Mersana Therapeutics Reports Updated Data from the XMT-1536 Phase 1 Dose Escalation Study

March 30, 2020

- Well tolerated at doses up to 43 mg/m^2 with encouraging activity in heavily pre-treated patient populations

- Favorable trend towards higher response rates with higher NaPi2b expression

- On track for interim disclosure of Phase 1 expansion cohort data in Q2 2020

CAMBRIDGE, Mass., March 30, 2020 (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 updated efficacy and safety data in patients with ovarian cancer and non-small cell lung cancer (NSCLC) adenocarcinoma from its ongoing Phase 1 dose escalation study evaluating XMT-1536. The Company will host a call today, Monday, March 30, 2020, at 5:00 pm ET during which investigator Debra L. Richardson, MD, Associate Professor of Gynecologic Oncology at the Stephenson Cancer Center at the University of Oklahoma Health Sciences Center and the Sarah Cannon Research Institute and members of the Mersana executive team will present and discuss these data.

“These data demonstrate that XMT-1536, our first-in-class Dolaflexin ADC targeting NaPi2b, delivers confirmed responses and durable stable disease in heavily pretreated ovarian cancer and NSCLC adenocarcinoma patients who have exhausted all other treatment options. These data also show that XMT-1536 is well tolerated without the severe toxicities of other ADC platforms such as neutropenia, neuropathy and ocular toxicity. Moreover, these data establish the potential for a biomarker-response relationship to identify patients most likely to benefit from XMT-1536,” said Anna Protopapas, President and Chief Executive Officer of Mersana Therapeutics. “We look forward to advancing XMT-1536 for both ovarian cancer and NSCLC adenocarcinoma patients. Having already accumulated meaningful patient experience in the expansion cohorts, we remain on track to provide an interim update in the second quarter of 2020.”

Of the 59 patients enrolled, tumor types included 37 ovarian cancer, 11 NSCLC adenocarcinoma, and 11 other tumor types previously disclosed at lower dose levels. Patients were heavily pre-treated, with a median of five prior lines of treatment (range 1-10). These data include new patients dosed at 30, 36 and 43 mg/m^2. The majority of the ovarian cancer patients had received prior bevacizumab or PARP inhibitors. All NSCLC adenocarcinoma patients had received prior platinum and immunotherapy. Updated and new data as of February 3, 2020 includes:

• Safety profile consistent with previously reported data at lower doses.

- The most common treatment-related adverse events (TRAEs) were Grade 1-2 nausea, fatigue, headache and the most frequent Grade 3 TRAE was transient AST elevation.
- There were no dose limiting toxicities observed in the 43 mg/m^2 cohort.
- There was no reported severe neutropenia, peripheral neuropathy or ocular toxicity.

• Additional confirmed responses in heavily pretreated patients and favorable biomarker-response trend observed.

- First confirmed partial response seen in a NSCLC adenocarcinoma patient with prior treatments including carboplatin, pemetrexed, paclitaxel and nivolumab.
- At the 43 mg/m^2 dose level, 2/7 (29%) patients achieved partial responses (PRs) and 4/7 (57%) patients achieved stable disease (SD) for a disease control rate (DCR) of 6/7 (86%). In January 2020, the expansion portion of the Phase 1 study dose was amended from 36 mg/m^2 to 43 mg/m^2 for newly enrolled patients.
- For the subset of evaluable patients treated at **>**30 mg/m^2 who had higher NaPi2b expression, 5/15 (33%) achieved PR and 6/15 (40%) achieved SD for a DCR of 11/15 (73%).
- In contrast, for the subset of evaluable patients treated at **>**30 mg/m^2 who had lower NaPi2b expression, 0/9 (0%) achieved PR and 5/9 (55%) achieved SD for a DCR of 5/9 (55%).

Response - Ovarian Cancer and NSCLC adenocarcinoma N=39*		**N (%)**			
		All	**Higher NaPi2b ^{o}**	**Lower NaPi2b ^{oo}**	**Indeterminate NaPi2b ****
20 mg/m^2	N	10	7	2	1
	PR	**1 (10%)**	**0 (0%)**	**0 (0%)**	**1 (100%)**
	SD	6 (60%)	4 (57%)	2 (100%)	0 (0%)

	DCR (PR+SD)	**7 (70%)**	**4 (57%)**	**2 (100%)**	**1 (100%)**
30, 36, 40 mg/m^2	N	22	12	7	3
	PR	**3 (14%)**	**3 (25%)**	**0 (0%)**	**0 (0%)**
	SD	10 (45%)	6 (50%)	3 (43%)	1 (33%)
	DCR (PR+SD)	**13 (59%)**	**9 (75%)**	**3 (43%)**	**1 (33%)**
43 mg/m^2	N	7	3	2	2
	PR	**2 (29%)**	**2 (67%)**	**0 (0%)**	**0 (0%)**
	SD	4 (57%)	0 (0%)	2 (100%)	2 (100%)
	DCR (PR+SD)	**6 (86%)**	**2 (67%)**	**2 (100%)**	**2 (100%)**

*Excludes 3 patients discontinued due to investigator/patient choice and 1 without RECIST scan
**Hypocellular specimen/indeterminate for H-score or not determined yet
^{O} Higher NaPi2b Expression: at / above lowest H-score at which response observed (>110)
^{OO} Lower NaPi2b Expression: below the lowest H-score at which response observed (<110)

Mersana plans to enroll approximately 45 patients in each of the ovarian cancer and NSCLC adenocarcinoma patient cohorts in the expansion portion of the XMT-1536 Phase 1 study. The Company expects to present interim data from the dose expansion study in the second quarter of 2020.

Conference Call Details
Mersana Therapeutics will host a conference call and webcast today at 5:00 p.m. ET to review these data. To access the call, please dial 877-303-9226 (domestic) or 409-981-0870 (international) and provide the Conference ID 2889994. A live webcast of the presentation will be available on the Investors & Media section of the Mersana website at www.mersana.com.

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, XMT-1536, is in a Phase 1 proof-of-concept clinical trial in patients with tumors likely to express NaPi2b, including ovarian cancer and NSCLC adenocarcinoma. Mersana's second product candidate targeting NaPi2b-expressing tumors, XMT-1592, is an ADC created using Mersana's customizable and homogenous Dolasynthen platform. The Company's early stage programs include a B7-H4 targeting ADC, as well as 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. Forward-looking statements generally can be identified by terms such as "anticipates," "believes," "could," "seeks," "estimates," "intends," "may," "plans," "potential," "predicts," "projects," "should," "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 may not be predictive of the results or success of ongoing or later preclinical or clinical trials, that the development and testing of the Company's product candidates and new platforms will take longer and/or cost more than planned, including as a result of any impact of the current pandemic, and that the identification of new product candidates will take longer than planned, as well as those listed in the Company's Annual Report on Form 10-K filed on February 28, 2020, with the Securities and Exchange Commission ("SEC") and subsequent SEC filings. 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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