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 9, 2011

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 9, 2011, ADVENTRX Pharmaceuticals, Inc. issued a press release announcing its financial results for the three months ended March 31, 2011. 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 9, 2011

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 9, 2011

ADVENTRX REPORTS FIRST QUARTER 2011 FINANCIAL RESULTS

Recent Highlights

- **Acquisition of SynthRx completed April 2011**
- **$46.6 million in cash at March 31, 2011**

SAN DIEGO – May 9, 2011 – ADVENTRX Pharmaceuticals, Inc. (NYSE Amex: ANX) today reported financial results for the first quarter ended March 31, 2011.

"We are pleased to have completed the acquisition of SynthRx and look forward to meeting with the FDA this year to reach agreement on the protocol for a pivotal phase 3 study of ANX-188 for the treatment of sickle cell crisis," said Brian M. Culley, Chief Executive Officer of ADVENTRX. "In addition, we continue to prepare for the commercial launch of Exelbine and to develop the protocol for a phase 3 study of ANX-514, our polysorbate 80-free formulation of docetaxel, to provide the additional safety data requested by the FDA."

"Our strong balance sheet and cash position at March 31, 2011 will help fund these phase 3 studies while allowing us to continue to evaluate strategic acquisitions that we believe will further enhance our product pipeline and create value for our stockholders," Mr. Culley concluded.

First Quarter 2011 Operating Results

ADVENTRX's net loss applicable to common stock for the first quarter of 2011 was $3.0 million, or $0.13 per share, compared to a net loss applicable to common stock of $4.9 million, or $0.48 per share, for the same period in 2010. Included in the net loss applicable to common stock for the first quarter of 2010 was a non-cash, deemed dividend expense of $2.5 million incurred in connection with the Company's January 2010 equity financing.

Research and development (R&D) expenses for the first quarter of 2011 were $0.6 million, a decrease of $0.6 million, or 51%, compared to $1.2 million for the same period in 2010. The decrease was due primarily to a $0.7 million decrease in external nonclinical study fees and expenses. The decrease in external nonclinical study fees and expenses resulted largely from a $0.5 million decrease in research-related manufacturing expenses for ANX-514 and a $0.2 million decrease in fees for regulatory consulting services related to ANX-514.

Selling, general and administrative (SG&A) expenses for the first quarter of 2011 were $1.6 million, an increase of $0.4 million, or 34%, compared to $1.2 million for the same period in 2010. The increase was due primarily to a $ $0.2 million increase in personnel costs, mainly due to an accrual for estimated bonus expense related to 2011 performance, and a $0.2 million increase in fees for legal services primarily related to commercial-readiness activities for Exelbine™.

Transaction-related expenses for the first quarter of 2011 were $0.8 million compared to $0 for the same period in 2010. Transaction-related expenses consist of legal, accounting, financial and business development advisory fees associated with the acquisition of SynthRx and the evaluation of potential acquisition targets.

Balance Sheet Highlights

As of March 31, 2011, the Company had cash totaling $46.6 million. Stockholders' equity amounted to $44.8 million as of March 31, 2011.

About ADVENTRX Pharmaceuticals

ADVENTRX Pharmaceuticals is a specialty pharmaceutical company focused on acquiring, developing and commercializing proprietary product candidates. The Company's current lead product candidates are Exelbine and ANX-514, novel emulsion formulations of currently marketed chemotherapy drugs, and ANX-188, a novel, purified, rheologic and antithrombotic compound initially being developed as a first-in-class treatment for pediatric patients with sickle cell disease in acute crisis. 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 ADVENTRX's expectations that its anticipated phase 3 clinical studies of ANX-188 and ANX-514 may provide the basis for submission of NDAs for those product candidates, the potential for receipt of and timing regarding FDA approval to market Exelbine, and ADVENTRX's expectations regarding strategic transactions that would enhance its product pipeline and create value for its stockholders. Actual events or results may differ materially from those expressed or implied by the forward-looking statements in this press release due to a number of risks and uncertainties, including, without limitation: difficulties or delays in obtaining regulatory approval for its product candidates and the possibility that ADVENTRX does not receive regulatory approval on a timely basis, or at all; the potential for ADVENTRX to raise additional capital to acquire new technologies, product candidates or products and/or to fund development and/or commercialization activities for current and/or future product candidates; difficulties or delays in reaching agreement with the FDA on the clinical development of ANX-188 and ANX-514; the risk that the cost of the planned phase 3 clinical trials of ANX-188 and ANX-514 will exceed the amounts projected for such trials; the potential for the FDA to require significant additional clinical and/or nonclinical studies of ADVENTRX's lead product candidates, in addition to its planned phase 3 clinical trials of ANX-188 and ANX-514, and that ADVENTRX consequently determines to discontinue one or more of those development programs; the potential for the FDA to impose requirements to be completed before or after approval of the Exelbine NDA; difficulties or delays in manufacturing material for clinical studies; difficulties or

delays in manufacturing Exelbine and any other product candidate on a commercial scale, if approved, including validating commercial manufacturing processes and manufacturers, as well as suppliers; difficulties or delays in marketing Exelbine and any other product candidate, if approved, including developing or acquiring marketing, sales and distribution capabilities; ADVENTRX's reliance on third parties to assist in the conduct of important aspects of its product candidates' development programs, and that such third parties may fail to perform as expected; the risk that ADVENTRX will pursue acquisition and/or development activities at levels on timelines, or will incur unexpected expenses, that shorten the period through which its operating funds will sustain it; the potential for ADVENTRX to enter into a merger or other business combination in connection with the acquisition of a new technology, product candidate or product resulting in a successor entity that focuses its resources on developing products and product candidates other than ADVENTRX's current lead product candidates; 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.

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[Tables to Follow]

ADVENTRX Pharmaceuticals, Inc.
(A Development Stage Enterprise)
Condensed Consolidated Statements of Operations
(Unaudited)
(In 000's except per share data)

	Three months ended March 31,	
	2011	**2010 †**
Total net revenues	$ —	$ —
Operating expenses:		
Research and development	611	1,239
Selling, general and administrative	1,574	1,175
Transaction-related expenses	799	—
Depreciation and amortization	10	6
Total operating expenses	2,994	2,420
Loss from operations	(2,994)	(2,420)
Interest and other income	38	17
Loss before income taxes	(2,956)	(2,403)
Provision for income taxes	—	—
Net loss	(2,956)	(2,403)
Deemed dividends on preferred stock	—	(2,515)
Net loss applicable to common stock	$ (2,956)	$ (4,918)
Net loss per share – basic and diluted	$ (0.13)	$ (0.48)
Weighted average shares – basic and diluted	22,755	10,144

† Share and per share information related to dates or periods prior to April 23, 2010 have been restated to reflect retrospective application of the 1-for-25 reverse split of outstanding common stock that took place on that date.

ADVENTRX Pharmaceuticals, Inc.
(A Development Stage Enterprise)
Balance Sheet Data
(In 000's)

	March 31, 2011	**December 31, 2010**
Total cash	$46,552	$27,979
Working capital	44,753	26,608
Total assets	46,957	28,487
Total liabilities	2,134	1,801
Stockholders' equity	44,824	26,685