

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>Novartis Bioventures Ltd</u> <hr/> (Last) (First) (Middle) C/O NOVARTIS INTERNATIONAL AG WSJ-200.220 <hr/> (Street) CH-4002 BASEL V8 000000000 <hr/> (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 10/25/2016	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 type="checkbox"/> 10% Owner <input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below) <input type="checkbox"/>	5. If Amendment, Date of Original Filed (Month/Day/Year) <hr/> 6. Individual or Joint/Group Filing (Check Applicable Line) <input type="checkbox"/> Form filed by One Reporting Person <input checked="" type="checkbox"/> 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)

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			
Warrants to Purchase Common Stock	(2)	04/01/2022	Common Stock	62,575	0.07	D ⁽¹⁾	
Series A Preferred Stock	(3)	(3)	Common Stock	1,389,797	(3)	D ⁽¹⁾	
Series B-1 Preferred Stock	(4)	(4)	Common Stock	522,561	(4)	D ⁽¹⁾	
Series B-2 Preferred Stock	(5)	(5)	Common Stock	486,104	(5)	D ⁽¹⁾	

1. Name and Address of Reporting Person* <u>Novartis Bioventures Ltd</u> <hr/> (Last) (First) (Middle) C/O NOVARTIS INTERNATIONAL AG WSJ-200.220 <hr/> (Street) CH-4002 BASEL V8 000000000 <hr/> (City) (State) (Zip)
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1. Name and Address of Reporting Person *		
NOVARTIS AG		
(Last)	(First)	(Middle)
LICHTSTRASSE 35		
(Street)		
BASEL	V8	CH 4056
(City)	(State)	(Zip)

Explanation of Responses:

1. The board of directors of Novartis Bioventures Ltd. has sole voting and investment control and power over such securities. None of the members of its board of directors has individual voting or investment power with respect to such securities and each disclaims beneficial ownership of such securities. Novartis Bioventures Ltd. is an indirectly owned subsidiary of Novartis AG.
2. 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.
3. 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.
4. 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.
5. 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.

Remarks:

Exhibit 24.1: Power of Attorney

[/s/ Michael Jones, Authorized Signatory](#) [/s/ Laurieann Chaikowsky, Authorized Signatory](#) [10/25/2016](#)
[/s/ Michael Jones, Director](#) [/s/ Laurieann Chaikowsky, Authorized Signatory](#) [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.

POWER OF ATTORNEY

We, the undersigned, under the authority granted to each of us to sign jointly on behalf of Novartis AG, hereby grant powers to Simon Zivi, Laurieann Chaikowsky, Michael Jones, David Middleton, Bartosz Dzikowski, Markus Goebel and Reinhard Ambros and constitute and appoint any two of them jointly as our true and lawful attorneys and representatives and to act on our behalf and to sign filings to be made with the U.S. Securities and Exchange Commission (the "SEC") relating to the shares of Ra Pharmaceuticals, Inc. held by Novartis Bioventures Ltd, an indirect subsidiary of Novartis AG, as required by the SEC (the "SEC Filings"), and to undertake and carry out all tasks and formalities on our behalf which may be required in connection with giving effect to the SEC Filings.

We, the undersigned, undertake to ratify and confirm whatever our true and lawful attorneys do or purport to do in good faith in the exercise of any power conferred by this Power of Attorney.

We, the undersigned, declare that a person who deals with our true and lawful attorneys in good faith may accept a written statement signed by such attorneys to the effect that this Power of Attorney has not been revoked as conclusive evidence of that fact.

The authority granted by this Power of Attorney shall expire immediately after the date on which the SEC Filings are no longer required.

IN WITNESS WHEREOF, this Power of Attorney is duly signed on this 2nd day of September 2016.

Novartis AG

By: /s/ K. Roth Pellanda
Name: Katja Roth Pellanda
Title: Authorized Signatory

By: /s/ Felix Eichhorn
Name: Felix Eichhorn
Title: authorized signatory
