

ARCA biopharma, Inc.  
Form 4  
June 26, 2009

**FORM 4**

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

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person \*  
**FALBERG KATHRYN E**

(Last) (First) (Middle)  
  
52 PIEDMONT ROAD  
  
(Street)

LARKSPUR, CA 94939

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
**ARCA biopharma, Inc. [ABIO]**

3. Date of Earliest Transaction  
(Month/Day/Year)  
**06/25/2009**

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director  10% Owner  
 Officer (give title below)  Other (specify below)  
CFO and COO

6. Individual or Joint/Group Filing(Check Applicable Line)  
 Form filed by One Reporting Person  
 Form filed by More than One Reporting Person

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership Indirect Beneficial Ownership (Instr. 4)
				(A) or (D)	Code V Amount (D) Price		

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

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(9-02)

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

1. Title of Derivative Security	2. Conversion or Exercise	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any	4. Transaction Code	5. Number of Derivative Securities	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)

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(Instr. 3)	Price of Derivative Security	(Month/Day/Year)	(Instr. 8)	Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)			Date Exercisable	Expiration Date	Title	Amount or Number of Shares
				Code	V	(A)				
Option to purchase common stock	\$ 2.9	06/25/2009	A			50,000	(1)	06/25/2019	Common Stock	50,000

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
FALBERG KATHRYN E 52 PIEDMONT ROAD LARKSPUR, CA 94939			CFO and COO	

## Signatures

Patrick Wheeler, attorney  
in fact

06/26/2009

\_\_Signature of Reporting Person                      Date

## Explanation of Responses:

- \* If the form is filed by more than one reporting person, *see* Instruction 4(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).

The option vests as to 1/48th of the total number of shares subject to the option on each monthly anniversary of the vesting start date. In addition, upon the date that the United States Food and Drug Administration approves ARCA's New Drug Application for Gencaro, the

(1) vesting of the option shall be accelerated such that the option shall be vested as to an aggregate of 50% of the total number of shares subject to the option, provided that fewer than 50% of the total shares subject to the option have been vested on that date. The option shall become fully vested immediately prior to a change in control of ARCA.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.