

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

SCHEDULE 13D
(RULE 13d-101)

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULE 13d-1(a)
AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(a)**

(Amendment No. 2)*

Ra Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock
(Title of Class of Securities)

74933V108
(CUSIP Number)

Travis Boettner
Morgenthaler Management Corporation
3200 Alpine Road, Portola Valley, CA 94028
(650) 681-8420
(Name, Address and Telephone Number of Person
Authorized to Receive Notices and Communications)

December 14, 2018
(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 Rule 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.

This 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	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Morgenthaler Venture Partners IX, L.P. ("MVP IX")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 2,584,477 shares, except that Morgenthaler Management Partners IX, LLC ("MMP IX"), the general partner of MVP IX, may be deemed to have sole power to vote these shares, and Robert C. Bellas, Jr. ("Bellas"), Ralph E. Christoffersen ("Christoffersen"), Jason Lettmann ("Lettmann"), Gary R. Little ("Little"), Rebecca Lynn ("Lynn"), Gary J. Morgenthaler ("Morgenthaler"), Robert D. Pavey ("Pavey") and Henry Plain ("Plain"), the members of MMP IX, may be deemed to have shared power to vote these shares.
	8	SHARED VOTING POWER See response to row 7.
	9	SOLE DISPOSITIVE POWER 2,584,477 shares, except that MMP IX, the general partner of MVP IX, may be deemed to have sole power to dispose of these shares, and Bellas, Christoffersen, Lettmann, Little, Lynn, Morgenthaler, Pavey and Plain, the members of MMP IX, may be deemed to have shared power to dispose of these shares.
	10	SHARED DISPOSITIVE POWER See response to row 9.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	PN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Morgenthaler Management Partners IX, LLC ("MMP IX")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 2,584,477 shares, all of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"). MMP IX, the general partner of MVP IX, may be deemed to have sole power to vote these shares, and Robert C. Bellas, Jr. ("Bellas"), Ralph E. Christoffersen ("Christoffersen"), Jason Lettmann ("Lettmann"), Gary R. Little ("Little"), Rebecca Lynn ("Lynn"), Gary J. Morgenthaler ("Morgenthaler"), Robert D. Pavey ("Pavey") and Henry Plain ("Plain"), the members of MMP IX, may be deemed to have shared power to vote these shares.
	8	SHARED VOTING POWER See response to row 7.
	9	SOLE DISPOSITIVE POWER 2,584,477 shares, all of which are directly owned by MVP IX. MMP IX, the general partner of MVP IX, may be deemed to have sole power to dispose of these shares, and Bellas, Christoffersen, Lettmann, Little, Lynn, Morgenthaler, Pavey and Plain, the members of MMP IX, may be deemed to have shared power to dispose of these shares.
	10	SHARED DISPOSITIVE POWER See response to row 9.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	OO

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Robert C. Bellas, Jr. ("Bellas")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 2,584,477 shares, all of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Bellas, a member of MMP IX, may be deemed to have shared power to vote these shares.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 2,584,477 shares, all of which are directly owned by MVP IX. MMP IX is the general partner of MVP IX, and Bellas, a member of MMP IX, may be deemed to have shared power to dispose of these shares.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	IN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Ralph E. Christoffersen ("Christoffersen")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 2,584,477 shares, all of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Christoffersen, a member of MMP IX, may be deemed to have shared power to vote the shares owned by MVP IX.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 2,584,477 shares, all of which are directly owned by MVP IX. MMP IX is the general partner of MVP IX, and Christoffersen, a member of MMP IX, may be deemed to have shared power to dispose of the shares owned by MVP IX.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	IN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Jason Lettmann ("Lettmann")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 3,466,589 shares, 2,584,477 of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"), 776,373 of which are directly owned by Lightstone Ventures, L.P. ("Lightstone"), and 105,739 of which are directly owned by Lightstone Ventures (A), L.P. ("Lightstone A"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Lettmann, a member of MMP IX, may be deemed to have shared power to vote the shares owned by MVP IX. LSV Associates, LLC ("LSV GP") is the general partner of Lightstone and Lightstone A, and Lettmann, a managing director of LSV GP, may be deemed to have shared power to vote the shares owned by Lightstone and Lightstone A.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 3,466,589 shares, 2,584,477 of which are directly owned by MVP IX, 776,373 of which are directly owned by Lightstone, and 105,739 of which are directly owned by Lightstone A. MMP IX is the general partner of MVP IX, and Lettmann, a member of MMP IX, may be deemed to have shared power to dispose of the shares owned by MVP IX. LSV GP is the general partner of Lightstone and Lightstone A, and Lettmann, a managing director of LSV GP, may be deemed to have shared power to dispose of the shares owned by Lightstone and Lightstone A.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	3,466,589
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	8.2%
14	TYPE OF REPORTING PERSON	IN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Gary R. Little ("Little")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 2,584,477 shares, all of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Little, a member of MMP IX, may be deemed to have shared power to vote these shares.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 2,584,477 shares, all of which are directly owned by MVP IX. MMP IX is the general partner of MVP IX, and Little, a member of MMP IX, may be deemed to have shared power to dispose of these shares.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	IN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Rebecca Lynn ("Lynn")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 2,584,477 shares, all of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Lynn, a member of MMP IX, may be deemed to have shared power to vote these shares.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 2,584,477 shares, all of which are directly owned by MVP IX. MMP IX is the general partner of MVP IX, and Lynn, a member of MMP IX, may be deemed to have shared power to dispose of these shares.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	IN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Gary J. Morgenthaler ("Morgenthaler")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 2,584,477 shares, all of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Morgenthaler, a member of MMP IX, may be deemed to have shared power to vote these shares.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 2,584,477 shares, all of which are directly owned by MVP IX. MMP IX is the general partner of MVP IX, and Morgenthaler, a member of MMP IX, may be deemed to have shared power to dispose of these shares.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	IN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Robert D. Pavey ("Pavey")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 2,584,477 shares, all of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Pavey, a member of MMP IX, may be deemed to have shared power to vote these shares.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 2,584,477 shares, all of which are directly owned by MVP IX. MMP IX is the general partner of MVP IX, and Pavey, a member of MMP IX, may be deemed to have shared power to dispose of these shares.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	2,584,477
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	6.1%
14	TYPE OF REPORTING PERSON	IN

1	NAME OF REPORTING PERSON I.R.S. IDENTIFICATION NO. OF ABOVE PERSONS (ENTITIES ONLY) Henry Plain ("Plain")	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS 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 U.S. Citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER -0-
	8	SHARED VOTING POWER 3,466,589 shares, 2,584,477 of which are directly owned by Morgenthaler Venture Partners IX, L.P. ("MVP IX"), 776,373 of which are directly owned by Lightstone Ventures, L.P. ("Lightstone"), and 105,739 of which are directly owned by Lightstone Ventures (A), L.P. ("Lightstone A"). Morgenthaler Management Partners IX, LLC ("MMP IX") is the general partner of MVP IX, and Plain, a member of MMP IX, may be deemed to have shared power to vote the shares owned by MVP IX. LSV Associates, LLC ("LSV GP") is the general partner of Lightstone and Lightstone A, and Plain, a managing director of LSV GP, may be deemed to have shared power to vote the shares owned by Lightstone and Lightstone A.
	9	SOLE DISPOSITIVE POWER -0-
	10	SHARED DISPOSITIVE POWER 3,466,589 shares, 2,584,477 of which are directly owned by MVP IX, 776,373 of which are directly owned by Lightstone, and 105,739 of which are directly owned by Lightstone A. MMP IX is the general partner of MVP IX, and Plain, a member of MMP IX, may be deemed to have shared power to dispose of the shares owned by MVP IX. LSV GP is the general partner of Lightstone and Lightstone A, and Plain, a managing director of LSV GP, may be deemed to have shared power to dispose of the shares owned by Lightstone and Lightstone A.
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON	3,466,589
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW 11 EXCLUDES CERTAIN SHARES	<input type="checkbox"/>
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11	8.2%
14	TYPE OF REPORTING PERSON	IN

Statement on Schedule 13D

This Amendment No. 2 (“Amendment No. 2”) amends and restates the Statement on Schedule 13D initially filed on November 7, 2016 and amended on December 12, 2018 (the “Original Schedule 13D”) relating to the beneficial ownership of Common Stock of Ra Pharmaceuticals, Inc., a corporation organized under the laws of the state of Delaware (“Issuer”). This Amendment No. 2 is being filed by Morgenthaler Venture Partners IX, L.P., a Delaware limited partnership (“MVP IX”), Morgenthaler Management Partners IX, LLC, a Delaware limited liability company (“MMP IX”), Robert C. Bellas, Jr. (“Bellas”), Ralph E. Christoffersen (“Christoffersen”), Jason Lettmann (“Lettmann”), Gary R. Little (“Little”), Rebecca Lynn (“Lynn”), Gary J. Morgenthaler (“Morgenthaler”), Robert D. Pavey (“Pavey”) and Henry Plain (“Plain” and together with MVP IX, MMP IX, Bellas, Christoffersen, Lettmann, Little, Lynn, Morgenthaler and Pavey, the “Reporting Persons”).

ITEM 1. SECURITY AND ISSUER.

- (a) The class of equity securities to which this statement relates is the Common Stock of the Issuer.
- (b) The Issuer’s principal executive offices are located at 87 Cambridge Park Drive, Cambridge, MA 02140.

ITEM 2. IDENTITY AND BACKGROUND.

(a) The persons and entities filing this Schedule 13D are MVP IX, MMP IX, Bellas, Christoffersen, Lettmann, Little, Lynn, Morgenthaler, Pavey and Plain. MMP IX, the general partner of MVP IX, may be deemed to have sole power to vote and sole power to dispose of shares of the Issuer directly owned by MVP IX.

(b) The address of the principal place of business for each of the Reporting Persons is c/o Morgenthaler Management Corporation, 3200 Alpine Road, Portola Valley, CA 94028.

(c) The principal occupation of each of the Reporting Persons is the venture capital investment business. The principal business of MVP IX is to make investments in private and public companies, and the principal business of MMP IX is to serve as the general partner of MVP IX. Bellas, Christoffersen, Lettmann, Little, Lynn, Morgenthaler, Pavey and Plain are the members of MMP IX.

(d) During the last five years, none of the Reporting Persons has been convicted in any criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the last five years, none of the Reporting Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to 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.

(f) MVP IX is a Delaware limited partnership. MMP IX is a Delaware limited liability company. Bellas, Christoffersen, Lettmann, Little, Lynn, Morgenthaler, Pavey and Plain are U.S. citizens.

ITEM 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION.**MVP IX****First Convertible Note Financing and Common Stock Purchase**

On July 7, 2008, MVP IX purchased (i) a Convertible Promissory Note from the Issuer in the principal amount of \$500,000.00 and (ii) 40,000 shares of the Issuer’s Common Stock for \$0.001 per share, or \$40.00 in the aggregate.

The Issuer effected a one-for-seven reverse stock split of its Common Stock on October 14, 2016, pursuant to which MVP IX's 40,000 shares of the Issuer's Common Stock were consolidated into 5,714 shares of the Issuer's Common Stock.

On January 4, 2010, MVP IX purchased a second Convertible Promissory Note from the Issuer in the principal amount of \$50,000.

Conversion of Convertible Promissory Notes, Series A Financing and First Warrant

On February 12, 2010, MVP IX entered into a Series A Preferred Stock Purchase Agreement, pursuant to which (i) on February 12, 2010, MVP IX acquired a Warrant to purchase 80,000 shares of the Issuer's Common Stock for an exercise price of \$0.01 per share, (ii) on February 12, 2010, MVP IX acquired 764,678 shares of the Issuer's Series A Preferred Stock as a result of the conversion of both Convertible Promissory Notes and all accrued interest thereon, (iii) on February 12, 2010, MVP IX acquired from the Issuer 2,993,414 shares of the Issuer's Series A Preferred Stock for a purchase price of \$0.80176 per share, or \$2,399,999.61 in the aggregate, (iv) on February 10, 2012, MVP IX acquired from the Issuer 2,993,412 shares of the Issuer's Series A Preferred Stock for a purchase price of \$0.80176 per share, or \$2,399,998.01 in the aggregate, and (v) on March 31, 2014, MVP IX acquired from the Issuer 2,993,412 shares of the Issuer's Series A Preferred Stock for a purchase price of \$0.80176 per share, or \$2,399,998.01 in the aggregate.

In connection with the closing of the Issuer's initial public offering of Common Stock (the "Initial Offering"), the 9,744,916 shares of Series A Preferred Stock held by MVP IX automatically converted on a one-for-seven basis into 1,392,130 shares of Common Stock.

On February 12, 2015, MVP IX exercised the Warrant to purchase 80,000 shares of the Issuer's Common Stock for an exercise price of \$0.01 per share, or \$800.00 in the aggregate.

The Issuer effected a one-for-seven reverse stock split of its Common Stock on October 14, 2016, pursuant to which MVP IX's 80,000 shares of the Issuer's Common Stock issued pursuant to the exercise of such Warrant were consolidated into 11,428 shares of the Issuer's Common Stock.

Second Convertible Note Financing and Second Warrant

On April 1, 2015, MVP IX purchased (i) a Convertible Promissory Note from the Issuer in the principal amount of \$1,414,744.00 and (ii) a Warrant to purchase 441,137 shares of the Issuer's Common Stock for an exercise price of \$0.01 per share.

The Issuer effected a one-for-seven reverse stock split of its Common Stock on October 14, 2016, as a result of which MVP IX's Warrant to purchase 441,137 shares of the Issuer's Common Stock for an exercise price of \$0.01 per share was adjusted and became a Warrant to purchase 63,019 shares of the Issuer's Common Stock for \$0.07 per share.

In connection with the closing of the Initial Offering, such Warrant was automatically net exercised. The exercise price of the shares issuable pursuant to the Warrant was \$0.07 per share, or \$4,411.33 in the aggregate. The exercise price of the shares was paid by having the Issuer withhold 340 shares of Common Stock that were otherwise issuable pursuant to the Warrant, which shares had an aggregate value of \$4420.00, based on the offering price of the Issuer's Common Stock in the Initial Offering of \$13.00 per share. Consequently, MVP IX acquired 62,679 shares of the Issuer's Common Stock as a result of the net exercise of the Warrant.

Conversion of Convertible Promissory Note and Series B Financing

On July 10, 2015, MVP IX entered into a Series B Preferred Stock Purchase Agreement, pursuant to which (i) on July 10, 2015, MVP acquired 1,559,824 shares of Series B-1 Preferred Stock as a result of the conversion of the Convertible Promissory Note and all accrued interest thereon, (ii) on July 10, 2015, MVP IX acquired from the Issuer 2,104,247 shares of the Issuer's Series B-1 Preferred Stock for a purchase price of \$0.92667 per share, or \$1,949,942.67 in the aggregate, and (iii) on June 14, 2016, MVP IX acquired from the Issuer 3,408,439 shares of Series B-2 Preferred Stock of the Issuer for a purchase price of \$0.99617 per share, or \$3,395,384.68 in the aggregate.

In connection with the closing of the Initial Offering, the 3,664,071 shares of Series B-1 Preferred Stock held by MVP IX automatically converted on a one-for-seven basis into 523,438 shares of Common Stock, and the 3,408,439 shares of Series B-2 Preferred Stock held by MVP IX automatically converted on a one-for-seven basis into 486,919 shares of Common Stock.

Purchase of Common Stock in Initial Offering

On October 31, 2016, MVP IX purchased 263,538 shares of the Issuer's Common Stock in the Initial Offering for \$13.00 per share, or \$3,425,994.00 in the aggregate. Such purchase occurred pursuant to and on the terms set forth in the Issuer's Prospectus filed pursuant to Rule 424(b)(4) on October 26, 2016 with the Securities and Exchange Commission (File No. 333-213917) (the "Prospectus").

Sale of Common Stock

On December 10, 2018, MVP IX sold 86,718 shares of Common Stock at an average price of \$18.777177 per share, or \$1,638,319.24 in the aggregate, in open market sales.

On December 12, 2018, MVP IX sold 36,046 shares of Common Stock at an average price of \$18.156467 per share, or \$654,468.01 in the aggregate, in open market sales.

On December 18, 2018, MVP IX sold 13,502 shares of Common Stock at an average price of \$18.242316 per share, or \$246,307.75 in the aggregate, in open market sales.

On December 19, 2018, MVP IX sold 4,600 shares of Common Stock at an average price of \$18.177282 per share, or \$86,615.50 in the aggregate, in open market sales.

On December 27, 2018, MVP IX sold 20,503 shares of Common Stock at an average price of \$18.100486 per share, or \$371,114.26 in the aggregate, in open market sales.

Source of Funds

The source of the funds for all purchases and acquisitions by MVP IX was from working capital.

No part of the purchase price was borrowed by MVP IX for the purpose of acquiring any securities discussed in this Item 3.

Lightstone and Lightstone A

Series B Financing

On July 10, 2015, Lightstone and Lightstone A entered into a Series B Preferred Stock Purchase Agreement, pursuant to which (i) on July 10, 2015, Lightstone acquired from the Issuer 3,798,914 shares of Series B-1 Preferred Stock for a purchase price of \$0.92667 per share, or \$3,520,339.64 in the aggregate, (ii) on July 10, 2015, Lightstone A acquired from the Issuer 517,617 shares of Series B-1 Preferred Stock for a purchase price of \$0.92667 per share, or \$479,660.15 in the aggregate, (iii) on June 14, 2016, Lightstone acquired from the Issuer 3,533,875 shares of Series B-2 Preferred Stock for a purchase price of \$0.99617 per share, or \$3,520,340.26 in the aggregate, and (iv) on June 14, 2016, Lightstone A acquired from the Issuer 481,503 shares of Series B-2 Preferred Stock for a purchase price of \$0.99617 per share, or \$479,658.85 in the aggregate.

In connection with the closing of the Initial Offering, the Series B-1 Preferred Stock held by Lightstone automatically converted on a one-for-seven basis into 542,702 shares of Common Stock, the Series B-1 Preferred Stock held by Lightstone A automatically converted on a one-for-seven basis into 73,945 shares of Common Stock, the Series B-2 Preferred Stock held by Lightstone automatically converted on a one-for-seven basis into 504,839 shares of Common Stock, and the Series B-2 Preferred Stock held by Lightstone A automatically converted on a one-for-seven basis into 68,786 shares of Common Stock.

Purchase of Common Stock in Initial Offering

On October 31, 2016, Lightstone purchased 114,752 shares of the Issuer's Common Stock in the Initial Offering for \$13.00 per share, or \$1,491,776.00 in the aggregate, and Lightstone A purchased 15,633 shares of the Issuer's Common Stock in the Initial Offering for \$13.00 per share, or \$203,229.00 in the aggregate. Such purchases occurred pursuant to and on the terms set forth in the Issuer's Prospectus.

Sale of Common Stock

On December 10, 2018, Lightstone sold 132,000 shares of Common Stock and Lightstone A sold 18,000 shares of Common Stock, each at an average price of \$18.214924 per share, or \$2,732,238.60 in the aggregate in open market sales.

On December 12, 2018, Lightstone sold 124,373 shares of Common Stock and Lightstone A sold 16,960 shares of Common Stock, each at an average price of \$17.814421 per share, or \$2,517,765.56 in the aggregate in open market sales.

On December 17, 2018, Lightstone sold 7,627 shares of Common Stock and Lightstone A sold 1,040 shares of Common Stock, each at an average price of \$17.554952 per share, or \$152,148.77 in the aggregate in open market sales.

On December 18, 2018, Lightstone sold 17,990 shares of Common Stock and Lightstone A sold 2,453 shares of Common Stock, each at an average price of \$18.109863 per share, or \$370,219.93 in the aggregate in open market sales.

On December 19, 2018, Lightstone sold 38,487 shares of Common Stock and Lightstone A sold 5,248 shares of Common Stock, each at an average price of \$17.396332 per share, or \$760,828.58 in the aggregate in open market sales.

On December 20, 2018, Lightstone sold 5,812 shares of Common Stock and Lightstone A sold 793 shares of Common Stock, each at an average price of \$17.134716 per share, or \$113,174.80 in the aggregate in open market sales.

On December 26, 2018, Lightstone sold 21,519 shares of Common Stock and Lightstone A sold 2,934 shares of Common Stock, each at an average price of \$17.477875 per share, or \$427,386.48 in the aggregate in open market sales.

On December 27, 2018, Lightstone sold 38,112 shares of Common Stock and Lightstone A sold 5,197 shares of Common Stock, each at an average price of \$17.934989 per share, or \$776,746.44 in the aggregate in open market sales.

Source of Funds

The source of the funds for all purchases and acquisitions by Lightstone and Lightstone A was from working capital.

No part of the purchase price was borrowed by Lightstone or Lightstone A for the purpose of acquiring any securities discussed in this Item 3.

ITEM 4. PURPOSE OF TRANSACTION.

The Reporting Persons hold their securities of the Issuer for investment purposes. Depending on the factors discussed herein, the Reporting Persons may, from time to time, acquire additional shares of Common Stock and/or retain and/or sell all or a portion of the Common Stock held by the Reporting Persons in the open market or in privately negotiated transactions, and/or may distribute the Common Stock held by the Reporting Persons to their respective members or limited partners. Any actions the Reporting Persons might undertake will be dependent upon the Reporting Persons' review of numerous factors, including, among other things, the price levels of the Common Stock; general market and economic conditions; ongoing evaluation of the Issuer's business, financial condition, operations and prospects; the relative attractiveness of alternative business and investment opportunities; and other future developments. Except as set forth above, the Reporting Persons have no present plans or intentions which would result in or relate to any of the transactions described in subparagraphs (a) through (j) of Item 4 of Schedule 13D.

ITEM 5. INTEREST IN SECURITIES OF THE ISSUER.

(a,b) Regarding aggregate beneficial ownership, see Row 11 of the cover page of each Reporting Person. Regarding percentage beneficial ownership, see Row 13 of the cover page of each Reporting Person. Regarding sole power to vote shares, see Row 7 of the cover page of each Reporting Person. Regarding shared power to vote shares, see Row 8 of the cover page of each Reporting Person. Regarding sole power to dispose of shares, see Row 9 of the cover page of each Reporting Person. Regarding shared power to dispose of shares, see Row 10 of the cover page of each Reporting Person. The percentage listed in Row 13 for each Reporting Person was calculated based upon 42,032,187 shares of Common Stock outstanding as of December 12, 2018, as reported by the Issuer in the Prospectus Supplement filed pursuant to Rule 424(b)(5) on December 12, 2018.

(c) Except as set forth in Item 3 above, the Reporting Persons have not effected any transaction in the securities of the Issuer during the past 60 days.

(d) Under certain circumstances set forth in the limited partnership agreement of MVP IX and the limited liability company agreement of MMP IX the partners or members, as the case may be, of each of such entities may be deemed to have the right to receive dividends from, or the proceeds from the sale of, shares of the Issuer directly or indirectly owned by each such entity of which they are a partner or member.

(e) Not applicable.

ITEM 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO SECURITIES OF THE ISSUER.

In connection with the issuance of the Series B Preferred Stock of the Issuer, the Issuer, MVP IX and certain other investors entered into an Amended and Restated Investors' Rights Agreement dated July 10, 2015 (the "Rights Agreement"). The Rights Agreement grants to MVP IX and certain other parties thereto certain rights including demand registration rights, piggyback registration rights and Form S-3 registration rights. Such registration rights will expire, with respect to any particular stockholder, upon the earlier of: (i) a Deemed Liquidation Event (as defined therein), (ii) five (5) years after the closing of the Initial Offering or (iii) at such time following the Initial Offering when a stockholder holds less than one percent (1%) of the outstanding securities of the Issuer and all Registrable Securities (as defined therein) of such stockholder may be sold without restriction pursuant to Rule 144 of the Securities Act of 1933, as amended, within a three (3) month period. The rights set forth in the Rights Agreement are more fully described in the Prospectus and incorporated herein by reference.

MVP IX entered into a letter agreement with the Issuer and Credit Suisse Securities (USA) LLC, Jefferies LLC and BMO Capital Markets Corp, as representatives of the underwriters, on August 17, 2016 (the "Lock-Up Agreement"). Pursuant to the Lock-Up Agreement, MVP IX agreed that it would not, without the prior written consent of the underwriters and subject to limited exceptions, offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, any securities of the Issuer, or enter into any transaction that would have the same effect, or enter into any swap, hedge or other arrangement that transfers, in whole or in part, any of the economic consequences of the ownership of the Issuer's securities, in each case, for a period of 180 days after the date of the Prospectus. The terms of the Lock-Up Agreement are more fully described in the Prospectus and incorporated herein by reference.

Lettmann, in his former capacity as a director of the Issuer, entered into an Indemnification Agreement with the Issuer, as more fully described in the Prospectus and incorporated herein by reference.

ITEM 7. MATERIAL TO BE FILED AS EXHIBITS.

EXHIBIT A	Reference to Agreement of Joint Filing.
EXHIBIT B	Reference to Travis Boettner as Attorney-in-Fact
EXHIBIT C	Amended and Restated Investors' Rights Agreement, filed on September 30, 2016 as Exhibit 4.1 to the Issuer's Registration Statement on Form S-1 (File No. 333-213917), and incorporated herein by reference.
EXHIBIT D	Form of Lock-Up Agreement, filed as Exhibit B to the Underwriting Agreement filed on October 13, 2016 as Exhibit 1.1 to Amendment No. 2 to the Issuer's Registration Statement on Form F-1 (File No. 333-213917), and incorporated herein by reference.
EXHIBIT E	Form of Indemnification Agreement for directors, filed on October 13, 2016 as Exhibit 10.5 to Amendment No. 1 to the Issuer's Registration Statement on Form S-1 (File No. 333-213917), and incorporated herein by reference.

SIGNATURES

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: December 28, 2018

MORGENTHALER VENTURE PARTNERS IX, L.P.

By: Morgenthaler Management Partners IX, LLC
Its: General Partner

By: /s/ Travis Boettner
Travis Boettner
Chief Financial Officer and
Chief Compliance Officer

MORGENTHALER MANAGEMENT PARTNERS IX, LLC

By: /s/ Travis Boettner
Travis Boettner
Chief Financial Officer and
Chief Compliance Officer

ROBERT C. BELLAS, JR.
RALPH E. CHRISTOFFERSEN
JASON LETTMANN
GARY R. LITTLE
REBECCA LYNN
GARY J. MORGENTHALER
ROBERT D. PAVEY
HENRY PLAIN

By: /s/ Travis Boettner
Travis Boettner
Attorney-in-Fact

EXHIBIT INDEX

Exhibit	Description
A	Reference to Agreement of Joint Filing
B	Reference to Travis Boettner as Attorney-in-Fact
C	Amended and Restated Investors' Rights Agreement, filed on September 30, 2016 as Exhibit 4.1 to the Issuer's Registration Statement on Form S-1 (File No. 333-213917), and incorporated herein by reference.
D	Form of Lock-Up Agreement, filed as Exhibit B to the Underwriting Agreement filed on October 13, 2016 as Exhibit 1.1 to Amendment No. 2 to the Issuer's Registration Statement on Form F-1 (File No. 333-213917), and incorporated herein by reference.
E	Form of Indemnification Agreement for directors, filed on October 13, 2016 as Exhibit 10.5 to Amendment No. 1 to the Issuer's Registration Statement on Form S-1 (File No. 333-213917), and incorporated herein by reference.

EXHIBIT A

Reference to Agreement of Joint Filing

The Reporting Persons have agreed that a single Schedule 13D (or any amendment thereto) relating to the Common Stock of Ra Pharmaceuticals, Inc. shall be filed on behalf of all of the Reporting Persons. A copy of the applicable Agreement of Joint Filing is already on file with the appropriate agencies.

EXHIBIT B

Reference to Travis Boettner as Attorney-in-Fact

Travis Boettner has signed the enclosed documents as Attorney-in-Fact. A copy of the applicable Power of Attorney is already on file with the appropriate agencies.
