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Data Published in Nature Biotechnology Shows Fc Engineering Improves Antibody Efficacy and Convenience

Monrovia, Calif. – January 19, 2010 – A Nature Biotechnology article published online January 17 reveals that Xencor Inc.'s proprietary Fc engineering extends the half-life of antibodies while maintaining their potency and extending duration of action. These results, published in an article entitled, "Enhanced antibody half-life improves in vivo activity" demonstrate the potential of Fc engineering to impact the flexibility of route, schedule and dose for nearly any antibody.

"Competition is heating up in biologics, with patent expirations looming and the market demanding drugs that will improve patient compliance," said John Desjarlais, Ph.D., vice president of research at Xencor and lead author on the study. "Although monoclonal antibodies have reasonably long half-lives, market pressures for less frequent dosing schedules can reduce efficacy. In this Nature Biotechnology paper, our research shows that it's possible with pharmacokinetic engineering to maintain efficacy of antibody drugs, but with less frequent dosing and greater patient convenience."

To determine whether improved affinity to the neonatal Fc receptor (FcRn) can result in enhanced therapeutic efficacy, Xencor researchers tested whether antibodies with half-lives extended up to five-fold in human FcRn transgenic mice and three-fold in cynomolgus monkeys retain efficacy at longer dosing intervals. Data for the Fc variant constructed in the context of VEGF antibody, bevacizumab (Avastin), which is approved for the treatment of colorectal, lung, breast and renal cancers, showed significantly improved efficacy compared to bevacizumab in tumor xenograft models. These results are consistent with the improved efficacy in tumor xenograft models seen with an anti-EGFR antibody variant of cetuximab (Erbitux) versus cetuximab, which is approved for the treatment of colorectal and head and neck cancers.

"While we continue to expand our Fc engineering capabilities and work with partners like Pfizer and Centocor to optimize their antibodies, Xencor is also moving its internal antibody pipeline forward including XmAb2513 in a Phase I trial for lymphoma and pre-clinical antibodies for B-cell malignancies and autoimmune diseases," added Bassil Dahiyat, Ph.D., president and CEO of Xencor.

About Xtend™ technology

Enhance Antibody Half-Life

Xencor's proprietary antibody technology platform provides a validated solution to enhancing the serum half-life of immunoglobulin molecules. Using its proprietary series of antibody Fc variants, antibody half-life can be readily prolonged to enhance performance in a number of different therapeutic indications.

Commercial Benefits

Dosing frequency is an important attribute and differentiating factor in certain indications. By prolonging the serum half-life of antibody drug molecules the opportunity arises to address chronic indications with an antibody drug product that potentially has the ability to be administered at greater than monthly intervals, greatly enhancing patient convenience and improving market positioning. In addition, it is possible to reduce the dose of the biologic that is required to maintain effective drug levels, potentially improving the cost, profitability and capital expense profile of the product.

About Xencor

Xencor, Inc. engineers superior biotherapeutics using its proprietary Protein Design Automation® technology platform, and is a leader in the field of antibody engineering to significantly improve antibody half-life, immune-regulatory function and potency. The company is advancing multiple XmAb® antibody drug candidates into the clinic, including XmAb®5871 targeting CD32b and CD19 for autoimmune diseases, a portfolio of biosuperior antibodies that are versions of blockbuster antibody drugs engineered for superior half-life and dosing schedule, and an anti-CD30 candidate XmAb®2513 in a Phase I clinical trial for the treatment of Hodgkin lymphoma. With multiple partners, such as industry leaders Merck, Pfizer, CSL Ltd., Boehringer Ingelheim, MedImmune, Centocor and Human Genome Sciences, Xencor is applying its suite of proprietary antibody Fc domains to improve antibody drug candidates for traits such as sustained half-life and potency. For more information, please visit www.xencor.com.

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