Mersana Therapeutics Announces Target and Presents New Preclinical Data for XMT-2056, First Immunosynthen STING-Agonist ADC, at AACR-NCI-EORTC Virtual International Conference on Molecular Targets and Cancer Therapeutics

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- *Preclinical data demonstrate that XMT-2056 activates the STING pathway in a target-dependent manner in both tumor cells and tumor-resident immune cells and is significantly more efficacious in head-to-head studies than trastuzumab-TLR7/8 agonist ADC and small-molecule systemically-administered STING agonist benchmarks*
  - *XMT-2056 targets a novel epitope of HER2 with differentiated binding from trastuzumab and pertuzumab, potentially allowing for broad combinability with approved and investigational HER2 therapies*

CAMBRIDGE, Mass., Oct. 07, 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 that XMT-2056, its first Immunosynthen STING-agonist ADC candidate, targets a novel epitope of human epidermal growth factor receptor 2 (HER2) and presented new preclinical data during a plenary session at the AACR-NCI-EORTC Virtual International Conference on Molecular Targets and Cancer Therapeutics (Triple Meeting).

“Previously, across multiple targets and models, we demonstrated that our Immunosynthen ADCs can stimulate the innate immune system in a targeted manner in both tumor cells and tumor-resident myeloid cells – a “one-two punch” resulting in robust efficacy. New head-to-head preclinical data comparing XMT-2056 to TLR7/8-agonist ADC and systemically-administered STING agonist benchmarks further supports the potential advantages of XMT-2056 to offer greater efficacy and a wider therapeutic index,” said Timothy B. Lowinger, PhD, Chief Science and Technology Officer of Mersana Therapeutics. “In addition, new data with XMT-2056 in combination with trastuzumab supports our rationale for selecting an antibody that recognizes a novel epitope of HER2, providing broad combination potential with approved and investigational HER2 therapies.”

“STING is a fundamental mechanism yet approaches to date have been unsuccessful at stimulating the innate immune system in a targeted manner. Our Immunosynthen platform not only has the potential to address this limitation but also is designed to allow us to extend our ADC development efforts beyond cytotoxic payloads, which we believe represents a significant advancement in the ADC field,” said Anna Protopapas, President and Chief Executive Officer of Mersana Therapeutics. “We are particularly excited about the potential of XMT-2056 to offer a novel approach to the treatment of HER2-expressing tumors both as a single agent and in combination.”

Previously reported preclinical data suggest that XMT-2056 offers a highly differentiated approach, enabling tumor-targeted delivery of a STING agonist with improved efficacy and tolerability over a systemically-administered STING agonist benchmark. In vitro and in vivo studies demonstrate that STING-agonist ADCs activate the STING pathway in both tumor-resident immune cells and tumor cells, offering the potential for an increased therapeutic index and an advantage over other innate immune activating pathways.

The Company has evaluated Immunosynthen ADCs across a wide range of antibodies, targets, tumor models and mouse strains and observed broad efficacy and consistent results demonstrating target-dependent anti-tumor effects and has selected HER2 as the first target for clinical evaluation with XMT-2056. The Company developed a differentiated anti-HER2 antibody that binds a novel epitope distinct from that of trastuzumab and pertuzumab, providing the opportunity for combinations with these well-established anti-HER2 therapies.

New preclinical data presented today at the Triple Meeting include:

- XMT-2056 demonstrated increased efficacy in both high and low HER2 SCID mouse models in comparison to benchmark agents such as a trastuzumab-TLR7/8 agonist ADC as well as a small molecule systemically-administered STING agonist.
- XMT-2056 showed excellent in vivo efficacy as a single agent in a SKOV3 HER2 high model and this efficacy is further enhanced by combining XMT-2056 with a 3 mg/kg dose of trastuzumab.
- XMT-2056 was generally well-tolerated in NHP studies with no clinical signs and no adverse findings in clinical pathology or histopathology after single and repeat IV doses of 9 mg/kg, at exposures far exceeding those necessary for efficacy in mouse models, indicating the potential for a wide therapeutic index.

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 being studied in UPLIFT, a single-arm registration strategy in patients with platinum-resistant ovarian cancer, as well as in UPGRADE, a Phase 1 umbrella study in combination with other ovarian cancer therapies. UpRi is also being studied in the expansion portion of a Phase 1 proof-of-concept clinical study. 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 targeting a novel epitope of HER2, developed using the Company’s Immunosynthen platform. In addition, multiple

partners are using Mersana's Dolaflexin platform to advance their ADC pipelines. The Company routinely posts information that may be useful to investors on the "Investors and Media" section of our website at www.mersana.com.

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, the potential benefits of our product candidates, and expectations regarding future clinical trial results based on data achieved to date. 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 Quarterly Report on Form 10-Q filed on August 6, 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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