produce antibodies. Actimab-M is currently being studied in a Phase 1 dose escalation study in up to 12 patients that is designed to establish safety, maximum tolerable dose and proof of concept. Actimab-M is an ARC or Antibody Radio-Conjugate that consists of Actinium-225, an alpha-emitting radioisotope coupled to the anti-CD33 monoclonal antibody, lintuzumab. CD33 has been shown to be expressed on myeloma plasmocytes in 25% of multiple myeloma patients and up to 35% of multiple myeloma patients and has also shown to be correlated with poorer outcomes.

About Actinium Pharmaceuticals, Inc.

Actinium Pharmaceuticals Inc. is a clinical-stage biopharmaceutical company focused on developing and commercializing targeted therapies for safer myeloablation and conditioning of the bone marrow prior to a bone marrow transplant and for the targeting and killing of cancer cells. Our targeted therapies are ARC's or Antibody Radio-Conjugates that combine the targeting ability of monoclonal antibodies with the cell killing ability of radioisotopes. Three of our four ARC drug candidates are based on our AWE or Actinium Warhead Enabling Technology Platform that utilizes the isotope Actinium-225 (Ac-225), which emits alpha particles. We are currently conducting clinical trials for our four product candidates; Iomab-B, Actimab-A Actimab-M and Actimab-MDS, as well as performing research on other potential drug candidates utilizing our proprietary AWE Technology Platform. Our most advanced product candidate, Iomab-B, an ARC developed by the Fred Hutchinson Cancer Research Center, is comprised of an anti-CD45 monoclonal antibody labeled with iodine-131. We are currently conducting a pivotal Phase 3 trial of Iomab-B for myeloablation and conditioning of the bone marrow prior to a bone marrow transplant for patients with relapsed or refractory acute myeloid leukemia (AML) age 55 and older. A bone marrow transplant is a potentially curative treatment for patients with AML and other blood cancers including leukemias, lymphomas and multiple myeloma as well as certain blood disorders. Iomab-B has been tested in several of these other cancers with over four hundred patients treated in several Phase 1 and 2 trials with promising results. Upon successful completion of our Phase 3 clinical trial for Iomab-B we intend to submit this candidate for marketing approval in the U.S. and European Union where it has been designated as an Orphan Drug. We are also developing a potentially best in class CD33 program using an ARC comprised of the anti-CD33 monoclonal antibody lintuzumab labelled with the alpha-particle emitter Ac-225.

Our most advanced CD33 program candidate, Actimab-A, is currently in a Phase 2 clinical trial for patients over the age of 60 who are newly diagnosed with AML and ineligible for standard induction chemotherapy. Actimab-A is also has Orphan Drug designation in the US and EU. Actimab-M, our second CD33 targeting ARC, is being studied in a Phase 1 trial for patients with refractory multiple myeloma. Actinium is also planning a Phase 2 trial for Actimab-MDS, our third CD33 program candidate, as a conditioning regimen prior to a bone marrow transplant for patients with MDS that have a p53 genetic mutation. Our AWE or Actinium Warhead Enabling Technology Platform, originally developed in conjunction with Memorial Sloan Kettering Cancer Center, is focused on leveraging Actinium's know how and intellectual property to create additional ARC drug candidates by labeling Ac-225 to targeting moieties that we will either progress in clinical trials ourselves or out-license.

More information is available at www.actiniumpharma.com and our Twitter feed @ActiniumPharma, www.twitter.com/actiniumpharma.

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