

Ozeroff Christopher David
Form 4
February 22, 2010

FORM 4

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

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

OMB APPROVAL

OMB
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(Print or Type Responses)

1. Name and Address of Reporting Person *
Ozeroff Christopher David

(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)
02/18/2010

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

5. Relationship of Reporting Person(s) to
Issuer

(Check all applicable)

____ Director ____ 10% Owner
X Officer (give title below) ____ Other (specify
below)

SVP & GENERAL COUNSEL

6. Individual or Joint/Group Filing(Check
Applicable Line)
X 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) (A) or (D)	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 Indirect Beneficial Ownership (Instr. 4)
				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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information contained in this form are not
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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)

1. Title of Derivative	2. Conversion	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if	4. Transaction of Derivative	5. Number	6. Date Exercisable and Expiration Date	7. Title and Amount of Underlying Securities	8. Do
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Security (Instr. 3)	or Exercise Price of Derivative Security	any (Month/Day/Year)	Code (Instr. 8)	Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	(Month/Day/Year)		(Instr. 3 and 4)		Se (I	
			Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Option to Purchase Common Stock	\$ 2.97	02/18/2010	A		6,400		<u>(1)</u>	02/18/2020	Common Stock	6,400

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Ozeroff Christopher David C/O ARCA BIOPHARMA, INC. 8001 ARISTA PLACE, SUITE 200 BROOMFIELD, CO 80021			SVP & GENERAL COUNSEL	

Signatures

Patrick Wheeler, attorney
in fact

02/22/2010

__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 vest in equal monthly installments over a three year period from the date of grant. In the event of a change in control of the Company, 50% of the unvested options shall become fully and immediately vested upon the closing date of such change in control, provided, however, that on the earlier of (i) the one-year anniversary of the closing date or (ii) involuntary termination, any options that remain unvested on such earlier date shall become fully and immediately vested.

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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