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) **April 19, 2005**

ADVENTRX Pharmaceuticals, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation)

001-32157	**84-1318182**
(Commission File Number)	(IRS Employer Identification No.)

6725 Mesa Ridge Road, Suite 100
San Diego, California 92121
(Address of principal executive offices) (Zip Code)

(858) 552-0866
(Company's telephone number, including area code)

Item 8.01. Other Events.

On April 19, 2005, the Company announced that it presented CoFactor toxicity and pharmacodynamics data from its Phase II clinical trial in metastatic colorectal cancer. In addition, the Company announced that it presented enhanced antitumor activity and lower systemic toxicity with CoFactor combination therapies in preclinical models for colorectal and pancreatic cancer.

The press releases issued by the Company on April 19, 2005 with respect to these matters are included with this report as exhibits.

Item 9.01. Financial Statements and Exhibits.

(99) ©The exhibit list required by this item is incorporated by reference to the Exhibit Index filed as part of this report.

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.
By: /s/ Carrie E. Carlander
Name: Carrie E. Carlander
Title: Chief Financial Officer, Vice President, Finance, and Treasurer
April 19, 2005

EXHIBIT INDEX

Exhibit	Description
99.1	Press Release of the Company dated April 19, 2005.
99.2	Press Release of the Company dated April 19, 2005

Exhibit 99.1

ADVENTRX PRESENTS COFACTOR TOXICITY AND PHARMACODYNAMICS DATA FROM PHASE II TRIAL

SAN DIEGO - April 19, 2005 - ADVENTRX Pharmaceuticals, Inc. (Amex: ANX) today announced that it presented CoFactor™ toxicity and pharmacodynamics data collected from the Company's ongoing CoFactor Phase II clinical trial in metastatic colorectal cancer. This data suggests that there is negligible risk of toxicity.

C. Paul Spears, M.D., co-inventor of CoFactor, investigator in the COFU trial and lead author on the study, presented the results during the 96th Annual Meeting of the American Association for Cancer Research (AACR) in Anaheim, Calif.

Use of 5,10-methylene-tetrahydrofolate ([6R,S]-5,10-methylene-tetrahydropteroyl-monogluta-ate, CH_2FH_4) for promotion of 5-fluorouracil (5-FU) metabolite fluorodeoxyuridylate inhibition of thymidylate synthase has been promising for parameters of efficacy in solid tumors, with less toxicity than by use of leucovorin. CH_2FH_4 in dilute aqueous solution potentially could form formaldehyde (CHO) intermediates through kinetic dissociation of the methyene unit. Formation of CHO *in vivo* could be toxic, as in methanol metabolism. Formic acid is an end-metabolite of CHO and a marker for CHO toxicity.

Addition of CH_2FH_4 (CoFactor ^{TM}), 60 mg/m^2 , bolus i.v., to i.v. weekly 5-FU, 450 mg/m^2, was carried out in a Phase II trial in colon cancer patients as initial treatment of metastatic disease. Urinary formic acid levels were determined by ion chromatography at baseline, and at 2, 6, and 24 h after 5-FU/ CH_2FH_4, in the first 16 patients. This was repeated weekly for 6 weeks of the first cycle. Clinical markers related to CH_2FH_4 metabolism also included blood levels of B12, homocysteine, and RBC folate.

Normal urinary formic acid levels are 5 µg/mL (range, 0 - 12). Baseline pre-dose formic acid values of the first 16 patients on weekly 5-FU/ CH_2FH_4 showed a mean of 3.7 µg/mL (SD 6.14) and median value of 2.0 µg/mL (range, 0 - 26). The average value at 2 h was 2.0 (SD 1.32) and at 24 hours, 1.7 µg/mL (median 1.9 and 2.0 respectively, range 0 - 5.3 for 2 h, 0 - 3.0 for 24 h).
Baseline pre-dose RBC folate levels (by methotrexate competition) were 585, 573, and 442 ng/mL in the first three patients of study. Sustained increases to 1689, 1334, and 862 ng/mL, respectively, after weekly 5-FU/ CH_2FH_4 were noted.

Results of homocysteine levels in serum in 24 patients are available. Baseline mean pre-dose levels were 9.55 (SD 2.71) µM, with no change at week two or later post-dosing, 9.75 (SD 2.25) µM. However, one patient with a baseline homocysteine value of 14.2 showed a drop to 4.3 µM.
In conclusion, the metabolism of i.v. CH_2FH_4 at 60 mg/m^2, which results in marked RBC folate pool expansion, not only results in no immediate or delayed formic acid excretion, but may be associated with a decrease in urinary formate. This is consistent with the established use of reduced folates for treatment of methanol/CHO toxicity. CH_2FH_4 may bind additional moles of CHO, or this may occur through FH_4 its major metabolite.

"This study demonstrates that the simple, rapid administration of CoFactor shows direct and sustained expansion of folate pools without concomitant toxicity," said Joan M. Robbins, Ph.D., ADVENTRX chief technical officer and co-author of the study. "We continue to be encouraged by the safety profile for CoFactor."

This abstract “Pharmacodynamics of weekly intravenous methylene-tetrahydrofolate/5-fluorouracil on formic acid, RBC folate, and homocysteine levels in patients with metastatic colon cancer” is available via the Company’s Web site at www.adventrx.com.

ADVENTRX has filed for clearance to initiate a Phase III trial in the US and recently received clearance in the UK to begin an international Phase IIb trial with CoFactor in metastatic colorectal cancer and intends to file in the first half of this year for clearance to initiate an EU-based Phase III study in pancreatic cancer.

About CoFactor
CoFactor is a folate-based biomodulator drug developed to enhance the activity of the widely used cancer chemotherapeutic, 5-FU. Clinical data from previous clinical trials in Europe have demonstrated clinical benefit and improved overall median survival in patients with advanced tumors, including colorectal, pancreatic and breast. CoFactor creates more stable binding, compared to leucovorin, of the active form of 5-FU, FdUMP, to the target enzyme, thymidylate synthase (TS). CoFactor bypasses the chemical pathway required by leucovorin to deliver the active form of folate to allow 5-FU to work more effectively. This improves 5-FU performance and lowers toxicity. ADVENTRX is the exclusive licensee of this compound. More information on CoFactor can be found at http://www.adventrx.com/products/antic_cofactor.htm.

About ADVENTRX
ADVENTRX Pharmaceuticals is a biopharmaceutical research and development company focused on introducing new technologies for anticancer and antiviral treatments that improve the performance of existing drugs and address significant problems such as drug metabolism, bioavailability and resistance. More information can be found on the Company's Web site at www.adventrx.com.

Forward Looking Statement
This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Such statements are made based on management's current expectations and beliefs. Actual results may vary from those currently anticipated based upon a number of factors, including uncertainties inherent in the drug development process, the timing and success of clinical trials, the validity of research results, and the receipt of necessary approvals from the FDA and other regulatory agencies. For a discussion of such risks and uncertainties, which could cause actual results to differ from those contained in the forward-looking statements, see “Risk Factors” in the Company’s last quarterly report on Form 10-QSB, as well as other reports that the Company files from time to time with the Securities and Exchange Commission. All forward-looking statements are qualified in their entirety by this cautionary statement. The Company undertakes no obligation to release publicly any revisions, which may be made to reflect events or circumstances after the date hereof.

Contact:
ADVENTRX Pharmaceuticals
Andrea Lynn
858-552-0866

Investor Contact:
Lippert, Heilshorn & Associates
Jody Cain (jcain@lhai.com)
Brandi Floberg (bfloberg@lhai.com)
310-691-7100

Media Contact
Lippert Heilshorn & Associates
Mark Stuart (mstuart@lhai.com)
310-691-7116

Exhibit 99.2

ADVENTRX PRESENTS ENHANCED ANTITUMOR ACTIVITY AND LOWER SYSTEMIC TOXICITY WITH COFACTOR COMBINATION THERAPIES IN PRECLINICAL MODELS

SAN DIEGO - April 19, 2005 - ADVENTRX Pharmaceuticals, Inc. (Amex: ANX) today announced that it presented preclinical results that demonstrated CoFactor™ plus 5-fluorouracil (5-FU) used in combination with various other anticancer treatments enhanced antitumor activity and reduced systemic toxicity in mouse models for colorectal and pancreatic cancer.

Mark Cantwell, Ph.D., ADVENTRX director of preclinical programs, presented the results during the 96th Annual Meeting of the American Association for Cancer Research (AACR) in Anaheim, Calif.

Using *in vivo* human tumor xenotransplant mouse models for colorectal and pancreatic cancer, the antitumor efficacy of 5-FU/CoFactor in combination with CPT-11, oxaliplatin, anti-VEGF antibody, and gemcitabine, CoFactor-containing combination regimens induced either equivalent or better antitumor responses, as noted by slower tumor growth and increased mouse survival, compared with leucovorin-containing combinations for all drug types tested.

In an *in vivo* Balb/c systemic toxicity model, 5-FU/CoFactor induced less systemic toxicity than 5-FU/LV either alone or in combination drug regimens. Lower hematological toxicity was observed including less thrombocytopenia, neutropenia and lymphopenia. Furthermore, weight loss, a common side-effect associated with 5-FU/LV-based treatments, was quantitatively less severe with drug treatments containing CoFactor. For example, while 5-FU/LV/gemcitabine induced >25% weight loss in 91% of mice, significantly less ($p < 0.05$, Fisher's exact test) mice treated with 5-FU/CoFactor/gemcitabine (33% of mice) had this level of weight loss.

"This data suggests CoFactor increases the therapeutic index of 5-FU-based regimens in combination with a broad range of cytotoxic drugs," said Joan M. Robbins, Ph.D., ADVENTRX chief technical officer and co-author of the study. "As such, CoFactor might be a valuable replacement for leucovorin in combination regimens because of its enhanced antitumor activity with lower associated systemic toxicity."

This abstract "5,10-methylenetetrahydrofolate/5-fluorouracil combination therapy shows enhanced antitumor activity and lower systemic toxicity with a broad range of cytotoxic drugs" is available via the Company's Web site at www.adventrx.com.

ADVENTRX has filed for clearance to initiate a Phase III trial in the US and recently received clearance in the UK to begin an international Phase IIb trial with CoFactor in metastatic colorectal cancer and plans to file in the first half of this year for clearance to initiate an EU-based Phase III study in pancreatic cancer.

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Brandi Floberg (bfloberg@lhai.com)
310-691-7100

Media Contact
Lippert Heilshorn & Associates
Mark Stuart (mstuart@lhai.com)
310-691-7116