

PROCESSED
JAN 13 2009
THOMSON REUTERS

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

1143527
OMB APPROVAL
OMB Number: 3235-0076
Expires: October 31, 2008
Estimated average burden
hours per response: 4.00

TEMPORARY
FORM D

NOTICE OF SALE OF SECURITIES
PURSUANT TO REGULATION D,
SECTION 4(6), AND/OR
UNIFORM LIMITED OFFERING EXEMPTION

SEC REG
Mail Processing
Section

Name of Offering (check if this is an amendment and name has changed, and indicate change.)

Filing Under (Check box(es) that apply): Rule 504 Rule 505 Rule 506 Section 4(6) ULOE
Type of Filing: New Filing Amendment

JAN 07 2009

A. BASIC IDENTIFICATION DATA

1. Enter the information requested about the issuer

Washington, DC
105

Name of Issuer (check if this is an amendment and name has changed, and indicate change.)

Archemix Corp.

Address of Executive Offices (Number and Street, City, State, Zip Code) Telephone Number (Including Area Code)
300 Third Street, Cambridge, MA 02142 617-621-7700

Address of Principal Business Operations (if different from Executive Offices) (Number and Street, City, State, Zip Code) Telephone Number (Including Area Code)

Brief Description of Business

Aptamer Therapeutics

Type of Business Organization

corporation limited partnership, already formed other (please specify)
 business trust limited partnership, to be formed



Actual or Estimated Date of Incorporation or Organization: Month Year Actual Estimated
Jurisdiction of Incorporation or Organization: (Enter two-letter U.S. Postal Service abbreviation for State: CN for Canada; FN for other foreign jurisdiction)

GENERAL INSTRUCTIONS Note: This is a special Temporary Form D (17 CFR 239.500T) that is available to be filed instead of Form D (17 CFR 239.500) only to issuers that file with the Commission a notice on Temporary Form D (17 CFR 239.500T) or an amendment to such a notice in paper format on or after September 15, 2008 but before March 16, 2009. During that period, an issuer also may file in paper format an initial notice using Form D (17 CFR 239.500) but, if it does, the issuer must file amendments using Form D (17 CFR 239.500) and otherwise comply with all the requirements of § 230.503T.

Federal:

Who Must File: All issuers making an offering of securities in reliance on an exception under Regulation D or Section 4(6), 17 CFR 230.501 et seq. or 15 U.S.C. 77d(6).

When To File: A notice must be filed no later than 15 days after the first sale of securities in the offering. A notice is deemed filed with the U.S. Securities and Exchange Commission (SEC) on the earlier of the date it is received by the SEC at the address given below or, if received at that address after the date on which it is due, on the date it was mailed by United States registered or certified mail to that address.

Where To File: U.S. Securities and Exchange Commission, 100 F Street, N.E., Washington, D.C. 20549.

Copies Required: Two (2) copies of this notice must be filed with the SEC, one of which must be manually signed. The copy not manually signed must be a photocopy of the manually signed copy or bear typed or printed signatures.

Information Required: A new filing must contain all information requested. Amendments need only report the name of the issuer and offering, any changes thereto, the information requested in Part C, and any material changes from the information previously supplied in Parts A and B. Part E and the Appendix need not be filed with the SEC.

Filing Fee: There is no federal filing fee.

State:

This notice shall be used to indicate reliance on the Uniform Limited Offering Exemption (ULOE) for sales of securities in those states that have adopted ULOE and that have adopted this form. Issuers relying on ULOE must file a separate notice with the Securities Administrator in each state where sales are to be, or have been made. If a state requires the payment of a fee as a precondition to the claim for the exemption, a fee in the proper amount shall accompany this form. This notice shall be filed in the appropriate states in accordance with state law. The Appendix to the notice constitutes a part of this notice and must be completed.

ATTENTION

Failure to file notice in the appropriate states will not result in a loss of the federal exemption. Conversely, failure to file the appropriate federal notice will not result in a loss of an available state exemption unless such exemption is predicated on the filing of a federal notice.

A. BASIC IDENTIFICATION DATA

2. Enter the information requested for the following:

- Each promoter of the issuer, if the issuer has been organized within the past five years;
- Each beneficial owner having the power to vote or dispose, or direct the vote or disposition of, 10% or more of a class of equity securities of the issuer.
- Each executive officer and director of corporate issuers and of corporate general and managing partners of partnership issuers; and
- Each general and managing partner of partnership issuers.

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

De Souza, Errol B.

Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Maraganore, John M.

Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Barrett, Peter

Full Name (Last name first, if individual)

c/o Atlas Venture Fund, 890 Winter Street, Suite 320, Waltham, MA 02451

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Ross, Michael J.

Full Name (Last name first, if individual)

c/o Schroder Venture Life Sciences, 344 Virginia Ave, San Mateo, CA 94402

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Barkas, Alex

Full Name (Last name first, if individual)

c/o Prospect Ventures, 435 Tasso Street, Suite 200 Palo Alto, CA 94301

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Stein, Robert B.

Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Best, Lawrence

Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142

Business or Residence Address (Number and Street, City, State, Zip Code)

(Use blank sheet, or copy and use additional copies of this sheet, as necessary)

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- Each beneficial owner having the power to vote or dispose, or direct the vote or disposition of, 10% or more of a class of equity securities of the issuer.
- Each executive officer and director of corporate issuers and of corporate general and managing partners of partnership issuers; and
- Each general and managing partner of partnership issuers.

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Mullov, Corey
 Full Name (Last name first, if individual)

c/o Highland Management Partners IV, Inc., 92 Hayden Ave., Lexington, MA 02421
 Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Higgins, John Duncan
 Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142
 Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Beloff, Gregg
 Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142
 Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Gilbert, James
 Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142
 Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Page Bouchard
 Full Name (Last name first, if individual)

c/o Archemix Corp., 300 Third Street, Cambridge, MA 02142
 Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Highland Capital Partners VI Limited Partners
 Full Name (Last name first, if individual)

92 Hayden Avenue, Lexington, MA 02421
 Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Atlas Venture Fund V, L.P.
 Full Name (Last name first, if individual)

22 Berkley Street, Boston, MA 02116
 Business or Residence Address (Number and Street, City, State, Zip Code)

(Use blank sheet, or copy and use additional copies of this sheet, as necessary)

A. BASIC IDENTIFICATION DATA

2. Enter the information requested for the following:

- Each promoter of the issuer, if the issuer has been organized within the past five years;
- Each beneficial owner having the power to vote or dispose, or direct the vote or disposition of, 10% or more of a class of equity securities of the issuer.
- Each executive officer and director of corporate issuers and of corporate general and managing partners of partnership issuers; and
- Each general and managing partner of partnership issuers.

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Prospect Venture Partners II, LP

Full Name (Last name first, if individual)

435 Tasso Street, Suite 200, Palo Alto, CA 94301

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

International Life Sciences Fund III

Full Name (Last name first, if individual)

c/o Schroden Venture Life Science Advisors, Inc., 60 State Street, Suite 3650, Boston, MA 02109

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Merck, KGaA

Full Name (Last name first, if individual)

Frankfurter Street, 250 D 64293, Darmstadt, Germany

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

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Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

(Use blank sheet, or copy and use additional copies of this sheet, as necessary)

B. INFORMATION ABOUT OFFERING

1. Has the issuer sold, or does the issuer intend to sell, to non-accredited investors in this offering? Yes No
 Answer also in Appendix, Column 2, if filing under ULOE.
2. What is the minimum investment that will be accepted from any individual? \$ 0
3. Does the offering permit joint ownership of a single unit? Yes No
4. Enter the information requested for each person who has been or will be paid or given, directly or indirectly, any commission or similar remuneration for solicitation of purchasers in connection with sales of securities in the offering. If a person to be listed is an associated person or agent of a broker or dealer registered with the SEC and/or with a state or states, list the name of the broker or dealer. If more than five (5) persons to be listed are associated persons of such a broker or dealer, you may set forth the information for that broker or dealer only.

Full Name (Last name first, if individual)

N/A

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) All States

<input type="checkbox"/> AL	<input type="checkbox"/> AK	<input type="checkbox"/> AZ	<input type="checkbox"/> AR	<input type="checkbox"/> CA	<input type="checkbox"/> CO	<input type="checkbox"/> CT	<input type="checkbox"/> DE	<input type="checkbox"/> DC	<input type="checkbox"/> FL	<input type="checkbox"/> GA	<input type="checkbox"/> HI	<input type="checkbox"/> ID
<input type="checkbox"/> IL	<input type="checkbox"/> IN	<input type="checkbox"/> IA	<input type="checkbox"/> KS	<input type="checkbox"/> KY	<input type="checkbox"/> LA	<input type="checkbox"/> ME	<input type="checkbox"/> MD	<input type="checkbox"/> MA	<input type="checkbox"/> MI	<input type="checkbox"/> MN	<input type="checkbox"/> MS	<input type="checkbox"/> MO
<input type="checkbox"/> MT	<input type="checkbox"/> NE	<input type="checkbox"/> NV	<input type="checkbox"/> NH	<input type="checkbox"/> NJ	<input type="checkbox"/> NM	<input type="checkbox"/> NY	<input type="checkbox"/> NC	<input type="checkbox"/> ND	<input type="checkbox"/> OH	<input type="checkbox"/> OK	<input type="checkbox"/> OR	<input type="checkbox"/> PA
<input type="checkbox"/> RI	<input type="checkbox"/> SC	<input type="checkbox"/> SD	<input type="checkbox"/> TN	<input type="checkbox"/> TX	<input type="checkbox"/> UT	<input type="checkbox"/> VT	<input type="checkbox"/> VA	<input type="checkbox"/> WA	<input type="checkbox"/> WV	<input type="checkbox"/> WI	<input type="checkbox"/> WY	<input type="checkbox"/> PR

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) All States

<input type="checkbox"/> AL	<input type="checkbox"/> AK	<input type="checkbox"/> AZ	<input type="checkbox"/> AR	<input type="checkbox"/> CA	<input type="checkbox"/> CO	<input type="checkbox"/> CT	<input type="checkbox"/> DE	<input type="checkbox"/> DC	<input type="checkbox"/> FL	<input type="checkbox"/> GA	<input type="checkbox"/> HI	<input type="checkbox"/> ID
<input type="checkbox"/> IL	<input type="checkbox"/> IN	<input type="checkbox"/> IA	<input type="checkbox"/> KS	<input type="checkbox"/> KY	<input type="checkbox"/> LA	<input type="checkbox"/> ME	<input type="checkbox"/> MD	<input type="checkbox"/> MA	<input type="checkbox"/> MI	<input type="checkbox"/> MN	<input type="checkbox"/> MS	<input type="checkbox"/> MO
<input type="checkbox"/> MT	<input type="checkbox"/> NE	<input type="checkbox"/> NV	<input type="checkbox"/> NH	<input type="checkbox"/> NJ	<input type="checkbox"/> NM	<input type="checkbox"/> NY	<input type="checkbox"/> NC	<input type="checkbox"/> ND	<input type="checkbox"/> OH	<input type="checkbox"/> OK	<input type="checkbox"/> OR	<input type="checkbox"/> PA
<input type="checkbox"/> RI	<input type="checkbox"/> SC	<input type="checkbox"/> SD	<input type="checkbox"/> TN	<input type="checkbox"/> TX	<input type="checkbox"/> UT	<input type="checkbox"/> VT	<input type="checkbox"/> VA	<input type="checkbox"/> WA	<input type="checkbox"/> WV	<input type="checkbox"/> WI	<input type="checkbox"/> WY	<input type="checkbox"/> PR

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) All States

<input type="checkbox"/> AL	<input type="checkbox"/> AK	<input type="checkbox"/> AZ	<input type="checkbox"/> AR	<input type="checkbox"/> CA	<input type="checkbox"/> CO	<input type="checkbox"/> CT	<input type="checkbox"/> DE	<input type="checkbox"/> DC	<input type="checkbox"/> FL	<input type="checkbox"/> GA	<input type="checkbox"/> HI	<input type="checkbox"/> ID
<input type="checkbox"/> IL	<input type="checkbox"/> IN	<input type="checkbox"/> IA	<input type="checkbox"/> KS	<input type="checkbox"/> KY	<input type="checkbox"/> LA	<input type="checkbox"/> ME	<input type="checkbox"/> MD	<input type="checkbox"/> MA	<input type="checkbox"/> MI	<input type="checkbox"/> MN	<input type="checkbox"/> MS	<input type="checkbox"/> MO
<input type="checkbox"/> MT	<input type="checkbox"/> NE	<input type="checkbox"/> NV	<input type="checkbox"/> NH	<input type="checkbox"/> NJ	<input type="checkbox"/> NM	<input type="checkbox"/> NY	<input type="checkbox"/> NC	<input type="checkbox"/> ND	<input type="checkbox"/> OH	<input type="checkbox"/> OK	<input type="checkbox"/> OR	<input type="checkbox"/> PA
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(Use blank sheet, or copy and use additional copies of this sheet, as necessary.)

C. OFFERING PRICE, NUMBER OF INVESTORS, EXPENSES AND USE OF PROCEEDS

1. Enter the aggregate offering price of securities included in this offering and the total amount already sold. Enter "0" if the answer is "none" or "zero." If the transaction is an exchange offering, check this box and indicate in the columns below the amounts of the securities offered for exchange and already exchanged.

Type of Security	Aggregate Offering Price	Amount Already Sold
Debt	\$ 0	\$ 0
Equity	\$ 6,499,999.50	\$ 6,499,999.50
	<input type="checkbox"/> Common <input type="checkbox"/> Preferred	
Convertible Securities (including warrants)	\$ _____	\$ _____
Partnership Interests	\$ _____	\$ _____
Other (Specify _____)	\$ _____	\$ _____
Total	\$ 6,499,999.50	\$ 6,499,999.50

Answer also in Appendix, Column 3, if filing under ULOE.

2. Enter the number of accredited and non-accredited investors who have purchased securities in this offering and the aggregate dollar amounts of their purchases. For offerings under Rule 504, indicate the number of persons who have purchased securities and the aggregate dollar amount of their purchases on the total lines. Enter "0" if answer is "none" or "zero."

	Number Investors	Aggregate Dollar Amount of Purchases
Accredited Investors	1	\$ 6,499,999.50
Non-accredited Investors	_____	\$ _____
Total (for filings under Rule 504 only)	_____	\$ 6,499,999.50

Answer also in Appendix, Column 4, if filing under ULOE.

3. If this filing is for an offering under Rule 504 or 505, enter the information requested for all securities sold by the issuer, to date, in offerings of the types indicated, in the twelve (12) months prior to the first sale of securities in this offering. Classify securities by type listed in Part C — Question 1.

Type of Offering	Type of Security	Dollar Amount Sold
Rule 505	_____	\$ _____
Regulation A	_____	\$ _____
Rule 504	_____	\$ _____
Total	_____	\$ _____

4. a. Furnish a statement of all expenses in connection with the issuance and distribution of the securities in this offering. Exclude amounts relating solely to organization expenses of the insurer. The information may be given as subject to future contingencies. If the amount of an expenditure is not known, furnish an estimate and check the box to the left of the estimate.

Transfer Agent's Fees	<input checked="" type="checkbox"/>	\$ 0
Printing and Engraving Costs	<input checked="" type="checkbox"/>	\$ 0
Legal Fees	<input checked="" type="checkbox"/>	\$ 25,000
Accounting Fees	<input checked="" type="checkbox"/>	\$ 0
Engineering Fees	<input checked="" type="checkbox"/>	\$ 0
Sales Commissions (specify finders' fees separately)	<input checked="" type="checkbox"/>	\$ 0
Other Expenses (identify) _____	<input checked="" type="checkbox"/>	\$ 0
Total	<input checked="" type="checkbox"/>	\$ 25,000

C. OFFERING PRICE, NUMBER OF INVESTORS, EXPENSES AND USE OF PROCEEDS

b. Enter the difference between the aggregate offering price given in response to Part C — Question 1 and total expenses furnished in response to Part C — Question 4.a. This difference is the "adjusted gross proceeds to the issuer."

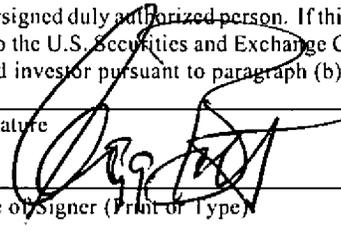
\$ 6,474,999.50

5. Indicate below the amount of the adjusted gross proceed to the issuer used or proposed to be used for each of the purposes shown. If the amount for any purpose is not known, furnish an estimate and check the box to the left of the estimate. The total of the payments listed must equal the adjusted gross proceeds to the issuer set forth in response to Part C — Question 4.b above.

	Payments to Officers, Directors, & Affiliates	Payments to Others
Salaries and fees	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Purchase of real estate	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Purchase, rental or leasing and installation of machinery and equipment	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Construction or leasing of plant buildings and facilities	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Acquisition of other businesses (including the value of securities involved in this offering that may be used in exchange for the assets or securities of another issuer pursuant to a merger)	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Repayment of indebtedness	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Working capital	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ 6,474,499.50
Other (specify): _____	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
_____	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Column Totals	<input checked="" type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ _____
Total Payments Listed (column totals added)	<input checked="" type="checkbox"/> \$ 6,474,499.50	

D. FEDERAL SIGNATURE

The issuer has duly caused this notice to be signed by the undersigned duly authorized person. If this notice is filed under Rule 505, the following signature constitutes an undertaking by the issuer to furnish to the U.S. Securities and Exchange Commission, upon written request of its staff, the information furnished by the issuer to any non-accredited investor pursuant to paragraph (b)(2) of Rule 502.

Issuer (Print or Type) Archemix Corp.	Signature 	Date 11/5/09
Name of Signer (Print or Type) Gregg Beloff	Title of Signer (Print or Type) Chief Financial Officer	

ATTENTION
Intentional misstatements or omissions of fact constitute federal criminal violations. (See 18 U.S.C. 1001.)

END