ARCA biopharma, Inc.
Form 8-K
December 22, 2009

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the

Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported): December 16, 2009

ARCA biopharma, Inc.

(Exact Name of Registrant as Specified in Charter)

Delaware	**000-22873**	**36-3855489**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(I.R.S. Employer Identification No.)**

8001 Arista Place, Suite 200, Broomfield, CO 80021

(Address of Principal Executive Offices) (Zip Code)

(720) 940-2200

(Registrant s Telephone Number, Including Area Code)

Not Applicable

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

¨ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

¨ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

¨ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

¨ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 Entry into a Material Definitive Agreement

On December 2, 2009, ARCA biopharma, Inc. (the Company) entered into an agreement with the University of Cincinnati that gives it an option to license exclusive, worldwide rights to certain patent rights relating to genetic polymorphisms of adrenergic cardiac receptors. These rights include those for developing and commercializing diagnostics for the receptor polymorphisms that may indicate which patients will respond most favorably to Gencaro. The period of the option is through December 2, 2010. As consideration for the option, the Company will assume the reasonable costs of prosecuting the associated patent rights.

Item 8.01 Other Events

On December 22, 2009, the Company issued a press release announcing that it has submitted a study protocol for review under the U.S. Food and Drug Administration s Special Protocol Assessment process for the design of a clinical trial to assess the safety and efficacy of Gencaro in approximately 3,000 patients with chronic heart failure who have the genotype that appears to respond most favorably to Gencaro. The press release is attached as Exhibit 99.1 hereto, the contents of which are incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No.	Description
99.1	Press Release titled ARCA Announces Submission of a Request for Special Protocol Assessment for Gencaro Development in Genotype-Defined Heart Failure Population , dated December 22, 2009.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: December 22, 2009

ARCA biopharma, Inc.

(Registrant)

By: /s/ CHRISTOPHER D. OZEROFF
Name: Christopher D. Ozeroff
Title: Senior Vice President and General Counsel

EXHIBIT INDEX

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