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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 3, 2010

**ADVENTRX Pharmaceuticals, Inc.**

(Exact Name of Registrant as Specified in Charter)

**Delaware**  
(State or Other Jurisdiction  
of Incorporation)

**001-32157**  
(Commission File No.)

**84-1318182**  
(IRS Employer Identification No.)

**6725 Mesa Ridge Road, Suite 100**  
**San Diego, CA 92121**  
(Address of Principal Executive Offices and Zip Code)

**N/A**  
(Former name or former address if changed since last report)

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

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 May 3, 2010, ADVENTRX Pharmaceuticals, Inc. issued a press release announcing the results of stability tests performed on samples of ANX-530 (vinorelbine injectable emulsion), or Exelbine™, manufactured at ADVENTRX's intended commercial manufacturing site. The 6-month stability data are on track to support the submission of the New Drug Application (NDA) for Exelbine. 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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**SIGNATURE**

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.**

Dated: May 3, 2010

By: /s/ Patrick L. Keran

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Name: Patrick L. Keran

Title: Chief Operating Officer

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EXHIBIT INDEX

99.1 Press release, dated May 3, 2010



## ADVENTRX ANNOUNCES 6-MONTH STABILITY DATA RESULTS FOR ANX-530

**SAN DIEGO (May 3, 2010)** – ADVENTRX Pharmaceuticals, Inc. (NYSE Amex: ANX) today announced the results of stability tests performed on samples of ANX-530 (vinorelbine injectable emulsion), or Exelbine™, manufactured at the Company’s intended commercial manufacturing site. The 6-month stability data are on track to support the submission of the New Drug Application (NDA) for Exelbine.

“These results are what we expected and what we expect to see from the 12-month data,” said Brian M. Culley, Chief Executive Officer of ADVENTRX. “Once we have the 12-month data, we will submit the Exelbine NDA, which we expect will take place in the fourth quarter of this year.”

### 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](http://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: the risk that future stability testing results are not consistent with prior results or are out-of-specification or otherwise do not support comparability between ADVENTRX’s prior and intended commercial manufacturing sites or a commercially-viable expiration dating period; the risk that the FDA does not accept a submitted Exelbine NDA for review, including as a result of identifying clinical or nonclinical reasons for a refusal-to-file or identifying CMC reasons that were not identified in the refusal-to-file of the previously submitted Exelbine NDA; ADVENTRX’s dependence on the success of Exelbine, and uncertainty as to whether Exelbine will receive regulatory approval or be commercialized successfully; the risk that the bioequivalence data and other information included in the Exelbine NDA may not adequately support bioequivalence with Navelbine®; the potential that changes made in transferring the manufacturing process for Exelbine may result in a lack of comparability between the commercial product and the material used in the bioequivalence trial, and that the FDA may require ADVENTRX to perform additional nonclinical, bioequivalence or clinical studies; the potential for the FDA to impose other requirements to be completed before or after approval of the Exelbine NDA; 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; 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](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 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.

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