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 1, 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 8.01 Other Events.

On March 1, 2010, ADVENTRX Pharmaceuticals, Inc. issued a press release announcing that it received a refuse to file letter from the U.S. Food and Drug Administration (FDA) regarding its New Drug Application (NDA) for ANX-530 (vinorelbine injectable emulsion). The press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

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.

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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 1, 2010

By: /s/ Patrick L. Keran

Name: Patrick L. Keran
Title: Chief Operating Officer

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Exhibit Index

Exhibit No.	Description
99.1	Press release, dated March 1, 2010

ADVENTRX Receives Refuse to File Letter from FDA on ANX-530 New Drug Application

- **Conference call and webcast begin at 9:00 a.m. Eastern time Monday, March 1**

SAN DIEGO (March 1, 2010) – ADVENTRX Pharmaceuticals, Inc. (NYSE Amex: ANX) announced today that it received a refuse to file letter from the U.S. Food and Drug Administration (FDA) regarding its New Drug Application (NDA) for ANX-530 (vinorelbine injectable emulsion). In the letter, the FDA indicated that the data included in the initial submission from the intended commercial manufacturing site was insufficient to support a commercially-viable expiration dating period. FDA identified only the one chemistry, manufacturing and controls (CMC) reason for the refusal to file. ADVENTRX plans to meet with the FDA as soon as possible to discuss its response.

To support a commercially-viable expiration dating period, the stability data provided in the ANX-530 NDA met ICH filing requirements for a new drug. Site-specific stability data from lots manufactured at the intended commercial manufacturing site also were submitted in the NDA.

“We believed, following discussions with the FDA at a pre-NDA meeting, the stability data package included in our initial submission supported both NDA acceptance and appropriate expiration dating. However, we now expect FDA will require additional site-specific stability data to accept our application. Although we plan to discuss the particular filing requirements with the reviewing chemists, site-specific stability studies are already ongoing and our recent financings provide us the capital to continue this work and, we expect, resubmit the application,” said Brian M. Culley, Chief Executive Officer at ADVENTRX.

“We will work closely with the Agency to understand its new requirements and define the path to a successful resubmission at the earliest possible time,” Mr. Culley continued.

ADVENTRX submitted the NDA for ANX-530 on December 30, 2009. Based on current regulations, once an NDA is submitted to the FDA, FDA has 60 days to preliminarily review the NDA submission and assess whether the NDA is sufficiently complete to permit a substantive review. If it determines that the NDA is not sufficiently complete, the FDA issues a refuse to file letter to the applicant. ADVENTRX plans to request a meeting with the FDA as soon as possible to discuss its comments on the NDA submission and to reach an understanding on what would be required for the ANX-530 NDA to be accepted for review.

Conference Call and Webcast
ADVENTRX will hold a conference call on Monday, March 1, 2010 beginning at 9:00 a.m. Eastern time to review the developments discussed in this news release. Individuals interested in listening to the conference call may do so by dialing (866) 305-6438 for domestic callers, or (706) 679-7161 for international callers, or from the webcast on the investor relations section of the Company’s Web site at www.adventrx.com. A 48-hour telephone replay will be available approximately one hour after the conclusion of the call by dialing (800) 642-1687 for domestic callers, or (706) 645-9291 for international callers, and entering reservation code 60223016. The webcast will be available on the Company’s Web site for 14 days following the completion of the call.

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: FDA’s requirements for the ANX-530 NDA to be accepted for review do not justify continued development of ANX-530; ADVENTRX’s dependence on the success of ANX-530, and increased uncertainty as to whether ANX-530 will receive regulatory approval or be commercialized successfully; the potential that FDA may not accept a resubmitted ANX-530 NDA for review, or that the bioequivalence data and other information included in the ANX-530 NDA may not adequately support bioequivalence with Navelbine, including as a result of performing pharmacokinetic equivalence analyses based on a patient population other than the population on which ADVENTRX based its analysis; the potential that changes made in transferring the manufacturing process for ANX-530 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 potential for FDA to impose other requirements to be completed before or after approval of the ANX-530 NDA; ADVENTRX’s reliance on third parties to assist with its bioequivalence trials, regulatory submissions, manufacturing and other important aspects of the ANX-530 development program, and the risk that FDA approval may be delayed if their performance is found to have been substandard; the possibility that patent claims covering ANX-530 will not issue or, if they do, that such claims, which likely will be limited to a specific intravenous emulsion formulation of vinorelbine, will not be sufficient to preclude development of other formulations of vinorelbine by competitors; the risk of investigator bias in reporting adverse events as a result of the open-label nature of the ANX-530 bioequivalence study, including bias that increased the reporting of adverse events associated with Navelbine and/or that decreased the reporting of adverse events associated with ANX-530; the risk that ADVENTRX will have insufficient capital to support its operations during the FDA review of the ANX-530 NDA, including as a result of FDA requesting or ADVENTRX providing additional information or clarification with respect to such submission or the FDA not completing its review by the ANX-530 “PDUFA date,” should a resubmitted ANX-530 be accepted; 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 the ANX-530 NDA is approved; 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 these 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 on which it was made.

Company Contact:
ADVENTRX Pharmaceuticals
Brian Culley, Chief Executive Officer
858-552-0866

Investor Contact:
Lippert/Heilshorn & Associates, Inc.
Don Markley (dmarkley@lhai.com)
310-691-7100

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