



Mersana Presents Updated Data on Investigational Cancer Antibody Drug Conjugate at World Conference on Lung Cancer

December 5, 2016

XMT-1536 Demonstrates Anti-tumor Activity in Lung Cancer Patient-Derived Xenograft Studies

CAMBRIDGE, Mass., December 5, 2016 -- [Mersana Therapeutics, Inc.](http://www.mersana.com), a biotechnology company focused on discovering and developing a pipeline of antibody drug conjugates (ADCs) based on its Fleximer® platform technology, today announced that it presented data on its preclinical immunoconjugate, XMT-1536, at the 2016 IASLC 17th World Conference on Lung Cancer, in Vienna, Austria. The oral presentation demonstrated encouraging results from pre-clinical studies that indicated that the compound induced durable complete tumor regressions in patient-derived xenograft models of non-small cell lung cancer (NSCLC). Data demonstrating outstanding pharmacokinetics and tolerability in non-human primates was also presented.

Details of the presentation are below:

Abstract ID: 5769
Program: MA09.10
Topic: 12. Chemotherapy/Targeted. Therapy/Immunotherapy
Title: A NaPi2b Antibody Drug Conjugate Induces Complete Tumor Regressions in Patient-derived Xenograft Models of NSCLC
Authors: Donald Bergstrom, Natalya Bodyak, Alex Yurkovetskiy, Laura Poling, Mao Lin, Marina-Protopopova, Mike Devit, LiuLiang Qin, Dmitry Gumerov, Elena Ter-Ovanesyan, Rebecca Mosher, Timothy Lowinger; Mersana Therapeutics, Cambridge, MA/United States of America.

"We are encouraged by these early results that demonstrate XMT-1536's potential in treating patients who have limited treatment options for their lung cancer," said Donald A. Bergstrom, M.D., Ph.D., Chief Medical Officer of Mersana. "The data presented at the conference suggest that XMT-1536 can induce complete and durable regressions in patient-derived lung cancer models. Based on these data, we plan to move rapidly into studies in patients that will help us develop new therapeutic options to treat this devastating disease."

The study presented at the conference demonstrated that NaPi2b is expressed at high levels in a majority of non-squamous non-small cell lung cancers (NSCLC), suggesting it may be an attractive therapeutic target for ADC development in this disease. XMT-1536 is comprised of a humanized antibody against NaPi2b and approximately 15 auristatin-derived payload molecules per antibody conjugated via a multivalent hydrophilic polymer (Fleximer). The anti-tumor activity of XMT-1536 was evaluated in eight patient-derived xenograft models of NSCLC adenocarcinoma representing a spectrum of oncogenic driver mutations prevalent in NSCLC, including tumors without oncogenic drivers. The standard dose of XMT-1536 used across models was 3 mg/kg administered intravenously once weekly for 3 weeks (last dose on Day 14). Experiments ran until tumor growth past a pre-specified endpoint or Day 60. At the 3 mg/kg dose, XMT-1536 was active in 7/8 models: complete tumor regression in 4 models, partial tumor regression in 1 model, and significant tumor growth inhibition in 2 models. In 4 of the 5 models where XMT-1536 induced tumor regression, regressions were durable, with a majority of the animals maintaining partial or complete regression at Day 60. XMT-1536 was also evaluated for tolerability in a cynomolgus monkey study, in which there was no body weight loss, no clinical observations attributable to XMT-1536, and limited clinical pathology findings, including no evidence of neutropenia. Target organ toxicity was minimal to mild and generally reversible. Exposure to XMT-1536 indicated good conjugate stability, low exposure to free drug payload in plasma (<1 ng/mL), and supported the 3 mg/kg dose level in mouse studies as a potentially clinically-relevant dose.

About XMT-1536

XMT-1536 is a highly potent anti-sodium-dependent phosphate transport protein 2b (anti-NaPi2b) immunoconjugate comprised of an average of 15 auristatin molecules conjugated to XMT-1535, a novel humanized anti-NaPi2b antibody, via the Dolaflexin™ antibody-drug conjugate (ADC) platform. Dolaflexin is one of Mersana's proprietary Fleximer immunoconjugate platforms.

About Mersana Therapeutics

Mersana Therapeutics is a biotechnology company with highly differentiated and proprietary immunoconjugate platforms that allow for significantly higher drug loads, providing greater efficacy while simultaneously increasing tolerability. As a result, our platforms provide for expanded opportunities to provide meaningful clinical benefit to patients. Our lead program, XMT1522 is in Phase I clinical trials. Our second program, XMT1536 will be entering clinical trials in the latter part of 2017. In addition, our partners are advancing their pipeline of immunoconjugates using our platforms.

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