



Mersana Therapeutics Announces Publication of Two Manuscripts Detailing Preclinical Studies of the Dolaflexin Platform and Upifitamab Rilsodotin (XMT-1536) in AACR Journal Molecular Cancer Therapeutics

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CAMBRIDGE, Mass., March 15, 2021 (GLOBE NEWSWIRE) -- Mersana Therapeutics, Inc. (Nasdaq: MRSN), a clinical-stage biopharmaceutical company focused on discovering and developing a pipeline of antibody-drug conjugates (ADCs) targeting cancers in areas of high unmet medical need, today announced the publication of two manuscripts in *Molecular Cancer Therapeutics*, a journal of the American Association for Cancer Research (AACR). The manuscripts describe the preclinical development of the Dolaflexin ADC platform and XMT-1536, now called upifitamab rilsodotin (UpRi), Mersana's first-in-class NaPi2b-targeted ADC developed using this platform.

The first of these articles, "Dolaflexin: A Novel Antibody-Drug Conjugate Platform Featuring High Drug Loading and a Controlled Bystander Effect," provides detailed characterization of Dolaflexin, the Company's novel ADC technology which is designed to overcome limitations of the most common ADC platforms with two key features: a higher drug-antibody ratio and a proprietary auristatin with a controlled bystander effect. The proprietary, cell permeable DolaLock payload auristatin F-hydroxypropylamide (AF-HPA) undergoes metabolic conversion to the highly potent but less cell-permeable auristatin F (AF) to balance the bystander effect through drug trapping within target cells and is designed to improve efficacy while avoiding the severe neutropenia, peripheral neuropathy and ocular toxicities commonly observed with other anti-tubulin ADC payloads.

The second article, "The Dolaflexin-based antibody-drug conjugate XMT-1536 targets the solid tumor lineage antigen SLC34A2/NaPi2b," describes pre-clinical discovery and characterization of UpRi, Mersana's lead clinical-stage Dolaflexin ADC. NaPi2b is a sodium phosphate transporter expressed in a variety of human tumors. The broad expression of NaPi2b in epithelial ovarian cancer and lung adenocarcinoma is described, as is UpRi's ability to selectively target human NaPi2b. In vivo data in preclinical models revealed target expression-dependent activity in a series of NSCLC adenocarcinoma patient derived xenografts (PDX) as well as profound activity in a panel of ovarian adenocarcinoma PDXs. Pharmacokinetic analyses showed approximately dose-proportional exposure across animal species as well as high serum stability of the conjugate, and systemic free AF-HPA and AF concentrations remaining low in all animal species.

"These studies demonstrate the differentiated design and advantages of the Dolaflexin platform in preclinical studies and its potential for creating a new and improved class of ADCs," said Timothy Lowinger, Ph.D., Chief Science and Technology Officer of Mersana Therapeutics. "In addition, the extensive preclinical data with UpRi, created by conjugating a NaPi2b-targeting antibody with Dolaflexin, gave us the confidence to proceed into the clinic. UpRi has since exhibited promising activity and a favorable tolerability profile in ongoing proof-of-concept studies in heavily pre-treated ovarian cancer patients with significant unmet medical need. We are very proud of the dedication and commitment of our team who have worked tirelessly to bring Dolaflexin and UpRi forward."

UpRi is in the expansion portion of a Phase 1 proof-of-concept clinical study in patients with ovarian cancer and NSCLC adenocarcinoma. Mersana intends to initiate a single-arm registration enabling strategy in platinum resistant ovarian cancer (UPLIFT) in the first quarter of 2021 as well as an umbrella combination study in earlier lines of therapy (UPGRADE) in the third quarter of 2021. More information on the ongoing clinical study can be found at clinicaltrials.gov (NCT03319628).

About Mersana Therapeutics

Mersana Therapeutics is a clinical-stage biopharmaceutical company using its differentiated and proprietary ADC platforms to rapidly develop novel ADCs with optimal efficacy, safety and tolerability to meaningfully improve the lives of people fighting cancer. Mersana's lead product candidate, upifitamab rilsodotin (UpRi), is a Dolaflexin ADC targeting NaPi2b and is in the expansion portion of a Phase 1 proof-of-concept clinical study in patients with ovarian cancer and NSCLC adenocarcinoma. XMT-1592, Mersana's second ADC product candidate targeting NaPi2b-expressing tumors, was created using Mersana's customizable and homogeneous Dolasynthen platform and is in the dose escalation portion of a Phase 1 proof-of-concept clinical study. The Company's early-stage programs include XMT-1660, a Dolasynthen ADC targeting B7-H4, as well as XMT-2056, a STING-agonist ADC developed using the Company's Immunosynthen platform. In addition, multiple partners are using Mersana's Dolaflexin platform to advance their ADC pipelines.

Forward-Looking Statements

This press release contains "forward-looking" statements within the meaning of federal securities laws. These forward-looking statements are not statements of historical facts and are based on management's beliefs and assumptions and on information currently available to management. Forward-looking statements include information concerning the Company's business strategy and the design, progression and timing of its clinical trials, the ability of the single-arm UPLIFT cohort to enable registration, and expectations regarding future clinical trial results based on data achieved to date, and the sufficiency of the Company's cash on hand. Forward-looking statements generally can be identified by terms such as "aims," "anticipates," "believes," "contemplates," "continues," "could," "estimates," "expects," "goal," "intends," "may," "on track," "opportunity," "plans," "poised for," "possible," "potential," "predicts," "projects," "promises to be," "seeks," "should," "target," "will," "would" or similar expressions and the negatives of those terms. Forward-looking statements represent management's beliefs and assumptions only as of the date of this press release. The Company's operations involve risks and uncertainties, many of which are outside its control, and any one of which, or combination of which, could materially affect its results of operations and whether the forward-looking statements ultimately prove to be correct. Factors that may materially affect the Company's results of operations and whether these forward-looking statements prove to be correct include, among other things, that preclinical testing or early clinical results may not be predictive of the results or success of ongoing or later preclinical or clinical studies, that the identification, development and

testing of the Company's product candidates and new platforms will take longer and/or cost more than planned, and that our clinical studies may not be initiated or completed on schedule, if at all, as well as those listed in the Company's Annual Report on Form 10-K filed on February 26, 2021, with the Securities and Exchange Commission ("SEC"), and subsequent SEC filings. In addition, while we expect that the COVID-19 pandemic might adversely affect the Company's preclinical and clinical development efforts, business operations and financial results, the extent of the impact on the Company's operations and the value of and market for the Company's common stock will depend on future developments that are highly uncertain and cannot be predicted with confidence at this time, such as the ultimate duration of the pandemic, travel restrictions, quarantines, physical distancing and business closure requirements in the U.S. and in other countries, and the effectiveness of actions taken globally to contain and treat the disease. Except as required by law, the Company assumes no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

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