
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):

October 1, 2007

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 October 1, 2007, ADVENTRX Pharmaceuticals, Inc. issued a press release announcing the results of its Phase 2b clinical trial of ANX-510, or CoFactor®, for the treatment of metastatic colorectal cancer. 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 Index to Exhibits filed with 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.

October 1, 2007

By: /s/ Evan M. Levine

Name: Evan M. Levine

Title: Chief Executive Officer

Exhibit Index

| <u>Exhibit No.</u> | <u>Description</u> |
|--------------------|--------------------------------------|
| 99.1 | Press release, dated October 1, 2007 |

ADVENTRX PHARMACEUTICALS ANNOUNCES RESULTS FROM PHASE 2B CLINICAL TRIAL OF ANX-510 (COFACTOR®)

Conference call scheduled for October 1, 2007 at 1:00 p.m. (Eastern time); simultaneous webcast at www.adventrx.com

SAN DIEGO – October 1, 2007- ADVENTRX Pharmaceuticals, Inc. (Amex: ANX), a biopharmaceutical research and development company focused on commercializing proprietary product candidates for the treatment of cancer and infectious diseases, today announced results from its Phase 2b clinical trial of ANX-510, or CoFactor, for the treatment of metastatic colorectal cancer.

The CoFactor/5-FU (5-fluorouracil) arm demonstrated comparable overall safety to the leucovorin/5-FU arm. However, the CoFactor/5-FU arm did not demonstrate statistically significant improved safety in the trial’s primary endpoint, a reduction in the proportion of patients reporting at least one hematological or gastrointestinal adverse event of grade 3 or greater.

| | <u>CoFactor/5-FU</u> n=147 | <u>Leucovorin/5-FU</u> n=148 | <u>P-value</u> |
|--|-------------------------------|---------------------------------|------------------|
| Patients reporting at least 1 hematological or gastrointestinal adverse event of grade 3 or greater | 23 | 10 | p<0.05 |
| Hematological | <u>11</u> | <u>7</u> | <u>n/s</u> |
| Gastrointestinal | <u>12</u> | <u>5</u> | <u>n/s</u> |

In addition, no statistically significant differences between the arms were observed across overall safety and efficacy variables.

“The results of this trial are disappointing in that we were unable to demonstrate better safety with CoFactor plus 5-FU versus leucovorin plus 5-FU in the infusional setting,” stated Evan M. Levine, chief executive of ADVENTRX. “We will carefully analyze the full set of data and our assumptions underlying the development of CoFactor for the treatment of metastatic colorectal cancer in determining the future of this program.”

“Beyond CoFactor, we remain focused on completing our marketing-enabling clinical trial of ANX-530, our vinorelbine emulsion product candidate, and initiating a marketing-enabling clinical trial of ANX-514, our docetaxel emulsion product candidate” Mr. Levine continued. “We expect to announce the results for ANX-530 later this year and, if positive, to submit an NDA next year. Our financial position, with approximately \$38 million in cash, cash equivalents and short-term investments, remains strong.”

Preliminary selected findings from the Phase 2b trial include:

| | <u>CoFactor/5-FU</u> | <u>Leucovorin/5-FU</u> |
|--|----------------------|------------------------|
| Patients reporting at least 1 adverse event of grade 3 or greater (%): | | |
| Diarrhea | 0 | 0.7 |
| Nausea | 0.7 | 0 |
| Vomiting | 0.7 | 1.4 |
| Stomatitis | 0 | 1.4 |
| Mucositis | 0 | 0 |
| Anemia | 2.0 | 2.0 |
| Neutropenia | 2.7 | 2.0 |
| Hyperbilirubinemia | 2.7 | 2.0 |
| Neuropathy | 0 | 0 |
| Hand-Foot Syndrome | 0.7 | 0 |
| Patients reporting at least 1 adverse event of any grade (%): | | |
| Diarrhea | 17.0 | 17.6 |
| Nausea | 17.0 | 17.6 |
| Vomiting | 15.6 | 12.8 |
| Stomatitis | 2.7 | 2.7 |
| Mucositis | 0.7 | 0.7 |
| Anemia | 2.0 | 7.4 |
| Neutropenia | 4.8 | 3.4 |
| Hyperbilirubinemia | 6.1 | 3.4 |
| Neuropathy | 0 | 0.7 |
| Hand-Foot Syndrome | 2.7 | 1.4 |

Findings from selected secondary endpoints (intent-to-treat population) include:

| | <u>CoFactor/5-FU</u> | <u>Leucovorin/5-FU</u> |
|---|----------------------|------------------------|
| Objective Response Rate (%) | 10.7 | 13.3 |
| Median Progression-free Survival (months) | 6.3 | 6.1 |
| Preliminary Median Survival (months) | 14.7 | 14.3 |

One hundred fifty patients were randomized to each arm. Currently, of the patients randomized to the CoFactor/5-FU arm, 70 remain alive and, of the patients randomized to the leucovorin/5-FU arm, 65 remain alive.

This international, open-label, randomized, controlled Phase 2b clinical trial was designed to evaluate the safety and efficacy of CoFactor/5-FU compared to leucovorin/5-FU for the treatment of first line metastatic colorectal cancer. Three hundred patients were randomized to receive CoFactor/5-FU or leucovorin/5-FU. The primary endpoint was a reduction in the proportion of patients with at least one grade 3 or greater toxicity assessment in the category of "Blood/Bone Marrow" or "Gastrointestinal" adverse events (as defined by the NCI Common Terminology Criteria for Adverse Events, version 3). Superiority of the CoFactor/5-FU arm versus the leucovorin/5-FU arm was to be demonstrated by a two-sided $p < 0.05$ calculated by Fisher's exact test performed on the safety population. James Cassidy, MD, MBChB, MSc, FRCP, Professor of Oncology and Head of the Department of Cancer Research in the U.K. Department of Medical Oncology at the University of Glasgow in Glasgow, Scotland, was the study chair.

Conference Call Information

ADVENTRX will host a conference call and webcast to discuss the results today, Monday, October 1, 2007 at 1:00 p.m. Eastern Time (10:00 a.m. Pacific Time). The conference call may be accessed by dialing (800) 665-0430 for domestic callers and (913) 312-0402 for international callers. The webcast will be available live via the Internet by accessing ADVENTRX's web site at www.adventrx.com under "Investors." Replays of the webcast will be available for 30 days, and a phone replay will be available through October 2, 2007 by dialing (888) 203-1112 and entering the passcode 8640821.

About ANX-510, or CoFactor

CoFactor is a folate-based biomodulator drug designed to replace leucovorin as the preferred method to enhance the activity and reduce associated toxicity of the widely used cancer chemotherapeutic agent 5-FU. Delivery of CoFactor, compared to delivery of leucovorin, enables more stable binding of the metabolite of 5-FU to the target enzyme, thymidylate synthase (TS). CoFactor bypasses the metabolic pathway required by leucovorin to deliver the active form of folate. In addition to the Phase 2b clinical trial the subject of this press release, CoFactor is being evaluated in a Phase 3 clinical trial for the treatment of metastatic colorectal cancer and a Phase 2 clinical trial for the treatment of advanced breast cancer.

About ADVENTRX Pharmaceuticals

ADVENTRX Pharmaceuticals is a biopharmaceutical research and development company focused on commercializing proprietary product candidates for the treatment of cancer and infectious diseases. ADVENTRX seeks to improve the performance and safety of existing treatments by addressing significant problems, such as drug metabolism and bioavailability, excessive toxicity and treatment resistance. More information can be found on ADVENTRX'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: the risk that ADVENTRX will be unable to raise sufficient capital to fund the projects necessary to meet its anticipated or stated goals and milestones, including funding the continued development of CoFactor, ANX-530 or ANX-514; the risk that preclinical results are not indicative of the success of subsequent clinical trials and that products will not perform as preclinical data suggests or as otherwise anticipated; difficulties or delays in developing, testing, manufacturing and marketing and obtaining regulatory approval for ADVENTRX's product candidates, including receiving necessary regulatory approvals for clinical trials of ANX-514 and the potential for automatic injunctions regarding FDA approval of ANX-530 and ANX-514 and other challenges by patent holders during the Section 505(b)(2) process; uncertainty under Section 505(b)(2) resulting from legal action against the FDA and the potential that future interpretations of Section 505(b)(2) could delay or prevent the FDA from approving any Section 505(b)(2) NDA; the potential for regulatory authorities to require additional preclinical work or other clinical requirements to support regulatory filings; patent and non-patent exclusivity covering vinorelbine and docetaxel; the timing and success of clinical trials; 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, including as set forth in this press release, to reflect events or circumstances arising after the date on which it was made.

Investor Contact:

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