November 6, 2014

Xencor Provides Data Updates on XmAb Bispecific Antibody Programs and Announces Presentations at Upcoming American Society of Hematology 2014 Annual Meeting

Multiple T-cell engaging bispecific programs show potential as disease modifying treatments for acute myelogenous leukemia, B-cell lymphomas and leukemia, and multiple myeloma
Xencor designates its first bispecific antibody candidate, XmAb14045 an anti-CD123xCD3, for IND-enabling studies

MONROVIA, Calif. – November 6, 2014— Xencor, Inc. (NASDAQ: XNCR), a clinical-stage biopharmaceutical company developing engineered monoclonal antibodies for the treatment of autoimmune diseases, asthma and allergic diseases, and cancer, today announced that preclinical data from three programs using the company's XmAb® bispecific Fc technology show that targeting CD123, CD20 and CD38 antigens each activated T-cells to rapidly kill target cells from a single dose IV bolus in cynomolgus monkeys and demonstrated prolonged half-life of approximately one week in mice. This data, and additional data on primate pharmacokinetics, efficacy and tolerability, will be presented in three poster presentations at the upcoming American Society of Hematology (ASH) 2014 Annual Meeting in December 2014. The abstracts were made public today on the ASH 2014 website at http://www.hematology.org/Annual-Meeting.

“In stark contrast to bispecific platforms that do not contain an Fc domain, our candidates with XmAb bispecific Fc domains demonstrated profound and sustained reductions in targeted cells from a single IV dose in cynomolgus monkeys,” said Bassil Dahiyat, Ph.D., president and CEO of Xencor. “We believe our XmAb technology offers a potential solution to the manufacturing and commercialization challenges that historically have limited the potential of bispecific therapeutic antibodies.”

Xencor’s initial bispecific programs are tumor-targeted antibodies that contain both a tumor antigen binding domain (CD123, CD20, or CD38) and a cytotoxic T-cell binding domain (CD3). These bispecific antibodies activate T-cells for highly potent and targeted killing of malignant cells. XmAb Fc domains confer long circulating half-lives on the antibodies, up to a week in mice, and enable fine-tuning of the potency of the T-cell killing, potentially improving the tolerability of cancer immunotherapy.

Dr. Dahiyat added, “Based on these data, we have selected XmAb14045, our lead anti-CD123xCD3 bispecific antibody, for IND-enabling studies and cGMP process development and manufacturing at a contract manufacturer. We look forward to bringing this candidate into the clinic within the next 18 months.”

Highlights from the scheduled Xencor poster presentations are as follows:

XmAb Anti-CD123 x Anti-CD3 Bispecific Antibodies in Acute Myleogenous Leukemia
Chu, et al, Abstract ID# 2316, Sunday, December 7, 2014, 6:00 p.m. to 8:00 p.m. PT

- Depletion of over 99% of circulating CD123+ cells in monkeys for over a week
- Bone marrow CD123+ cells were depleted by over 95% at all doses in monkeys
- Prolonged serum half-life in mice of 6.2 days

XmAb Anti-CD20 × Anti-CD3 Bispecific Antibodies in B-cell Lymphomas and Leukemia
Chu, et al, Abstract ID# 3111, Sunday, December 7, 2014 at 6:00 p.m. to 8:00 p.m. PT

- Depletion of over 97% of circulating CD40+ B cells in monkeys for over a week
- CD40+ B cells in the more resistant lymph nodes and bone marrow were depleted by over 90% at all doses in monkeys
- Prolonged serum half-life in mice up to 6.7 days

Anti-CD38 × Anti-CD3 Bispecific Antibodies in Multiple Myeloma
Chuash ash , et al, Abstract ID# 4727, Monday, December 8, 2014, 6:00 p.m. to 8:00 p.m. PT

- Depleted circulating CD38+ cells by greater than 95%
- Prolonged half-life in mice up to 8 days

About Bispecifics

As opposed to traditional monoclonal antibodies that target and bind to a single antigen, bispecific antibodies are designed with two different variable domains to elicit biological effects that require simultaneous binding to two targets. Xencor’s

XmAb® bispecific Fc domain technology is designed to maintain full-length antibody properties in a bispecific antibody, potentially enabling favorable in vivo half-life and simplified manufacturing.

Efforts at bispecific antibody design are typically frustrated by poor molecular stability, difficulties in production and short in vivo half-life. Xencor has engineered a series of Fc domain variants that spontaneously form stable, heterodimeric bispecific antibodies and that can be made and purified with standard antibody production methods. These bispecific Fc domains are used to generate a broad array of novel drug candidates.

About Xencor, Inc.
Xencor is a clinical-stage biopharmaceutical company developing engineered monoclonal antibodies for the treatment of autoimmune diseases, asthma and allergic diseases, and cancer. Currently, seven candidates are in clinical development internally and with partners that have been engineered with Xencor's XmAb® technology. Xencor's internally-discovered programs include XmAb5871, in Phase 1b/2a clinical trials for the treatment of rheumatoid arthritis and in preparation for a clinical trial in IgG4-related disease, XmAb7195 in Phase 1a development for the treatment of asthma, and XmAb5574/MOR208 which has been licensed to Morphosys AG and is in Phase 2 clinical trials for the treatment of acute lymphoblastic leukemia and non-Hodgkin lymphoma. Xencor's XmAb antibody engineering technology enables small changes to the structure of monoclonal antibodies resulting in new mechanisms of therapeutic action. Xencor partners include Merck, Janssen R&D LLC, Alexion and Boehringer Ingelheim. For more information, please visit www.xencor.com.

Forward Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the U.S. securities laws, including statements associated with Xencor's research and its expectations regarding future therapeutic and commercial potential of Xencor's technologies, programs, drug candidates and intellectual property related to Xencor's XmAb technology. Because such statements are subject to risks and uncertainties, including risks associated with the process of discovering, developing and commercializing drugs that are safe and effective, actual results and the timing of events may differ materially from those expressed or implied by such forward-looking statements. These and other risks concerning Xencor's programs and technology are described in additional detail in Xencor's SEC filings. These forward-looking statements speak as of the date on which they were made, are based upon Xencor's current expectations and involve assumptions that may never materialize or may prove to be incorrect. Xencor disclaims any intention or obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

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