

OMB APPROVAL	
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**INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>BARRETT M JAMES</u> <hr/> (Last) (First) (Middle) <u>1954 GREENSPRING DRIVE</u> <u>SUITE 600</u> <hr/> (Street) <u>TIMONIUM MD 21093</u> <hr/> (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) <u>10/25/2016</u>	3. Issuer Name and Ticker or Trading Symbol <u>Ra Pharmaceuticals, Inc. [ RARX ]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) <hr/> 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person

**Table I - Non-Derivative Securities Beneficially Owned**

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
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**Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Series A Preferred Stock	(1)	(1)	Common Stock	1,778,227	(1)	I	See Note 2 <sup>(2)</sup>
Series B-1 Preferred Stock	(3)	(3)	Common Stock	669,951	(3)	I	See Note 2 <sup>(2)</sup>
Series B-2 Preferred Stock	(4)	(4)	Common Stock	623,210	(4)	I	See Note 2 <sup>(2)</sup>
Warrants to Purchase Common Stock	(5)	04/01/2022	Common Stock	80,658	(5)	I	See Note 2 <sup>(2)</sup>

**Explanation of Responses:**

- Each share of the Series A Preferred Stock is convertible into Common Stock on a 1-for-7 basis automatically upon the closing of the Issuer's initial public offering, and has no expiration date.
- The Reporting Person is a director of NEA 13 GP, LTD, which is the sole general partner of NEA Partners 13, L.P. ("NEA Partners 13"). NEA Partners 13 is the sole general partner of New Enterprise Associates 13, L.P. ("NEA 13"), which is the direct beneficial owner of the securities. The Reporting Person disclaims beneficial ownership, within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, or otherwise of such portion of the NEA 13 shares in which the Reporting Person has no pecuniary interest.
- Each share of the Series B-1 Preferred Stock is convertible into Common Stock on a 1-for-7 basis automatically upon the closing of the Issuer's initial public offering, and has no expiration date.
- Each share of the Series B-2 Preferred Stock is convertible into Common Stock on a 1-for-7 basis automatically upon the closing of the Issuer's initial public offering, and has no expiration date.
- The Warrants to Purchase Common Stock have a \$0.07 exercise price and are automatically exercised for shares of Common Stock on a net issuance basis upon consummation of the Issuer's initial public offering of Common Stock.

**Remarks:**

/s/ Sasha Keough, attorney-in-fact 10/25/2016

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 5 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.