

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

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

Rhythm Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock, \$.001 par value

(Title of Class of Securities)

76243J105

(CUSIP Number)

**Louis S. Citron, Esq.
New Enterprise Associates
1954 Greenspring Drive, Suite 600, Timonium, MD 21093
(410) 842-4000**

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

October 10, 2017

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

*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 disclosures provided in a prior cover page.

The information required on 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	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) New Enterprise Associates 13, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) NEA Partners 13, L.P.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) NEA 13 GP, LTD	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) CO	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) M. James Barrett	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Peter J. Barris	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Forest Baskett	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Patrick J. Kerins	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) David M. Mott	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Scott D. Sandell	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Ravi Viswanathan	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,909,956 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,909,956 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,909,956 shares	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 18.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

Schedule 13D

Item 1. Security and Issuer.

This statement relates to the common stock, \$.001 par value (the "Common Stock") of Rhythm Pharmaceuticals, Inc. (the "Issuer") having its principal executive office at 500 Boylston Street, 11th Floor, Boston, MA 02116.

Item 2. Identity and Background.

This statement is being filed by:

(a) New Enterprise Associates 13, L.P. ("NEA 13"); NEA Partners 13, L.P. ("NEA Partners 13"), which is the sole general partner of NEA 13; and NEA 13 GP, LTD ("NEA 13 LTD" and, together with NEA Partners 13, the "Control Entities"), which is the sole general partner of NEA Partners 13; and

(b) M. James Barrett ("Barrett"), Peter J. Barris ("Barris"), Forest Baskett ("Baskett"), Patrick J. Kerins ("Kerins"), David M. Mott ("Mott"), Scott D. Sandell ("Sandell"), and Ravi Viswanathan ("Viswanathan") (together, the "Directors"). The Directors are the directors of NEA 13 LTD.

The persons named in this Item 2 are referred to individually herein as a "Reporting Person" and collectively as the "Reporting Persons."

The address of the principal business office of NEA 13 and each Control Entity is New Enterprise Associates, 1954 Greenspring Drive, Suite 600, Timonium, MD 21093. The address of the principal business office of each of Barrett, Barris, Kerins and Mott is New Enterprise Associates, 5425 Wisconsin Avenue, Suite 800, Chevy Chase, MD 20815. The address of the principal business office of Baskett, Sandell, and Viswanathan is New Enterprise Associates, 2855 Sand Hill Road, Menlo Park, California 94025.

The principal business of NEA 13 is to invest in and assist growth-oriented businesses located principally in the United States. The principal business of NEA Partners 13 is to act as the sole general partner of NEA 13. The principal business of NEA 13 LTD is to act as the sole general partner of NEA Partners 13. The principal business of each of the Directors is to manage the Control Entities, NEA 13 and a number of affiliated partnerships with similar businesses.

During the five years prior to the date hereof, none of the Reporting Persons has been convicted in a criminal proceeding or has been a party to a civil proceeding ending in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

NEA 13 and NEA Partners 13 are exempted limited partnerships organized under the laws of the Cayman Islands. NEA 13 LTD is an exempted company organized under the laws of the Cayman Islands. Each of the Directors is a United States citizen.

Item 3. Source and Amount of Funds or Other Consideration.

On October 4, 2017, the Registration Statement on Form S-1 filed with the Securities and Exchange Commission (the "SEC") by the Issuer (File No. 333-220337) in connection with its initial public offering of 7,050,000 shares of Common Stock of the Issuer (the "IPO") was declared effective. The closing of the IPO took place on October 10, 2017 (the "Closing"), and at such closing NEA 13 purchased an aggregate of 550,000 shares of Common Stock at the IPO price of \$17.00 per share. In addition, prior to the IPO NEA 13 purchased from the Issuer in a series of private transactions (i) 29,378 shares of Common Stock, (ii) 1,402,870 shares of Series A Preferred Stock ("Series A Stock"), and (iii) 2,927,708 shares of Series A-1 Junior Preferred Stock ("Series A-1 Stock") for an aggregate purchase price of \$28,858,968.57. Immediately prior to the closing of the IPO, these shares of Series A Stock and Series A-1 Stock automatically converted into 4,330,578 shares of Common Stock of the Issuer. NEA 13 now holds a total of 4,909,956 shares of the Issuer's Common Stock (the "NEA 13 Shares").

The working capital of NEA 13 was the source of the funds for the purchase of the NEA 13 Shares. No part of the purchase price of the NEA 13 Shares was represented by funds or other consideration borrowed or otherwise obtained for the purpose of acquiring, holding, trading or voting the NEA 13 Shares.

Item 4. Purpose of Transaction.

NEA 13 acquired the NEA 13 Shares for investment purposes. Depending on market conditions, its continuing evaluation of the business and prospects of the Issuer and other factors, NEA 13 and other Reporting Persons may dispose of or acquire additional shares of the Issuer. Except as set forth above, none of the Reporting Persons has any present plans which relate to or would result in:

- (a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;
- (f) Any other material change in the Issuer's business or corporate structure;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934; or
- (j) Any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

- (a) NEA 13 is the record owner of the NEA 13 Shares. As the sole general partner of NEA 13, NEA Partners 13 may be deemed to own beneficially the NEA 13 Shares. As the sole general partner of NEA Partners 13, NEA 13 LTD may be deemed to own beneficially the NEA 13 Shares. As members of NEA 13 LTD, each of the Directors may be deemed to own beneficially the NEA 13 Shares.

Each Reporting Person disclaims beneficial ownership of the NEA 13 Shares other than those shares which such person owns of record.

The percentage of outstanding Common Stock of the Issuer which may be deemed to be beneficially owned by each Reporting Person is set forth on Line 13 of such Reporting Person's cover sheet. Such percentage was calculated based on the 26,073,984 shares of Common Stock reported to be outstanding immediately following the IPO on the Issuer's prospectus filed under Rule 424(b)(4), filed with the SEC on October 5, 2017.

- (b) Regarding the number of shares as to which such person has:
 - (i) sole power to vote or to direct the vote: See line 7 of cover sheets
 - (ii) shared power to vote or to direct the vote: See line 8 of cover sheets
 - (iii) sole power to dispose or to direct the disposition: See line 9 of cover sheets
 - (iv) shared power to dispose or to direct the disposition: See line 10 of cover sheets
- (c) Except as set forth in Item 3 above, none of the Reporting Persons has effected any transaction in the Common Stock during the last 60 days.
- (d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, Shares beneficially owned by any of the Reporting Persons.
- (e) Not applicable.

Item 6. Contracts, Arrangements, Undertakings or Relationships with Respect to Securities of the Issuer.

NEA 13 has entered into a lock-up agreement with the underwriters of the IPO pursuant to which NEA 13 has generally agreed, subject to certain exceptions, not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of the Issuer's common stock or any securities convertible into or exercisable or exchangeable for any shares of the Issuer's common stock, or enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock for a period of 180 days after October 4, 2017. Morgan Stanley & Co. LLC, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Cowen and Company, LLC, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

Item 7. Material to be Filed as Exhibits.

Exhibit 1 – Agreement regarding filing of joint Schedule 13D.

Exhibit 2 – Power of Attorney regarding filings under the Securities Exchange Act of 1934, as amended.

SIGNATURE

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

EXECUTED this 13th day of October, 2017.

NEW ENTERPRISE ASSOCIATES 13, L.P.

By: NEA PARTNERS 13, L.P.
General Partner

By: NEA 13 GP, LTD
General Partner

By: _____
*
Peter J. Barris
Director

NEA PARTNERS 13, L.P.

By: NEA 13 GP, LTD
General Partner

By: _____
*
Peter J. Barris
Director

NEA 13 GP, LTD

By: _____
*
Peter J. Barris
Director

*

M. James Barrett

*

Peter J. Barris

*

Forest Baskett

*

Patrick J. Kerins

*

David M. Mott

*

Scott D. Sandell

*

Ravi Viswanathan

*/s/ Louis S. Citron_____

Louis S. Citron

As attorney-in-fact

This Schedule 13D was executed by Louis S. Citron on behalf of the individuals listed above pursuant to a Power of Attorney a copy of which is attached as Exhibit 2

AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of shares of stock of Rhythm Pharmaceuticals, Inc.

EXECUTED this 13th day of October, 2017.

NEW ENTERPRISE ASSOCIATES 13, L.P.

By: NEA PARTNERS 13, L.P.
General Partner

By: NEA 13 GP, LTD
General Partner

By: _____
*
Peter J. Barris
Director

NEA PARTNERS 13, L.P.

By: NEA 13 GP, LTD
General Partner

By: _____
*
Peter J. Barris
Director

NEA 13 GP, LTD

By: _____
*
Peter J. Barris
Director

*

M. James Barrett

*

Peter J. Barris

*

Forest Baskett

*

Patrick J. Kerins

*

David M. Mott

*

Scott D. Sandell

*

Ravi Viswanathan

*/s/ Louis S. Citron

Louis S. Citron

As attorney-in-fact

This Agreement relating to Schedule 13D was executed by Louis S. Citron on behalf of the individuals listed above pursuant to a Power of Attorney a copy of which is attached hereto as Exhibit 2.

EXHIBIT 2

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Louis S. Citron, Timothy Schaller, Sasha Keough and Stephanie Brecher, and each of them, with full power to act without the others, his or her true and lawful attorney-in-fact, with full power of substitution, to sign any and all instruments, certificates and documents that may be necessary, desirable or appropriate to be executed on behalf of himself as an individual or in his or her capacity as a direct or indirect general partner, director, officer or manager of any partnership, corporation or limited liability company, pursuant to section 13 or 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and any and all regulations promulgated thereunder, and to file the same, with all exhibits thereto, and any other documents in connection therewith, with the Securities and Exchange Commission, and with any other entity when and if such is mandated by the Exchange Act or by the Financial Industry Regulatory Authority, granting unto said attorney-in-fact full power and authority to do and perform each and every act and thing necessary, desirable or appropriate, fully to all intents and purposes as he or she might or could do in person, thereby ratifying and confirming all that said attorney-in-fact, or his or her substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, this Power of Attorney has been signed as of the 13th day of March, 2017.

/s/ M. James Barrett
M. James Barrett

/s/ Peter J. Barris
Peter J. Barris

/s/ Forest Baskett
Forest Baskett

/s/ Ali Behbahani
Ali Behbahani

/s/ Colin Bryant
Colin Bryant

/s/ Carmen Chang
Carmen Chang

/s/ Anthony A. Florence, Jr.
Anthony A. Florence, Jr.

/s/ Carol G. Gallagher
Carol G. Gallagher

/s/ Dayna Grayson
Dayna Grayson

/s/ Patrick J. Kerins
Patrick J. Kerins

/s/ P. Justin Klein
P. Justin Klein

/s/ Vanessa Larco
Vanessa Larco

/s/ Joshua Makower
Joshua Makower

/s/ Mohamad H. Makhzoumi
Mohamad H. Makhzoumi

/s/ Edward T. Mathers
Edward T. Mathers

/s/ David M. Mott
David M. Mott

/s/ Sara M. Nayeem
Sara M. Nayeem

/s/ Jason R. Nunn
Jason R. Nunn

/s/ Gregory Papadopoulos
Gregory Papadopoulos

/s/ Chetan Puttagunta
Chetan Puttagunta

/s/ Jon Sakoda
Jon Sakoda

/s/ Scott D. Sandell
Scott D. Sandell

/s/ A. Brooke Seawell
A. Brooke Seawell

/s/ Peter W. Sonsini
Peter W. Sonsini

/s/ Melissa Taunton
Melissa Taunton

/s/ Frank M. Torti
Frank M. Torti

/s/ Ravi Viswanathan
Ravi Viswanathan

/s/ Paul E. Walker
Paul E. Walker

/s/ Rick Yang
Rick Yang