

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

SCHEDULE 13G/A

Under the Securities Exchange Act of 1934  
(Amendment No. 1)\*

**Mersana Therapeutics, Inc.**

(Name of Issuer)

**Common Stock, par value, \$0.0001 per share**

(Title of Class of Securities)

**59045L106**

(CUSIP Number)

**December 31, 2017**

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)  
 Rule 13d-1(c)  
 Rule 13d-1(d)

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1	NAME OF REPORTING PERSONS Rock Springs Capital Management LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 1,326,800
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 1,326,800
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,326,800	
10	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.8%	
12	TYPE OF REPORTING PERSON IA	

1	NAME OF REPORTING PERSONS Rock Springs Capital LLC	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 1,326,800
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 1,326,800
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,326,800	
10	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.8%	
12	TYPE OF REPORTING PERSON OO	

1	NAME OF REPORTING PERSONS Rock Springs Capital Master Fund LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 0
	6	SHARED VOTING POWER 1,326,800
	7	SOLE DISPOSITIVE POWER 0
	8	SHARED DISPOSITIVE POWER 1,326,800
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,326,800	
10	CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) 5.8%	
12	TYPE OF REPORTING PERSON PN	

**Item 1. (a) Name of Issuer**

Mersana Therapeutics, Inc. (the "Issuer")

**(b) Address of Issuer's Principal Executive Offices**

840 Memorial Drive, Cambridge, MA 02139

**Item 2. (a) Name of Person Filing**

This Statement is filed on behalf of each of the following persons (collectively, the "Reporting Persons"):

- i. Rock Springs Capital Management LP ("RSCM");
- ii. Rock Springs Capital LLC ("RSC"); and
- iii. Rock Springs Capital Master Fund LP ("Master Fund").

This Statement relates to Shares (as defined herein) held directly by the Master Fund, which is a Cayman Island exempted limited partnership, and indirectly held by RSCM, a Delaware limited partnership, and RSC, a Delaware limited liability company. RSCM serves as the investment manager to the Master Fund. RSC is the general partner of RSCM.

**(b) Address of Principal Business Office, or, if none, Residence****Rock Springs Capital Management LP and Rock Springs Capital LLC**

650 South Exeter, Suite 1070  
Baltimore, MD 21202

**Rock Springs Capital Master Fund LP**

c/o Walkers Corporate Limited  
Cayman Corporate Centre  
27 Hospital Road  
George Town, Grand Cayman, KY1-9008, Cayman Islands

**(c) Citizenship**

Rock Springs Capital Management LP - Delaware  
Rock Springs Capital LLC - Delaware  
Rock Springs Capital Master Fund LP - Cayman Islands

**(d) Title of Class of Securities**

Common Stock, par value, \$0.0001 per share (the "Shares")

**(e) CUSIP No.:**

59045L106

**Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:**

Not Applicable.

- (a)  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);
- (b)  Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
- (c)  Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
- (d)  Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);
- (e)  An investment adviser in accordance with §240.13d-1(b)(1)(ii)(E);
- (f)  An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g)  A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
- (h)  A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i)  A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j)  A non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J);
- (k)  A group, in accordance with §240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution: \_\_\_\_\_

**Item 4. Ownership**

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

**(a) Amount beneficially owned:**

Rock Springs Capital Management LP: 1,326,800  
Rock Springs Capital LLC: 1,326,800  
Rock Springs Capital Master Fund LP: 1,326,800

**(b) Percent of class:**

Rock Springs Capital Management LP: 5.8%  
Rock Springs Capital LLC: 5.8%  
Rock Springs Capital Master Fund LP: 5.8%

**(c) Number of shares as to which the person has:****(i) Sole power to vote or to direct the vote:**

Rock Springs Capital Management LP: 0  
Rock Springs Capital LLC: 0  
Rock Springs Capital Master Fund LP: 0

**(ii) Shared power to vote or to direct the vote:**

Rock Springs Capital Management LP: 1,326,800  
Rock Springs Capital LLC: 1,326,800  
Rock Springs Capital Master Fund LP: 1,326,800

**(iii) Sole power to dispose or to direct the disposition of:**

Rock Springs Capital Management LP: 0  
Rock Springs Capital LLC: 0  
Rock Springs Capital Master Fund LP: 0

**(iv) Shared power to dispose or to direct the disposition of:**

Rock Springs Capital Management LP: 1,326,800  
Rock Springs Capital LLC: 1,326,800  
Rock Springs Capital Master Fund LP: 1,326,800

**Item 5. Ownership of Five Percent or Less of a Class**

Not Applicable.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following

**Item 6. Ownership of More Than Five Percent on Behalf of Another Person**

Not Applicable.

**Item 7. Identification and Classification of the Subsidiary which Acquired the Security Being Reported on by the Parent Holding Company or Control Person**

Not Applicable. Please see response to Item 2.

**Item 8. Identification and Classification of Members of the Group**

Not Applicable.

**Item 9. Notice of Dissolution of Group**

Not Applicable.

**Item 10. Certification**

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

**SIGNATURE**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 14, 2018

Rock Springs Capital Management LP

By: Graham McPhail  
Name: Graham McPhail  
Title: Managing Member

Rock Springs Capital LLC  
By: Rock Springs Capital Management LP

By: Graham McPhail  
Name: Graham McPhail  
Title: Managing Member

Rock Springs Capital Master Fund LP  
By: Rock Springs Capital Management LP

By: Graham McPhail  
Name: Graham McPhail  
Title: Managing Member



**JOINT FILING AGREEMENT**

The undersigned acknowledge and agree that the foregoing statement on Schedule 13G/A is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13G/A shall be filed on behalf of each of the undersigned without the necessity of filing additional joint filing agreements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him or it contained herein and therein, but shall not be responsible for the completeness and accuracy of the information concerning the others, except to the extent that he or it knows or has reason to believe that such information is inaccurate.

Date: February 14, 2018

Rock Springs Capital Management LP

By: Graham McPhail  
Name: Graham McPhail  
Title: Managing Member

Rock Springs Capital LLC  
By: Rock Springs Capital Management LP

By: Graham McPhail  
Name: Graham McPhail  
Title: Managing Member

Rock Springs Capital Master Fund LP  
By: Rock Springs Capital Management LP

By: Graham McPhail  
Name: Graham McPhail  
Title: Managing Member