BIOCRYST PHARMACEUTICALS INITIATES PHASE II CLINICAL TRIAL OF BCX-1777 IN T-CELL LEUKEMIA

Birmingham, Alabama - March 31, 2004 - BioCryst Pharmaceuticals, Inc. (Nasdaq NM: BCRX) announced today that the first patient has been dosed in its Phase IIa trial of BCX-1777, the Company's purine nucleoside phosphorylase (PNP) inhibitor that is currently in clinical development for treatment of T-cell cancers. The small-molecule drug, which causes biochemical changes that result in blocking of the T-cell's DNA synthesis machinery, recently received orphan drug designation from the U.S. Food and Drug Administration for treatment of T-cell non-Hodgkin's lymphoma.

The Phase II clinical trial is a multicenter, global, open-label study to determine the efficacy of long-term dosing with BCX-1777. The trial will be divided into two parts, Phase IIa and IIb. The Phase IIa study will evaluate response rate and duration of response in 20 patients with refractory T-cell leukemia who have failed 2 previous treatments. The six-week dosing regimen will consist of consecutive seven-day cycles. Patients will receive a once-daily infusion of the drug at 40 mg/m2 for five days, followed by a two-day rest period. If indicated, the dose may be increased to 90mg/m2 after two cycles. The primary endpoint will be leukemic cell counts in both the peripheral blood and the bone marrow. BioCryst anticipates results from Phase IIa to be available during 2004. Assuming the clinical data from the first part of the trial is sufficiently positive, BioCryst expects to initiate a larger Phase IIb study of up to 100 patients. The company intends to seek Special Protocol Assessment from the FDA for the Phase IIb trial.

"We are pleased to have made such substantial progress with BCX-1777 in such a short time, and this is a very exciting milestone for us," said Dr. Charles Bugg, Chairman and Chief Executive Officer of BioCryst. "The data we have seen to date indicates that BCX-1777 is well tolerated by patients and has the potential to dramatically lower leukemic cell counts and prevent T-cell proliferation without cytotoxic effect on other cell functions. We are anxious to move this product candidate forward as quickly as possible, in order to reach cancer patients who have exhausted other treatment options for this rare but deadly form of the disease."

About T-Cell Cancers

The human immune system employs specialized cells, including T-cells, to control infection by recognizing and attacking disease-causing viruses, bacteria and parasites. T-cells are an essential part of the body's immune system that serve a dual purpose to both orchestrate and participate in the body's immune response. For the most part, this system works flawlessly to protect the body. However, when T-cells multiply uncontrollably, T-cell proliferative diseases, including T-cell cancers, occur. The most common form of leukemia in children is acute lymphoblastic leukemia (also known as ALL). According to the American Cancer Society, 3,830 new cases (adult and children combined) will be diagnosed in the United States in 2004.

About BioCryst

BioCryst Pharmaceuticals, Inc. designs, optimizes and develops novel drugs that block key enzymes essential for cancer, cardiovascular and autoimmune diseases, and viral infections. BioCryst integrates the necessary disciplines of biology, crystallography, medicinal chemistry and computer modeling to effectively use structure-based drug design to discover and develop small molecule pharmaceuticals. In addition to the Phase IIa trial, enrollment in four Phase I trials for BioCryst's lead product candidate, BCX-1777, is ongoing at nine U.S. cancer centers for patients with T-cell malignancies, hematologic malignancies, and other refractory cancers. BioCryst has several new enzyme targets in drug discovery including tissue factor/factor VIIa and hepatitis C polymerase. For more information about BioCryst, please visit the company's web site at www.biocryst.com.

These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Some of the factors that could affect the forward-looking statements contained herein include that we may not be able to enroll the required number of subjects in clinical trials of BCX-1777, that BCX-1777 or any of our other product candidates may not receive required regulatory clearances from the FDA, that Phase IIa clinical trials of BCX-1777 may not show the drug is effective over the 6-week period, that we may not be able to obtain a Special Protocol Assessment or otherwise be able to complete successfully the Phase IIb that is currently planned, that we may not be able to continue future development of BCX-1777 or any of our other current development programs including tissue factor/factor VIIa and hepatitis C polymerase, that BCX-1777 or our other development programs may never result in future product, license or royalty payments being received by BioCryst, that BioCryst may not have sufficient cash to continue funding the development,

manufacturing, marketing or distribution of its products and that additional funding, if necessary, may not be available at all or on terms acceptable to BioCryst. Please refer to the documents BioCryst files periodically with the Securities and Exchange Commission, specifically BioCryst's most recent Annual Report on Form 10-K, which identify important factors that could cause the actual results to differ materially from those contained in the projections or forward-looking statements.