

ARCA biopharma, Inc.
Form SC 13G/A
February 14, 2018

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549**

SCHEDULE 13G/A

**Under the Securities Exchange Act of 1934
(Amendment No. 2)***

ARCA biopharma, Inc.

(Name of Issuer)

Common stock

(Title of Class of Securities)

00211Y100

(CUSIP Number)

December 31, 2017

(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)

*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).

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CUSIP No. 00211Y100

1	Names of Reporting Persons Venrock Healthcare Capital Partners, L.P.	
2	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (1) (b) <input type="checkbox"/> o	
3	SEC Use Only	
4	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	5	Sole Voting Power 0
	6	Shared Voting Power 2,157,864(2)
	7	Sole Dispositive Power 0
	8	Shared Dispositive Power 2,157,864(2)
9	Aggregate Amount Beneficially Owned by Each Reporting Person 2,157,864(2)	
10	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/> o	
11	Percent of Class Represented by Amount in Row (9) 17.4%(3)	
12	Type of Reporting Person (See Instructions) PN	

(1) Venrock Healthcare Capital Partners, L.P. (VHCP); Venrock Healthcare Capital Partners II, L.P. (VHCP II); VCHP Co-Investment Holdings, LLC (Co-Invest); VHCP Co-Investment Holdings II, LLC (Co-Invest II); VCHP Management, LLC; VCHP Management II, LLC; Nimish Shah and Bong Koh are members of a group for the purposes of this Schedule 13G/A.

(2) Consists of: (i) 390,912 shares of common stock held directly by VHCP and 156,365 shares of common stock currently exercisable under a warrant held by VHCP; (ii) 767,660 shares of common stock held directly by VHCP II and 307,064 shares of common stock currently exercisable under a warrant held by VHCP II; (iii) 71,487 shares of common stock held directly by Co-Invest and 28,595 shares of common stock currently exercisable under a warrant held by Co-Invest; and (iv) 311,272 shares of common stock held directly by Co-Invest II and 124,509 shares of common stock currently exercisable under a warrant held by Co-Invest II.

(3) This percentage is calculated based upon (i) 11,750,977 shares of the Issuer's common stock outstanding as of November 7, 2017, as set forth in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 9, 2017, plus (ii) 616,533 shares of common stock underlying currently exercisable warrants held by the Reporting Persons.

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1	Names of Reporting Persons. Venrock Healthcare Capital Partners II, L.P.	
2	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input checked="" type="checkbox"/> (1) (b) <input type="checkbox"/> (0)	
3	SEC Use Only	
4	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	5	Sole Voting Power 0
	6	Shared Voting Power 2,157,864(2)
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9	Aggregate Amount Beneficially Owned by Each Reporting Person 2,157,864(2)	
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1	Names of Reporting Persons. VHCP Co-Investment Holdings, LLC	
2	Check the Appropriate Box if a Member of a Group (See Instructions)	
	(a) <input checked="" type="checkbox"/> (1)	
	(b) <input type="checkbox"/> (0)	
3	SEC Use Only	
4	Citizenship or Place of Organization Delaware	
Number of Shares Beneficially Owned by Each Reporting Person With	5	Sole Voting Power 0
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	(b) <input type="checkbox"/> (0)	
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Number of Shares Beneficially Owned by Each Reporting Person With	5	Sole Voting Power 0
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2	Check the Appropriate Box if a Member of a Group (See Instructions)	(a)	x(1)
		(b)	o
3	SEC Use Only		
4	Citizenship or Place of Organization Delaware		
Number of Shares Beneficially Owned by Each Reporting Person With	5	Sole Voting Power	0
	6	Shared Voting Power	2,157,864(2)
	7	Sole Dispositive Power	0
	8	Shared Dispositive Power	2,157,864(2)
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1 Names of Reporting Persons.
Shah, Nimish

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

(a) (1)

(b) (0)

3 SEC Use Only

4 Citizenship or Place of Organization

United States

Number of Shares Beneficially Owned by Each Reporting Person With	5	Sole Voting Power 0
	6	Shared Voting Power 2,157,864(2)
	7	Sole Dispositive Power 0