

April 2005

To Our Stockholders,

These are exciting times at ADVENTRX. In March of this year we announced the primary endpoint for response rate was achieved in our Phase II clinical trial of our lead product candidate, CoFactor™, in metastatic colorectal cancer. This clinical success in combination with various corporate accomplishments set the stage for an aggressive clinical timetable that includes the planned initiation of three late-stage trials with CoFactor this year in colorectal and pancreatic cancer.

Promising CoFactor Clinical Results

CoFactor is a biomodulator being developed to enhance the activity of the widely used cancer drug 5-fluorouracil (5-FU). Our clinical studies with CoFactor in combination with 5-FU indicate its potential to lower toxicities and increase survival compared with current therapies. We see opportunity for CoFactor to replace leucovorin, the currently used 5-FU biomodulator, in a host of cancer regimens that incorporate 5-FU, including 5-FU/leucovorin, 5-FU/leucovorin/oxaliplatin and 5-FU/leucovorin/CPT-11. We further believe that CoFactor may be clinically beneficial in combination with 5-FU and newer, less toxic regimens that incorporate Avastin® or ERBITUX™.

We believe the market potential for CoFactor is related to the broad use of leucovorin in 5-FU-based cancer therapies. According to the NDTI database from IMS Health, in 2003 there were 490,000 patient visits for leucovorin therapy for colorectal cancer in the U.S. alone. This prescription level is significantly larger than that of most other anticancer drugs used to treat colorectal cancer.

Last year's move into Phase II clinical development with CoFactor was predicated on what we believe are solid results from previously conducted Phase I/II trials. In those trials (described below) CoFactor showed feasibility for use with 5-FU in breast, stomach and pancreatic cancers, which suggests potential opportunities in indications beyond our near-term focus on metastatic colorectal cancer. CoFactor was found to reduce to a greater extent the side effects of 5-FU compared to the reduction when 5-FU was administered in conjunction with leucovorin. Further, gastrointestinal and breast cancer patients demonstrated improved survival with CoFactor/5-FU, compared with 5-FU/leucovorin therapy. In fact, 63% of gastrointestinal and breast cancer patients previously treated for advanced disease who had failed therapy showed stabilization or response to therapy when switched to a regimen combining CoFactor with 5-FU.

We currently plan to continue to focus our development of CoFactor for treatment of metastatic colorectal cancer, the second leading cause of cancer death among Americans with a five-year survival rate of only 9%, and pancreatic cancer, the fourth leading cause of cancer death in the U.S. with a five-year survival rate of about 4%. We believe CoFactor may qualify for the U.S. Food and Drug Administration's (FDA) Fast Track Program for rapid drug review for metastatic colorectal cancer.

CoFactor Phase II Trial in Metastatic Colorectal Cancer

Our decision to pursue CoFactor for treating colorectal cancer as our first indication was based on data from prior Phase II trials conducted in Europe. When given 20 minutes before intravenous administration of 5-FU, CoFactor was able to extend the median time to tumor progression in metastatic colorectal cancer patients to 14.7 months and median survival time to 21.5 months, which represented a seven-month improvement over the currently approved U.S. first-line therapies. No hospitalizations were required related to the treatment due to the very low toxicity of the regimen.

We began dosing patients in our current Phase II trial in May 2004. This Simon two-stage trial is an open-label, single-arm study to evaluate safety, tumor response, time-to-tumor-progression and overall survival in patients treated with CoFactor and 5-FU. Eligible patients for this study have surgically incurable metastatic colon or rectal adenocarcinoma, and have not received prior chemotherapy for metastatic disease. Each patient was evaluated for tumor response, as a primary endpoint, and time to tumor progression and survival as secondary endpoints. Response rate is defined in this trial as tumor reduction of at least 50%, based on World Health Organization criteria, or complete response following treatment as measured by CT or MRI scans.

Following our report of clinical data in November 2004 on the 23 patients included in the first Phase II stage, we received authorization from the FDA to begin enrolling patients in the second stage. In January 2005 the primary endpoint for response rate and the secondary endpoint for safety were met in the first stage of our Phase II trial. We also announced at that time the completion of patient enrollment for the Phase II study. At the beginning of March 2005 the full trial primary endpoint for response rate was met. As the study moves forward, further clinical data will be collected as the remaining patients undergo evaluation. We expect to announce preliminary data for the full Phase II trial in the second quarter of this year.

CoFactor Granted Orphan Drug Status for Pancreatic Cancer

In October 2004 CoFactor was granted orphan drug designation for use in treatment of pancreatic cancer in the US and EU by the FDA and European Medicines Evaluation Agency (EMA), respectively. In the US this provides ADVENTRX with tax incentives for clinical development of CoFactor for trials conducted in this country, and seven years of marketing exclusivity following drug approval. EU orphan status provides incentives, such as reduced fees for protocol assistance and scientific advice, and 10 years market exclusivity following drug approval.

Corporate Developments Support Future Commercialization

While we move forward with clinical development, we are taking steps to further build our company and bolster our financial position. During the past year, we welcomed several professionals to our senior management team. Last December 2004 Carrie Carlander joined us as Chief Financial Officer, bringing more than 13 years of experience in finance and strategic operations. Also in December, Brian Culley was appointed to the newly created position of Vice President of Business Development. Brian has more than 12 years of biotechnology industry and business development experience, and will spearhead strategic licensing negotiations and arrangements as we move CoFactor into later-stage trials. New members to our scientific advisory board include Edward D. Ball, MD, and Bengt G. Gustavsson, MD, PhD, co-inventor of CoFactor, who also serves as chair of our scientific advisory board. We expect the expertise of these gentlemen along with our other scientific advisory board members will prove instrumental in advancing CoFactor through clinical development.

Further, in April 2004 we increased our cash position by raising approximately \$15.5 million through a private placement of common stock plus warrants. Later that month, we began trading on the American Stock Exchange®, which we believe was an important step in gaining greater visibility and recognition from the investment community.

Three Late-Stage Trials with CoFactor to Begin in 2005

We believe that we are well on our way to achieving our goal of initiating three late-stage clinical trials with CoFactor in 2005, including two in colorectal cancer and one in pancreatic cancer. Early this year we filed Clinical Trial Applications in the United Kingdom and Germany, and in countries outside the EU for clearance to evaluate CoFactor in a Phase IIb multi-center, randomized, controlled trial for metastatic colorectal cancer. We also have filed for clearance with the FDA to begin a Phase III randomized, controlled trial in the same indication, and we plan to submit in the second quarter of this year a Clinical Trial Application in Europe to conduct a Phase III study in patients with advanced pancreatic cancer.

Product Pipeline and Partnering Opportunities

Our plan this year is to commit the vast majority of our research and development resources to the development of CoFactor, where we see the most significant near-term opportunity for market approval and for creating shareholder value. At the same time we are actively seeking new partnerships to expand and improve our research and development efforts. We are committed to creating relationships that are beneficial to our goals, and we are confident in our offering of promising technologies and products.

We are confident that we will continue with our recent progress and build on our recent accomplishments as we move forward. We have exceptional scientific, clinical and regulatory teams in place to move our drug development programs forward, and a highly motivated senior management team with significant product development, finance and business management expertise. Further, we have a pipeline of product candidates that we continue to evaluate for potential development and partnering opportunities.

I hope that you share our enthusiasm for our recent achievements and for the work that lies ahead. On behalf of our board of directors and my colleagues at ADVENTRX, I would like to thank our stockholders for your ongoing support as we

begin to transition from a company solely engaged in early-stage research and development to a more mature pharmaceutical enterprise.

Sincerely,

Evan M. Levine
Vice Chairman, President and Chief Executive Officer