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): March 16, 2010

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.)
6725 Mesa Ridge Road, Suite 100, San Diego, California		92121
(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 March 16, 2010, ADVENTRX Pharmaceuticals, Inc. (the "Company") issued a press release announcing its financial results for the three months and year ended December 31, 2009. A copy of this press release is furnished as Exhibit 99.1 hereto.

The attached press release contains pro forma financial information. "Pro forma" is not a term defined by U.S. generally accepted accounting principles ("GAAP"). The non-GAAP pro forma financial information presented in the press release should be considered in addition to, not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. Reconciliations between GAAP information and pro forma information are provided in the press release. The Company believes the pro forma financial information presented in the press release may be useful to investors in evaluating the Company's actual and effective cash positions following its January 2010 equity financing. The Company's management uses the pro forma information p resented in the press release to assess the Company's financial position going into 2010 and to budget for 2010 operations.

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 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.

March 16, 2010

By: /s/ Patrick Keran

Name: Patrick Keran
Title: President and Chief Operating Officer

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Exhibit Index

Exhibit No.	Description
99.1	Press Release, dated March 16, 2010

ADVENTRX PHARMACEUTICALS, INC. REPORTS FOURTH QUARTER AND FULL YEAR 2009 FINANCIAL RESULTS

SAN DIEGO – March 16, 2010 – ADVENTRX Pharmaceuticals, Inc. (NYSE Amex: ANX) today reported financial results for the fourth quarter and year ended December 31, 2009.

“ADVENTRX begins 2010 with a strong balance sheet reflecting $22.7 million in cash, taking into account the net proceeds from the equity financing in January 2010, against 2009 operating expenses of $11.6 million,” said Brian M. Culley, ADVENTRX’s Chief Executive Officer. “This capital will enable us to continue on-going stability studies from the intended commercial manufacturer of ANX-530, which we expect will be required to file the ANX-530 New Drug Application, and development of our detergent-free reformulation of the blockbuster chemotherapy drug, Taxotere.”

“We look forward to meeting with the Food and Drug Administration to discuss filing requirements for our ANX-530 NDA, as well as the results of our ANX-514 bioequivalence study,” Mr. Culley continued.

Fourth Quarter 2009 Operating Results

ADVENTRX’s net loss applicable to common stock for the fourth quarter of 2009 was $6.5 million, or $0.04 per share, compared to a net loss applicable to common stock of $7.5 million, or $0.08 per share, for the same period in 2008. Included in the net loss applicable to common stock for the fourth quarter of 2009 was a non-cash, deemed dividend expense of $3.3 million incurred in connection with the Company’s October 2009 equity financing.

Research and development (R&D) expenses for the fourth quarter of 2009 were $2.0 million, a decrease of $2.9 million, or 59%, compared to $4.8 million for the same period in 2008. The decrease primarily was due to a $1.5 million decrease in expenses related to external research-related manufacturing and regulatory and quality assurance activities related to ANX-530 and ANX-514, a $0.7 million decrease in personnel costs, a $0.6 million decrease in external clinical trial expenses related to ANX-514 and a $0.1 million decrease in non-cash, stock-based compensation expenses.

Selling, general and administrative (SG&A) expenses for the fourth quarter of 2009 were $1.3 million, a decrease of $1.4 million, or 53%, compared to $2.6 million for the same period in 2008. The decrease primarily was due to a $0.5 million decrease in personnel costs, a $0.5 million decrease in severance expenses, a $0.4 million decrease in legal and professional services, a $0.3 million decrease in consulting expenses, and a $0.1 million decrease in insurance expenses, offset in part by a $0.5 million increase in year-end bonus accrual.

Full-Year 2009 Operating Results

ADVENTRX’s net loss applicable to common stock for 2009 was $16.2 million, or $0.14 per share, compared to a net loss applicable to common stock of $26.6 million, or $0.30 per share, for 2008. Included in the net loss applicable to common stock for 2009 was a non-cash deemed dividend expense of $4.9 million incurred in connection with the Company’s June, July, August and October 2009 equity financings. Also included in the net loss applicable to common stock for 2009 were charges associated with the Company’s reductions in force completed in October 2008, and January and April 2009.

R&D expenses for 2009 were $6.5 million, a decrease of $11.4 million, or 64%, compared to $17.9 million for 2008. The decrease primarily was due to a $2.9 million decrease in nonclinical expenses related to ANX-514, a $2.5 million decrease in personnel costs, a $2.0 million decrease in nonclinical expenses related to ANX-530, a $1.8 million decrease in external clinical trial expenses related to the completion of ANX-510 studies, a $0.7 million decrease in external clinical trial expenses associated with the completion of patient enrollment in the ANX-514 bioequivalence study in the first quarter of 2009 and a $0.4 million decrease in nonclinical expenses related to various other product candidate projects that were discontinued in 2009 as part of cost reduction efforts. R&D expenses for 2009 included non-cash, stock-based compensation expenses amounting to $42,000, compared to $0.7 million for 2008.

SG&A expenses for 2009 were $5.0 million, a decrease of $4.7 million, or 49%, compared to $9.7 million for 2008. The decrease primarily was due to a $1.8 million decrease in personnel costs, a $0.9 million decrease in legal and professional services, a $0.6 million decrease in severance related costs, a $0.5 million decrease for consulting, Sarbanes-Oxley compliance and recruiting services, a $0.3 million decrease in non-cash, stock-based compensation expense, a $0.3 million decrease in travel expenses, a $0.2 million decrease for market research expenses and a $0.1 million decrease in insurance related expenses. SG&A expenses for 2009 included non-cash, stock-based compensation expenses amounting to $0.5 million, compared to $0.9 million for 2008.

Balance Sheet Highlights

As of December 31, 2009, the Company had cash totaling $8.7 million and working capital of $6.6 million. Stockholders’ equity amounted to $6.7 million as of December 31, 2009. Taking into account net proceeds of $14.0 million from the equity financing completed in January 2010, pro forma cash and pro forma working capital at December 31, 2009 were $22.7 million and $20.6 million, respectively.

Note Regarding Use of Non-GAAP Financial Measures

“Pro forma” is not a term defined by U.S. generally accepted accounting principles (GAAP). The non-GAAP pro forma financial information presented herein should be considered in addition to, not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. The Company believes the pro forma financial information presented herein may be useful to investors in evaluating the Company’s actual and effective cash positions following its January 2010 equity financing. The Company’s management uses the pro forma information presented herein to assess the Company’s financial position going into 2010 and to budget for 2010 operations.

About ADVENTRX Pharmaceuticals

ADVENTRX Pharmaceuticals is a specialty pharmaceutical company whose product candidates are designed to improve the performance of existing cancer treatments by addressing limitations associated principally with their safety and use. 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 involve risks and assumptions that, if they materialize or do not prove to be accurate, could cause ADVENTRX's results to differ materially from historical results or those expressed or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to: ADVENTRX's dependence on the success of ANX-530 and ANX-514, and increased uncertainty as to whether ANX-530 will receive regulatory approval on a timely basis, or at all, or be commercialized successfully; the risk that ADVENTRX will pursue development activities at levels or on timelines, or will incur unexpected expenses, that shortens the period through which its operating funds will sustain it; the risk that ADVENTRX will be unable to raise sufficient additional capital to commercialize ANX-530, if an ANX-530 NDA is re-submitted, accepted for filling and approved, or to continue the development of ANX-514; the potential for regulatory authorities to require additional preclinical work and/or clinical activities to support regulatory filings, including prior to the filing or the approval of an NDA for ANX-530 and/or ANX-514, which activities may increase the cost and timeline to NDA filling or approval and negatively impact our ability to raise additional capital; the potential that changes made in transferring the manufacturing process for ANX-530 and ANX-514 may result in a lack of comparability between the commercial product and the material used in clinical trials, and that FDA may require ADVENTRX to perform additional non-clinical or clinical studies; the risk the FDA will determine that ANX-530 and Navelbine® and/or ANX-514 and Taxotere® are not bioequivalent, including as a result of performing pharmacokinetic equivalence analysis based on a patient population other than the population on which ADVENTRX based its analysis or determining that increased docetaxel blood-levels during and immediately following infusion are clinically relevant; the risk of investigator bias in reporting adverse events as a result of the open-label nature of the ANX-530 bioequivalence study; difficulties or delays in manufacturing, obtaining regulatory approval for and marketing ANX-530 and ANX-514, including validating commercial manufacturing processes and manufacturers, as well as suppliers, and the potential for automatic injunctions regarding FDA approval of ANX-514; ADVENTRX's reliance on the performance of third parties to assist in the conduct of its bioequivalence trials, regulatory submissions, CMC activities and other important aspects of the ANX-530 and ANX-514 development programs, including on-going stability studies for ANX-530 and analysis of the ANX-514 bioequivalence trial data, 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 http://www.sec.gov.

You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date when made. ADVENTRX does not intend to update any forward-looking statement as set forth in this press release to reflect events or circumstances arising after the date on which it was made.

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[Tables to Follow]

ADVENTRX Pharmaceuticals, Inc.
(A Development Stage Enterprise)
Summary Consolidated Financial Information
(In 000s except for per share data)
Consolidated Statement of Operations Data*:

	Three months ended December 31,		Year ended December 31,	
	2009	**2008**	**2009**	**2008**
	(unaudited)	(unaudited)		
Revenue	$ —	$ —	$ 300	$ 500
Operating expenses:				
Research and development	1,962	4,849	6,508	17,922
Selling, general and administrative	1,253	2,644	4,998	9,720
Depreciation and amortization	10	37	80	168
Total operating expenses	3,225	7,530	11,586	27,810
Loss from operations	(3,225)	(7,530)	(11,286)	(27,310)
Interest Income	5	11	7	550
Other income/(expense)	—	7	(47)	112
Loss before income taxes	(3,220)	(7,512)	(11,325)	(26,647)
Provision for income taxes	—	—	—	—
Net loss	(3,220)	(7,512)	(11,325)	(26,647)
Deemed dividends on preferred stock	(3,258)	—	(4,867)	—
Net loss applicable to common stock	$ (6,478)	$ (7,512)	$ (16,192)	$ (26,647)
Net loss per share – basic and diluted	$ (0.04)	$ (0.08)	$ (0.14)	$ (0.30)
Weighted average shares – basic and diluted	162,732	90,253	116,679	90,253

** Sums may not equal totals due to rounding.*

Balance Sheet Data:

	2009	**2008**
Total cash	$ 8,667	$ 9,850

Working capital	6,619	5,736
Total assets	9,027	10,709
Total liabilities	2,354	4,714
Stockholders’ equity	6,674	5,995