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): May 7, 2012

ADVENTRX Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware	001-32157	84-1318182
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)
12390 El Camino Real, Suite 150, San Diego, California		92130
(Address of principal executive offices)		(Zip Code)

Registrant's telephone number, including area code: 858-552-0866

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:

[ ] 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))

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Item 2.02 Results of Operations and Financial Condition.

On May 7, 2012, ADVENTRX Pharmaceuticals, Inc. issued a press release announcing its financial results for the three months ended March 31, 2012. A copy of this press release is furnished as Exhibit 99.1 hereto.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

The list of exhibits called for by this Item is incorporated by reference to the Exhibit Index filed with this report.

The information set forth under Item 2.02 and in Exhibit 99.1 is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934 and is not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in any such filing.

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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.

ADVENTRX Pharmaceuticals, Inc.

May 7, 2012

By: /s/ Patrick L. Keran

Name: Patrick L. Keran
Title: President and Chief Operating Officer

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Exhibit Index

Exhibit No.	Description
99.1	Press release, dated May 7, 2012

ADVENTRX REPORTS FIRST QUARTER 2012 FINANCIAL RESULTS

SAN DIEGO – May 7, 2012 – ADVENTRX Pharmaceuticals, Inc. (NYSE Amex: ANX) today reported financial results for the first quarter ended March 31, 2012.

"In the first quarter, we focused our resources on ANX-188, including manufacturing activities related to generating clinical trial material for our planned phase 3 study in patients with sickle cell disease," stated Brian M. Culley, Chief Executive Officer of ADVENTRX. "Based in part on a recent meeting with the FDA regarding the manufacture of ANX-188, we continue to expect to initiate the phase 3 study later this year."

First Quarter 2012 Operating Results

ADVENTRX's net loss applicable to common stock for the first quarter of 2012 was $4.2 million, or $0.09 per share (basic and diluted), compared to a net loss applicable to common stock of $3.0 million, or $0.13 per share (basic and diluted), for the same period in 2011.

Research and development (R&D) expenses for the first quarter of 2012 were $2.2 million, an increase of $1.6 million, or 262%, compared to $0.6 million for the same period in 2011. The increase was due to a $1.1 million increase in external nonclinical study fees and expenses, a $0.3 million increase in personnel costs, and a $0.2 million increase in external clinical study fees. The increases in external nonclinical study fees and expenses were primarily related to increased research-related manufacturing expenses of $0.9 million for ANX-188 and $0.5 million for ANX-514, offset by a $0.3 million decrease in research-related manufacturing expenses related to Exelbine™. The increase in external clinical study fees and expenses was primarily related to increased clinical consulting expenses for ANX-188.

Selling, general and administrative (SG&A) expenses for the first quarter of 2012 were $2.0 million, an increase of $0.4 million, or 30%, compared to $1.6 million for the same period in 2011. The increase was due primarily to an increase of $0.2 million in personnel costs and a $0.2 million increase in share-based compensation expense.

Transaction-related expenses for the first quarter of 2012 were negative $0.1 million compared to positive $0.8 million for the same period in 2011. Transaction-related expenses for the first quarter of 2012 consisted of negative $0.1 million associated with changes since December 31, 2011 in the fair value of the contingent asset and contingent liability related to the SynthRx acquisition. Transaction-related expenses for the first quarter of 2011 consisted of $0.8 million related to legal, financial and business development advisory fees associated with the evaluation of potential acquisition targets, including SynthRx.

Balance Sheet Highlights

As of March 31, 2012, the Company had cash, cash equivalents and short-term investments totaling $46.0 million. Stockholders' equity amounted to $53.0 million as of March 31, 2012.

About ADVENTRX Pharmaceuticals

ADVENTRX Pharmaceuticals is a biopharmaceutical company focused on developing proprietary product candidates. The Company's lead product candidate is ANX-188, a rheologic, antithrombotic and cytoprotective agent that improves microvascular blood flow and has potential application in treating a wide range of diseases and conditions, such as complications arising from sickle cell disease. We also are developing ANX-514, a novel, detergent-free formulation of the chemotherapy drug docetaxel. More information can be found on the Company's web site at www.adventrx.com.

Forward Looking Statements

ADVENTRX cautions you that statements included in this press release that are not a description of historical facts are forward-looking statements that are based on ADVENTRX's current expectations and assumptions. Such forward-looking statements include, but are not limited to, statements regarding the Company's development plans for ANX-188, including the nature and timing of future clinical studies, and the Company's expectations regarding the FDA's agreement with such plans. Among the factors that could cause or contribute to material differences between ADVENTRX's actual results and those indicated from the forward-looking statements are risks and uncertainties inherent in ADVENTRX's business, including, but are not limited to: the potential for ADVENTRX to delay, reduce or discontinue current and/or planned development activities, partner its product candidates at inopportune times or pursue less expensive but higher-risk development paths if it is unable to raise sufficient additional capital as needed; ADVENTRX's ability to obtain additional funding on a timely basis or on acceptable terms, or at all; the potential for delays in the commencement or completion of its planned clinical studies including as a result of difficulties or delays in completing manufacturing process development activities and manufacturing clinical trial material or difficulties or delays in obtaining regulatory approval or meeting applicable regulatory requirements; the risk of suspension or termination of a clinical study including due to lack of adequate funding;

the risk that planned clinical studies of our product candidates, including ANX-188, are not successful and, even if they are successful, that the FDA could determine they are not sufficient to support an NDAs for the product candidate; the risk that the FDA does not grant market approval of ADVENTRX's product candidates, including ANX-188, on a timely basis, or at all; ADVENTRX's reliance on third parties to assist in the conduct of important aspects of its product candidates' development programs, including the manufacture of clinical trial material, the conduct of clinical studies and regulatory submissions related to product approval, and that such third parties may fail to perform as expected; and other risks and uncertainties more fully described in ADVENTRX's press releases and periodic filings with the Securities and Exchange Commission. ADVENTRX's public filings with the Securities and Exchange Commission are available at www.sec.gov.

You are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date when made. ADVENTRX does not intend to revise or update any forward-looking statement set forth in this press release to reflect events or circumstances arising after the date hereof, except as may be required by law.

Contact:
ADVENTRX Pharmaceuticals
Ioana C. Hone (ir@adventrx.com)
858-552-0866 Ext. 303

[Tables to Follow]

ADVENTRX Pharmaceuticals, Inc.
(A Development Stage Enterprise)
Condensed Consolidated Statements of Operations
(In thousands except per share data)

	Three months ended March 31, (Unaudited)	
	2012	**2011**
Total net revenue	$ —	$ —
Operating expenses:		
Research and development	2,210	611
Selling, general and administrative	2,045	1,574
Transaction-related expenses	(114)	799
Depreciation and amortization	30	10
Total operating expenses	4,171	2,994
Loss from operations	(4,171)	(2,994)
Interest and other income, net	18	38
Net loss applicable to common stock	$ (4,153)	$ (2,956)
Net loss per share – basic and diluted	$ (0.09)	$ (0.13)
Weighted average shares – basic and diluted	47,716	22,755

ADVENTRX Pharmaceuticals, Inc.
(A Development Stage Enterprise)
Balance Sheet Data
(In thousands)

	March 31, 2012 (Unaudited)	**December 31, 2011**
Cash, cash equivalents and short-term investments	$ 46,046	$ 50,704
Working capital	45,362	49,323
Total assets	57,510	61,856
Total liabilities	4,554	5,078
Stockholders' equity	52,956	56,779