

Skyline Venture Partners Qualified Purchaser Fund IV L P
 Form 4
 June 10, 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 *
 Skyline Venture Partners Qualified Purchaser Fund IV L P

(Last) (First) (Middle)

525 UNIVERSITY AVENUE, STE 520

(Street)

PALO ALTO, CA 94301

(City) (State) (Zip)

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

3. Date of Earliest Transaction (Month/Day/Year)
 06/08/2009

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)
 Former 10% owner

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 | 06/08/2009 | | S | | | 65,708 | D | \$ 4.2063 | 469,500 | D | |
| Common Stock | 06/09/2009 | | S | V | | 47,500 | D | \$ 3.9872 | 422,000 | D | |
| Common Stock | 06/10/2009 | | S | V | | 36,000 | D | \$ 3.9569 | 386,000 | D | |

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

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number.

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

| 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. Price of Derivative Security (Instr. 5) | 9. Nu Deriv Secur Bene Own Follo Repo Trans (Instr |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|
| | | | | Code V (A) (D) | | Date Exercisable Expiration Date | Title Number of Shares | | |

Reporting Owners

Reporting Owner Name / Address

Relationships

Director 10% Owner Officer Other

Skyline Venture Partners Qualified Purchaser Fund IV L P
525 UNIVERSITY AVENUE, STE 520
PALO ALTO, CA 94301

Former 10% owner

Signatures

Patrick Wheeler, attorney
in fact 06/10/2009

**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).

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.