# Mersana Therapeutics Presents Preclinical Data Further Demonstrating Differentiating Aspects of Its ADC Platform Technology at AACR 2018

April 17, 2018

*Detailed Characterization of Unique DolaLock Technology Enhancements to Drug Efficacy and Tolerability*

*XMT-1522 Demonstrates Synergy in Combination with a Checkpoint Inhibitor*

CAMBRIDGE, Mass., April 17, 2018 (GLOBE NEWSWIRE) -- Mersana Therapeutics, Inc. (NASDAQ:MRSN), a clinical-stage biopharmaceutical company focused on discovering and developing a pipeline of antibody drug conjugates (ADCs) based on its Dolaflexin and other proprietary platforms, today announced new data on Mersana's lead ADC platform, Dolaflexin, and on the HER2 targeted ADC XMT-1522, presented as part of the 2018 American Association for Cancer Research (AACR) Annual Meeting being held April 14-18 in Chicago, IL.

"The data presented in these posters demonstrate the benefits of our differentiated approach to ADCs," said Timothy B. Lowinger, Chief Scientific Officer, Mersana Therapeutics. "The DolaLock controlled bystander effect represents a unique approach to enhance both efficacy and tolerability. In addition, we are excited about the potential of XMT-1522 to be combined with checkpoint inhibitors to provide significant additional clinical benefit to patients in need."

In a poster presented on Sunday, April 15, "*Unique Pharmacologic Properties of Dolaflexin-based ADCs – a Controlled Bystander Effect*," Mersana demonstrated the ability of the DolaLock controlled bystander effect to improve the efficacy and tolerability of ADC therapies. Mersana investigators demonstrated the release and intracellular conversion of auristatin F-hydroxypropylamide (AF-HPA) to auristatin F (AF), as well as biodistribution and tumor retention *in vivo*. AF-HPA is the initial drug release product, which is freely cell permeable. Intra-tumor metabolism helps convert the AF-HPA to AF, which is non-cell permeable and highly potent. Conversion of AF-HPA to AF was observed within tumor cells, and co-culture assays with HER2-positive and HER2-negative cells confirmed the cell permeability and bystander-killing capabilities of AF-HPA. Biodistribution studies revealed time-dependent concentrations of AF-HPA and AF as well as significant accumulation of AF in xenograft tumor models.

A second poster presented on Tuesday, April 17, **"***Synergy of an anti-HER2 ADC TAK-522 (XMT-1522) in combination with anti-PD1 monoclonal antibody (mAb) in a syngeneic breast cancer model expressing human HER2" co-* authored by Takeda and Mersana*,* characterized the ability of both the free payload AF-HPA and the ADC XMT-1522 to induce immunogenic cell death (ICD) in cells. In addition, a novel syngeneic breast cancer (4T1) model expressing human HER2 at a relatively low antigen density was developed. XMT-1522 showed significant inhibition of tumor growth in this poorly immunogenic tumor model. A combination of XMT-1522 and a checkpoint inhibitor further enhanced the anti-tumor efficacy, resulting in complete responses.

**About XMT-1522**

XMT-1522 is a Dolaflexin ADC targeting HER2-expressing tumors. XMT-1522 comprises a proprietary HER2 antibody which is conjugated with Mersana's Dolaflexin platform – a Fleximer polymer linked with a proprietary auristatin payload. XMT-1522 provides a drug load of approximately 12 molecules per antibody, specifically designed to improve potency while simultaneously increasing tolerability. XMT-1522 has the potential to extend HER2-targeted therapy beyond the current "HER2-positive" populations into patients with lower levels of HER2 expression. The Phase 1 protocol will evaluate XMT-1522 in patients with advanced HER2-positive breast and gastric cancer, as well as advanced breast cancer with low HER2 expression and non-small cell lung cancer. More information on the ongoing Phase 1 clinical study can be found at clinicaltrials.gov.

**About Dolaflexin**

The Dolaflexin platform is designed to increase the efficacy, safety and tolerability of ADCs by overcoming key limitations of existing technologies based on direct conjugation of a payload molecule to an antibody. Dolaflexin consists of Fleximer, a biodegradable, highly biocompatible, water soluble polymer, to which are attached multiple molecules of our proprietary auristatin drug payload, using a linker specifically optimized for use with our polymer. The high-water solubility of the Fleximer polymer compensates for the low solubility of the payload, surrounding the payload and protecting it from aggregation and maintaining stability in circulation. Multiple molecules of this Dolaflexin polymer-drug conjugate can then be attached to an antibody of choice, which significantly increases the payload capacity of the resulting ADC. This approach differs from most other ADC technologies that conjugate the payload directly conjugated to the antibody via a linker. Using its Dolaflexin platform, Mersana has been able to generate ADCs with a very high Drug-to-Antibody Ratio (DAR), between 12 to 15, while maintaining acceptable pharmacokinetics and drug-like properties in animal models. This represents a three to four-fold increase in DAR relative to traditional ADC approaches.

**About Mersana Therapeutics**

Mersana Therapeutics is a clinical-stage biopharmaceutical company using its differentiated and proprietary ADC platforms to develop highly targeted drugs with increased tolerability and expanded opportunities to deliver meaningful clinical benefit to patients. Mersana's product candidate XMT-1522 is in Phase 1 clinical trials in patients with advanced tumors expressing HER2, including breast cancer, non-small-cell-lung-cancer (NSCLC) and gastric cancer patients. The Company's second product candidate, XMT-1536, is in Phase 1 clinical trials in patients with tumors expressing NaPi2b, including ovarian cancer, NSCLC and other cancers. In addition, multiple partners are using Mersana's platform to advance their ADC pipelines.

**Media Contact**

Paul Kidwell
paulkidwell@comcast.net

617-680-1088

**Investor Contact**
Stern Investor Relations, Inc.
Christina Tartaglia
christina@sternir.com
(212) 362-1200

Primary Logo

Source: Mersana Therapeutics, Inc.