

**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**SCHEDULE 13G**

(Rule 13d-102)

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO § 240.13d-1(b), (c) AND (d) AND AMENDMENTS THERETO FILED  
PURSUANT TO § 240.13d-2.**

(Amendment No. )\*

**RXi Pharmaceuticals Corporation**

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(Name of Issuer)

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

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(Title of Class of Securities)

**74979C808**

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(CUSIP Number)

**October 1, 2018**

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(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)

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\*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 purposes 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).

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(1) Names of Reporting Persons  
CVI Investments, Inc.

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(2) Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

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(3) SEC Use Only

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(4) Citizenship or Place of Organization  
Cayman Islands

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(5) Sole Voting Power  
0

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Number of Shares Beneficially Owned by Each Reporting Person With  
(6) Shared Voting Power \*\*  
814,237

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(7) Sole Dispositive Power  
0

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(8) Shared Dispositive Power \*\*  
814,237

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(9) Aggregate Amount Beneficially Owned by Each Reporting Person  
814,237

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(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

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(11) Percent of Class Represented by Amount in Row (9)  
9.9%

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(12) Type of Reporting Person (See Instructions)  
CO

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\*\* Heights Capital Management, Inc. is the investment manager to CVI Investments, Inc. and as such may exercise voting and dispositive power over these shares.

(1) Names of Reporting Persons  
Heights Capital Management, Inc.

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(2) Check the Appropriate Box if a Member of a Group (See Instructions)  
(a)   
(b)

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(3) SEC Use Only

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(4) Citizenship or Place of Organization  
Delaware

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(5) Sole Voting Power  
0

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Number of Shares Beneficially Owned by Each Reporting Person With  
(6) Shared Voting Power \*\*  
814,237

---

(7) Sole Dispositive Power  
0

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(8) Shared Dispositive Power \*\*  
814,237

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(9) Aggregate Amount Beneficially Owned by Each Reporting Person  
814,237

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(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

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(11) Percent of Class Represented by Amount in Row (9)  
9.9%

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(12) Type of Reporting Person (See Instructions)  
CO

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\*\* Heights Capital Management, Inc. is the investment manager to CVI Investments, Inc. and as such may exercise voting and dispositive power over these shares.

**Item 1.**

- (a) Name of Issuer  
RXi Pharmaceuticals Corporation (the "Company")
- 
- (b) Address of Issuer's Principal Executive Offices  
257 Simarano Drive, Suite 101, Marlborough, MA 01752
- 

**Item 2(a).**

Name of Person Filing  
This statement is filed by the entities listed below, who are collectively referred to herein as "Reporting Persons," with respect to the shares of Common Stock of the Company, \$0.0001 par value per share (the "Shares").

- (i) CVI Investments, Inc.
- (ii) Heights Capital Management, Inc.
- 

**Item 2(b).**

Address of Principal Business Office or, if none, Residence  
The address of the principal business office of CVI Investments, Inc. is:

P.O. Box 309GT  
Ugland House  
South Church Street  
George Town  
Grand Cayman  
KY1-1104  
Cayman Islands

The address of the principal business office of Heights Capital Management, Inc. is:

101 California Street, Suite 3250  
San Francisco, California 94111

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**Item 2(c).**

Citizenship  
Citizenship is set forth in Row 4 of the cover page for each Reporting Person hereto and is incorporated herein by reference for each such Reporting Person.

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**Item 2(d)**

Title of Class of Securities  
Common Stock, \$0.0001 par value per share

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**Item 2(e)**

CUSIP Number  
74979C808

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**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:**

- (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 association 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)  Group, in accordance with Rule 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.

The information required by Items 4(a) — (c) is set forth in Rows 5 — 11 of the cover page for each Reporting Person hereto and is incorporated herein by reference for each such Reporting Person.

The number of Shares reported as beneficially owned consists of (i) Shares, and (ii) Shares issuable upon the exercise of pre-funded Warrants to purchase Shares (the “Pre-Funded Warrants”). The Pre-Funded Warrants are not exercisable to the extent that the total number of Shares then beneficially owned by a Reporting Person and its affiliates and any other persons whose beneficial ownership of Shares would be aggregated with such Reporting Person for purposes of Section 13(d) of the Exchange Act, would exceed 9.99%.

The Company’s Prospectus to its Form S-1 Registration Statement (Registration Nos. 333-227173 and 333-227617), filed on October 2, 2018 indicates there were 8,086,280 Shares outstanding (excluding Shares underlying the Pre-Funded Warrants and Shares underlying other warrants issued at the same time) as of the completion of the offering of the units referred to therein.

Heights Capital Management, Inc., which serves as the investment manager to CVI Investments, Inc., may be deemed to be the beneficial owner of all Shares owned by CVI Investments, Inc. Each of the Reporting Persons hereby disclaims any beneficial ownership of any such Shares, except for their pecuniary interest therein.

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

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.

**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 each of the undersigned certifies that, to the best of its 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.

SIGNATURES

After reasonable inquiry and to the best of its knowledge and belief, each of the undersigned certifies that the information with respect to it set forth in this statement is true, complete, and correct.

Dated: October 10, 2018

CVI INVESTMENTS, INC.

HEIGHTS CAPITAL MANAGEMENT, INC.

By: Heights Capital Management, Inc. pursuant to a Limited Power of Attorney, a copy of which is attached as Exhibit I hereto

By: /s/ Brian Sopinsky  
Name: Brian Sopinsky  
Title: Secretary

By: /s/ Brian Sopinsky  
Name: Brian Sopinsky  
Title: Secretary

**EXHIBIT INDEX**

<b>EXHIBIT</b>	<b>DESCRIPTION</b>
I	Limited Power of Attorney
II	Joint Filing Agreement

**Exhibit I**

**LIMITED POWER OF ATTORNEY**

THIS LIMITED POWER OF ATTORNEY given on the 16th day of July, 2015 by CVI Investments, Inc. (hereinafter called "the Company"), whose Registered Office is situated at PO Box 309GT, Uglan House, South Church Street, George Town, Grand Cayman, Cayman Islands.

WHEREAS, by agreement dated July 16, 2015, by and between the Company and Heights Capital Management, Inc., the Company expressly authorized Heights Capital Management, Inc. to enter into transactions in certain designated areas as defined in the Discretionary Investment Management Agreement attached hereto marked "Appendix 1."

NOW THIS DEED WITNESSETH that William Walmsley, Director of the Company, hereby appoints on behalf of the Company the firm of HEIGHTS CAPITAL MANAGEMENT, INC., which through its officers, directors and employees is hereby formally granted limited power of attorney for the purpose of entering into transactions on behalf and for the account of the Company; and to take all actions on behalf of the Company as may be necessary to consummate such transactions, including but not limited to making, negotiating; signing, endorsing, executing, acknowledging and delivering in the name of the Company all applications, contracts, agreements, notes, statements, certificates, proxies and any other instruments of whatever kind and nature as may be necessary or proper in connection with the entering into of such transactions, instructing the transfer of funds where necessary with respect to such transactions, and performing all of the services specified under the Discretionary Investment Management Agreement with respect to such transactions.

IN WITNESS WHEREOF, the Company has caused this Limited Power of Attorney to take effect on the day and year above written.

CVI Investments, Inc.

By: /s/ William Walmsley  
William Walmsley, Director



**EXHIBIT II**  
**JOINT FILING AGREEMENT**

This will confirm the agreement by and among the undersigned that the Schedule 13G filed with the Securities and Exchange Commission on or about the date hereof with respect to the beneficial ownership by the undersigned of the shares of Common Stock of RXi Pharmaceuticals Corporation, \$0.0001 par value per share, is being filed, and all amendments thereto will be filed, on behalf of each of the persons and entities named below in accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Dated as of October 10, 2018

CVI INVESTMENTS, INC.

HEIGHTS CAPITAL MANAGEMENT, INC.

By: Heights Capital Management, Inc. pursuant to a Limited Power of Attorney

By: /s/ Brian Sopinsky  
Name: Brian Sopinsky  
Title: Secretary

By: /s/ Brian Sopinsky  
Name: Brian Sopinsky  
Title: Secretary