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Xencor Presents Preliminary Phase 1 Data on XmAb®2513 Antibody for Lymphomas at 2009 American Society of Clinical Oncology Annual Meeting

Drug well tolerated with early signs of efficacy in heavily pretreated Hodgkin lymphoma patient population

Monrovia, Calif. – June 1, 2009 – Xencor, Inc., an antibody discovery and development company, today announced initial results from its Phase I study of XmAb®2513 in patients with relapsed Hodgkin lymphoma (HL). XmAb®2513, an antibody drug candidate developed from Xencor's proprietary antibody engineering technology, was well tolerated in patients who had a median of six prior lines of cancer treatment. The maximum tolerated dose has not yet been reached, as patients continue to do well on therapy with XmAb®2513. In addition, there is early evidence of anti-tumor activity with stable disease or better observed as best response in more than half of the patients evaluable for efficacy. These data were presented in a poster session today at the 2009 American Society of Clinical Oncology (ASCO) Annual Meeting being held in Orlando, Florida.

"An important element of this trial is that it is designed to enroll and treat patients similar to what physicians encounter in the context of daily practice – HL patients who haven't responded after several lines of treatment, including stem cell transplantation, and remain extremely ill," said David A. Ramies, M.D., Chief Medical Officer at Xencor. "Early signals of efficacy, as evidenced by tumor reductions, along with the observed safety with increasing doses of XmAb2513, form a solid foundation for our continued investigation of this compound in patients with refractory HL as a single-agent and in combination with standard chemotherapy options."

The results presented for the open-label, multi-dose, single-arm, Phase I dose escalation study of XmAb2513 includes 17 relapsed HL patients to date and is designed to define the recommended dose for subsequent trials. Patients received two-hour intravenous infusions of 0.3, 1, 3, 6, 9 or 12 mg/kg doses every two weeks with a maximum of four cycles (eight doses total). To date, the first patient to receive a 9 mg/kg dose has experienced a partial response. Additional observations include 13-30 day half-life with repeat administration, consistent pharmacokinetics through day 100 at the 1 and 3 mg/kg doses, and a lack of immunogenicity across all cohorts. Adverse events were generally mild to moderate.

"This clinical data on XmAb®2513 demonstrates the capabilities of our XmAb antibody engineering technology, which we have used to create enhanced cytotoxicity and phagocystosis in a high-affinity, humanized antibody," said Bassil Dahiyat, Ph.D., CEO at Xencor. "This program is beginning to translate the value of our technology into our own pipeline, similar to the value we continue to provide to our partners' drug pipelines."

Today's ASCO poster presentation is available at the Xencor Web site: http://www.xencor.com/investor-presentations.html.

About XmAb2513

Xencor's lead candidate, XmAb®2513, is in Phase I clinical development for the treatment of relapsed Hodgkin lymphoma and T cell lymphomas. It is a humanized monoclonal antibody that targets the antigen CD30, a molecule expressed on the surface of a number of tumor cell types. Xencor has applied its XmAb antibody engineering technology to improve the potency of XmAb2513 by engineering its Fc region to improve binding affinity to Fc(gamma) receptors, thereby enhancing engagement of immune effector cells and tumor-cell killing. The compound has improved effector functions, including antibody dependent cell-mediated cytotoxicity and phagocytosis (ADCC, ADCP), and has demonstrated antiproliferative activity against CD30-expressing cell lines. XmAb2513 has shown superior activity in recruiting primary human immune cells to kill tumor cells in in vitro models, is active in blocking tumor growth in rodent models and was well-tolerated in primate models. XmAb2513 was humanized with Xencor's XmAb® Fv technology and is readily manufactured using standard monoclonal antibody production methods.

About Xencor

Xencor, Inc. engineers superior biotherapeutics using its proprietary Protein Design Automation® technology platform, and is a leader in the field of antibody Fc engineering to significantly improve antibody potency and half-life. The company is advancing multiple XmAb® antibody drug candidates into the clinic, led by anti-CD30 candidate XmAb®2513 in a Phase I clinical trial for the treatment of Hodgkin lymphoma and anaplastic large cell lymphoma, and anti-CD19 candidate XmAb®5574 in pre-clinical development for the treatment for non-Hodgkin lymphoma and B-cell leukemia. With multiple partners, such as industry leaders Merck, Pfizer, CSL Ltd., Boehringer Ingelheim, MedImmune and Human Genome Sciences, Xencor is applying its suite of

proprietary antibody Fc domains to improve antibody drug candidates for traits such as potency and sustained half-life. For more information, please visit www.xencor.com.

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