UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **May 27, 2020**

MERSANA THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**001-38129**	**04-3562403**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

840 Memorial Drive **Cambridge, MA 02139** **Cambridge, MA**	**02139**
(Address of principal executive offices)	(Zip Code)

(Registrant's telephone number, including area code): **(617) 498-0020**

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.0001 par value	MRSN	The Nasdaq Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Item 8.01 Other Events.

On May 27, 2020, Mersana Therapeutics, Inc. (the "Company") issued a press release reporting interim data from the expansion portion of the XMT-1536 Phase 1 study. The Company's press release is attached as Exhibit 99.1 to this current report and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit No.	Description
99.1	Press Release of Mersana Therapeutics, Inc., dated May 27, 2020

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MERSANA THERAPEUTICS, INC.

By: /s/ Brian DeSchuytner
Brian DeSchuytner
Senior Vice President, Finance & Product Strategy

Date: May 27, 2020

Exhibit 99.1

Mersana Therapeutics Reports Positive Interim Data from the Expansion Portion of the XMT-1536 Phase 1 Study

- Achieved 35% objective response rate, including 10% complete response rate, and 80% disease control rate among twenty evaluable patients with ovarian cancer

- Data continue to support a NaPi2b biomarker-based patient selection strategy

- Generally well-tolerated with no new safety signals

- Data to be presented on a conference call today at 8 a.m. ET and at the American Society of Clinical Oncology 2020 Virtual Scientific Program on Friday, May 29, 2020

CAMBRIDGE, Mass., May 27, 2020 -- 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 reported interim safety, tolerability and efficacy data from the ongoing expansion portion of the Phase 1 study evaluating XMT-1536, its first-in-class ADC candidate targeting NaPi2b, in patients with ovarian cancer and non-small cell lung (NSCLC) adenocarcinoma. The Company will host a conference call and webcast today, Wednesday, May 27, 2020, at 8:00 a.m. 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 will also be presented in a poster session at the American Society of Clinical Oncology 2020 Virtual Scientific Program on Friday, May 29, 2020 starting at 8:00 a.m. ET.

“These data demonstrate not only that XMT-1536, our first-in-class Dolaflexin ADC targeting NaPi2b, can deliver confirmed complete responses, partial responses and durable stable disease in platinum-resistant ovarian cancer, but also that these responses can deepen over time in a patient population with poor prognosis and limited treatment options,” said Anna Protopapas, President and Chief Executive Officer of Mersana Therapeutics. “XMT-1536 continues to demonstrate that it is generally well tolerated, without the dose-limiting toxicities of other ADC platforms such as severe neutropenia, neuropathy and ocular toxicity. These are encouraging signals as we look forward to reporting more mature data in the second half of the year and continuing to advance XMT-1536 for both platinum-resistant ovarian cancer and NSCLC adenocarcinoma patients.”

The expansion portion of the Phase 1 study is enrolling patients with platinum-resistant ovarian cancer, fallopian tube or primary peritoneal cancer who have received up to three lines of prior therapy and in some cases four lines of prior therapy regardless of platinum status as well as patients with NSCLC adenocarcinoma who had received prior treatment with platinum-based therapy and immunotherapy or targeted agents. With a data cutoff of May 1, 2020 these data include 34 patients total, 27 with ovarian cancer and seven with NSCLC adenocarcinoma. Patients with ovarian cancer had a median of three prior lines of treatment (range 1-5), and patients with NSCLC adenocarcinoma had a median of two lines of therapy (range 1-3). Fifteen of the patients were dosed at 36 mg/m^2, and 19 patients were dosed at 43 mg/m^2 every four weeks. Key findings include:

- **Safety profile consistent with previously reported dose escalation data and no new safety signals observed.**
  - The most frequently (≥20%) reported treatment-related adverse events (TRAEs) were Grade 1-2 fatigue, nausea, vomiting, pyrexia, decreased appetite, diarrhea and fever and transient AST elevation without associated changes in bilirubin or cases of Hy's law.
  - There were no reported cases of severe neutropenia, peripheral neuropathy or ocular toxicity.

- **Promising antitumor activity observed in platinum-resistant ovarian cancer.**
  - Of the 20 patients that were evaluable for response, 2/20 (10%) achieved confirmed complete responses (CRs) and 5/20 (25%) achieved confirmed partial responses (PRs) for an objective response rate (ORR) of 35%. Additionally, 1/20 (5%) patients achieved an unconfirmed partial response for which a confirmatory scan was pending at the time of the data cutoff, and 8/20 (40%) patients achieved stable disease (SD); the disease control rate (DCR) was 16/20 (80%).
  - The majority of responders had prior treatment with bevacizumab, PARP inhibitors, or both. Both patients with confirmed complete responses had prior treatment with bevacizumab and PARP inhibitors.

- **Data continue to support a NaPi2b biomarker-based patient selection strategy.**
  - An emerging biomarker-response relationship continues to be observed. For consistency, these data were bifurcated using the same expression level as used in the dose escalation portion of the study. More data are needed to define the patient selection strategy.
    - Among those patients with higher NaPi2b expression, two (2/14) patients achieved a CR, and two (2/14) achieved a PR.
    - Two (2/2) patients with NaPi2b expression not yet determined at the time of data cutoff achieved confirmed PRs.
    - One (1/4) patient with lower NaPi2b expression (H-score of 90) achieved a confirmed PR.
    - The Company expects to define the patient selection strategy based on the total data set from patients treated with XMT-1536.

Response - Ovarian Cancer N=20*	All	Higher NaPi2b [O]	Lower NaPi2b [OO]	NaPi2b Not Yet Determined
N	20	14	4	2
CR	2 (10%)	2 (14%)	0 (0%)	0 (0%)
PR	5 (25%)	2 (14%)	1 (25%)	2 (100%)
uPR**	1 (5%)	1 (7%)	0 (0%)	0 (0%)
SD	8 (40%)	7 (50%)	1 (25%)	0 (0%)
PD	4 (20%)	2 (14%)	2 (50%)	0 (0%)

*7 patients not evaluable: 1 withdrew consent (Lower NaPi2b Expression); 1 with unrelated SAE leading to discontinuation and death (Lower NaPi2b Expression); 5 have not yet received a scan

**uPR=1 patient with unconfirmed PR; confirmatory scan pending at the time of data cut

[O] Higher NaPi2b Expression: defined in dose escalation as at / above lowest H-score at which response observed (≥110)

[OO] Lower NaPi2b Expression: defined in dose escalation as below the lowest H-score at which response observed (<110)

- **More data are needed to assess antitumor activity of XMT-1536 in NSCLC adenocarcinoma patients.**
  - At the time of data cutoff, four out of seven NSCLC adenocarcinoma patients were evaluable for response, and 2/4 (50%) patients had achieved SD as best response.

Conference Call Details

Mersana Therapeutics will host a conference call and webcast today at 8:00 a.m. 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. To access the call, please dial 877-303-9226 (domestic) or 409-981-0870 (international) and provide the Conference ID 7785868. 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 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 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 and expectations regarding future clinical 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," "plans," "possible," "potential," "predicts," "projects," "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 clinical trials, and that the development and testing of the Company's product candidates will take longer and/or cost more than planned, as well as those listed in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on February 28, 2020, the Company's Quarterly Report on Form 10-Q filed with the SEC on May 8, 2020 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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Contact:

Investor & Media Contact
Sarah Carmody
617-844-8577
scarmody@mersana.com