ARCA biopharma, Inc. Form SC 13G/A February 10, 2012

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

SCHEDULE 13G

(Rule 13d-102)

Information Statement Pursuant to Rules 13d-1 and 13d-2 Under the Securities Exchange Act of 1934 (Amendment No. 3)*

ARCA BIOPHARMA, INC.

(Name of Issuer)

Common stock, \$0.001

(Title of Class of Securities)

00211Y100

(CUSIP Number)

December 31, 2011

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- o Rule 13d-1(b)
- o Rule 13d-1(c)
- x Rule 13d-1(d)

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).

^{*}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.

CUSIP No. 00211	IY100	13G		
1.	Name of Reporting Pers S.S. or I.R.S. Identificat			
	Atlas Venture Fund VII	L.P.		
2.	Check the Appropriate (a) (b)	ox if a Member of a Group* o o		
3.	SEC Use Only			
4.	Citizenship or Place of Organization Delaware			
	5.	Sole Voting Power		
Number of Shares Beneficially Owned by	6.	Shared Voting Power 1,337,612 shares		
Each Reporting Person With	7.	Sole Dispositive Power		
Telson Willi	8.	Shared Dispositive Power 1,337,612 shares		
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,337,612 shares			
10.	Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares o			
11.	Percent of Class Represented by Amount in Row (9) 12.72%			
12.	Type of Reporting Person	*		
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Item 1(a).			ner to which this filing on Schedule 13G/A relates is ARCA biopharma, Inc. (the
Item 1(b).			Principal Executive Offices tive offices of the Company are located at 8001 Arista Place, Suite 200, 221.
Item 2(a).		Associates VII, L.P. Associates VII, Inc.	ing filed on behalf of Atlas Venture Fund VII, L.P. (<u>Atlas VII</u>). Atlas Venture (<u>AVA VII L</u> P) is the sole general partner of Atlas VII. Atlas Venture (<u>AVA VII In</u> c.) is the sole general partner of AVA VII LP. Jean-Francois
Item 2(b).		Address of Principal The principal busine is 25 First Street, Su	ett and Jeff Fagnan is each a director of AVA VII Inc. (the <u>Directors</u>). Business Office or, if none, Residence ess address of each of Atlas VII, AVA VII LP, AVA VII Inc. and the Directors ite 303, Cambridge MA 02141.
Item 2(c).			AVA VII LP and AVA VII Inc. is organized under the laws of Delaware. Izen of France. Mr. Barrett is a citizen of the United States. Mr. Fagnan is a States.
Item 2(d).	Title of Class of Securities The class of equity securities of the Company to which this filing on Schedule 13G/A relation Common Stock, par value \$0.001 (Common Stock).		securities of the Company to which this filing on Schedule 13G/A relates is
Item 2(e).		CUSIP Number	of the Company s Common Stock is 00211Y100.
Item 3.	If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is		
	Not applicable.		
	(a)	0	Broker or dealer registered under section 15 of the Act (15 U.S.C. 780).
	(b)	0	Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 73c).
	(c)	0	Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C.
			78c).
	(d)	0	Investment company registered under section 8 of the Investment
	(a)	0	Company Act of 1940 (15 U.S.C. 80a-8).
	(e)	0	An investment adviser in accordance with §13d-1(b)(1)(ii)(E).
	(e) (f)	0 0	An investment adviser in accordance with §13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with
	(f)	o	An investment adviser in accordance with §13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F).
			An investment adviser in accordance with \$13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with \$240.13d-1(b)(1)(ii)(F). A parent holding company or control person in accordance with
	(f)	o	An investment adviser in accordance with \$13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with \$240.13d-1(b)(1)(ii)(F). A parent holding company or control person in accordance with \$240.13d-1(b)(1)(ii)(G). A savings association as defined in Section 3(b) of the Federal Deposit
	(f) (g) (h)	o o o	An investment adviser in accordance with \$13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with \$240.13d-1(b)(1)(ii)(F). A parent holding company or control person in accordance with \$240.13d-1(b)(1)(ii)(G). A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813).
	(f) (g)	0	An investment adviser in accordance with \$13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with \$240.13d-1(b)(1)(ii)(F). A parent holding company or control person in accordance with \$240.13d-1(b)(1)(ii)(G). A savings association as defined in Section 3(b) of the Federal Deposit
	(f) (g) (h) (i)	o o o	An investment adviser in accordance with \$13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with \$240.13d-1(b)(1)(ii)(F). A parent holding company or control person in accordance with \$240.13d-1(b)(1)(ii)(G). A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813). A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of
	(f) (g) (h)	o o o	An investment adviser in accordance with §13d-1(b)(1)(ii)(E). An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F). A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G). A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813). A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3).

Item 4. Ownership

Item 4(a). Amount beneficially owned

As of the close of business on February 10, 2012, Atlas VII is the record holder of 1,262,163 shares of Common Stock and 75,449 warrants to purchase shares of Common Stock (the Atlas Shares). AVA VII LP is the sole general partner of Atlas VII. AVA VII Inc. is the sole general partner of AVA VII LP. Messrs. Formela, Barrett and Fagnan are the directors of AVA VII Inc. No person other than the respective owner referred to herein of the Atlas Shares is known to have the right to receive or the power to direct the receipt of dividends from or the proceeds from the sale of such Atlas Shares. Each of Atlas VII, AVA VII LP, AVA VII Inc. and the Directors disclaim beneficial

ownership of the Atlas Shares except for such shares, if any, such person holds of record. Percent of class

As of the close of business on February 10, 2012 Atlas VII was the beneficial owner of 12.72% of

the Common Stock.

Item 4(c). Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote:

0

(ii) Shared power to vote or direct the vote:

1,337,612

(iii) Sole power to dispose or direct the disposition of:

0

(iv) Shared power to dispose or direct the disposition of:

1,337,612

Item 5. Ownership of Five Percent or Less of a Class

Not Applicable.

Item 4(b).

Item 6. Ownership of More than Five Percent on Behalf of Another Person

Not Applicable.

Item 7. Identification and Classification of the Subsidiary which Acquired the Security Being Reported on by the Parent

Holding Company:

Not Applicable.

Item 8. Identification and Classification of Members of the Group

Not Applicable. The Filing Persons expressly disclaim membership in a group as used in Rule 13d-5(b)(1).

Item 9. Notice of Dissolution of Group

Not Applicable.

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Item 10. Certification

Not Applicable. This statement on Schedule 13G is not filed pursuant to Rule 13d-1(b) or 13(d)-1(c).

Dated: February 10, 2012

ATLAS VENTURE FUND VII, L.P.

By: Atlas Venture Associates VII, L.P., its general partner By: Atlas Venture Associates VII, Inc., its general partner

By:: /s/ Kristen Laguerre

Name: Kristen Laguerre Title: Vice President

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