

BRISTOW MICHAEL R  
Form 4  
October 15, 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 \*  
BRISTOW MICHAEL R

(Last) (First) (Middle)

C/O ARCA BIOPHARMA,  
INC, 8001 ARISTA PLACE, SUITE  
200

(Street)

BROOMFIELD, CO 80021

(City) (State) (Zip)

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

3. Date of Earliest Transaction  
(Month/Day/Year)  
10/14/2009

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)  
President and CEO

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 Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price
Common Stock	10/14/2009		M		7,394	A	\$ 0.06
					280,071	D	

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

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SEC 1474  
(9-02)

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

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1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities (Instr. 3 and 4)	8. De Se (In			
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Option to Purchase Common Stock	\$ 0.06	10/14/2009		M		7,394		(1)	01/03/2010	Common Stock	7,394

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
BRISTOW MICHAEL R C/O ARCA BIOPHARMA, INC 8001 ARISTA PLACE, SUITE 200 BROOMFIELD, CO 80021	X		President and CEO	

## Signatures

Patrick Wheeler, attorney in fact	10/15/2009
**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).

(1) The options are exercisable immediately.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.  
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