



BIOCRYST UPDATES PERAMIVIR CLINICAL DEVELOPMENT PLAN

Birmingham, Alabama - January 23, 2008 - BioCryst Pharmaceuticals, Inc. (Nasdaq: BCRX) today provided an update on activities conducted following release of the preliminary Phase II data and outlined the resulting clinical development plan for intramuscular (i.m.) peramivir.

Following release of preliminary Phase II results in September 2007, the Company completed additional analyses of the clinical data and performed a preliminary analysis of the virologic data from this trial. The Company also conducted further pharmacokinetic (PK) studies in healthy volunteers and has had discussions with the FDA and The Department of Health and Human Services (HHS) in support of the continuing development of peramivir.

Preliminary analysis of the virologic data from the Phase II trial indicated that i.m. peramivir demonstrated statistically significant reductions in influenza virus shedding in both active treatment groups when compared to placebo, with greater reductions in the 300mg group ($p < 0.001$). Additionally, pharmacokinetic studies have been completed that indicate that needle length impacts adequate and consistent systemic exposure to i.m. peramivir. These PK studies also provide guidance on the appropriate needle length to use in future studies to provide adequate drug exposure for subjects based upon an individual's body mass index (BMI) and gender.

Based on these clinical results and virologic data, the Company believes that a single i.m. dose of 300mg peramivir can be a potentially clinically effective dose. Given the dose-response observed between the 150mg and 300mg doses in the Phase II trial, the Company also believes it is prudent to evaluate whether doses higher than 300mg provide additional efficacy. The Company has been limited in evaluating doses higher than 300mg due to the concentration of the formulation used in the Phase II trial. Alternative formulations are being developed, and should be available, that permit evaluation of a single dose higher than 300mg. BioCryst is now planning to initiate a Phase II clinical trial that will evaluate the 300mg dose and a higher dose of peramivir later this year. As a result, BioCryst will not continue to pursue a pivotal Phase III program for i.m. peramivir in the current influenza season.

"All of these analyses have reinforced our belief that adequate and consistent systemic exposure to peramivir is critical to demonstrate the clinical benefits of peramivir," said Jon P. Stonehouse, President and CEO of BioCryst. "This strategy allows us to test a higher dose, utilize a new formulation and make the adjustments in needle-length, all in one study. This strategy gives us confidence that we can maximize the likelihood of achieving a successful result."

After discussions between BioCryst and HHS, the Company believes that peramivir remains an important potential therapy for both seasonal influenza and pandemic preparedness. The key elements of the HHS contract remain the same. The contract amount is \$102.6M and the term is four years (concluding December 31, 2010). The development plan for peramivir has changed from that outlined in the original proposal to HHS. HHS has indicated that they will fund certain elements of the revised program, including the ongoing Phase II i.v. study in hospitalized subjects, planning and conduct of the planned Phase II i.m. study, manufacturing and toxicology. Each of these elements has specific HHS funding limits. Any costs in excess of these limits will be the responsibility of BioCryst. The Company anticipates that the full peramivir program will cost more than the original contract amount. HHS has indicated that, at this time, they will not fund certain elements of the revised program, and those costs may be the responsibility of BioCryst. On an ongoing basis, HHS will play a more active role in the program, and in reviewing related spending under this contract.

Mr. Stonehouse added, "We are pleased with HHS's continued support of peramivir. HHS support is critical in taking the next steps in the development of peramivir. A future pandemic remains a serious threat to global health. Additionally, seasonal influenza and related complications result in an estimated 40,000 deaths in the United States annually. We will work diligently to move both the i.v. and i.m. formulations of peramivir forward toward registration in order to make this potentially important therapy available to patients."

BioCryst will sponsor a conference call at 8:00 am Eastern U.S. Time, Thursday, January 24, 2008 to discuss today's news in more detail. This call is open to the public and can be accessed live either over the Internet from the company's website www.biocryst.com or by dialing 1-800-860-2442 (U.S.) or 1-412-858-4600 (international). No passcode is needed for the call.

About Peramivir

Peramivir is a member of the class of antiviral agents that inhibit influenza viral neuraminidase, an enzyme essential for the spread of influenza virus within the host. The availability of an injectable neuraminidase inhibitor may be important in treating

patients with acute, severe and potentially life-threatening influenza and could ensure appropriate dosing which may be a concern with currently available oral or inhaled anti-influenza agents. In January 2007, the U.S. Department of Health and Human Services (HHS) awarded a \$102.6 million, four-year contract to BioCryst for advanced development of peramivir to treat seasonal and life-threatening influenza. In the United States, intravenous peramivir injection has received Fast Track designation from the Food and Drug Administration (FDA).

About Influenza

The influenza virus causes an acute viral disease of the respiratory tract. Unlike the common cold and some other respiratory infections, seasonal influenza can cause severe illness, resulting in life-threatening complications. According to the Centers for Disease Control and Prevention, every year in the United States as many as 750,000 people are hospitalized due to influenza or its complications, and of this number, an estimated 40,000 people die each year. Most at risk are young children, the elderly, and people with seriously compromised immune systems.

Avian influenza A viruses of H5N1 subtype are circulating among birds worldwide. The virus is considered extremely contagious in fowl. It is believed that all species of birds are susceptible to avian influenza, but domestic poultry, including chickens and turkeys, are among the more susceptible to the highly pathogenic strain. According to the World Health Organization, as of December 2007 at least 331 people have been infected with H5N1 avian influenza, of which at least 200 have died. Almost all of these infections are believed to have resulted from contact with infected poultry.

About BioCryst

BioCryst Pharmaceuticals, Inc. is a leader in the use of crystallography and structure-based drug design for the development of novel therapeutics to treat cancer, cardiovascular diseases, autoimmune diseases, and viral infections. The Company is advancing multiple internal programs toward potential commercialization including forodesine HCl in oncology, BCX-4208 in transplantation and autoimmune diseases and peramivir in seasonal and life-threatening influenza. BioCryst has a worldwide partnership with Roche for the development and commercialization of BCX-4208, and is collaborating with Mundipharma for the development and commercialization of forodesine HCl in markets across Europe, Asia, Australia and certain neighboring countries. In February 2007, BioCryst established a partnership with Shionogi & Co., to develop and commercialize peramivir in Japan. For more information about BioCryst, please visit the company's web site at <http://www.biocryst.com>.

Forward-looking statements

This press release contains forward-looking statements, including statements regarding future results, performance or achievements. 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 our belief that many subjects in the Phase II clinical trials of peramivir did not receive adequate dosing by i.m. injection may not be correct, that HHS and the FDA may not agree with our analysis, that HHS may further condition, reduce or eliminate funding of the peramivir program, that the peramivir program may not be successful, that the pivotal trial with forodesine HCl in CTCL may not meet its endpoint, that the Phase II trial of BCX-4208 for psoriasis may not be successfully completed, that development and commercialization of forodesine HCl in CTCL may not be successful, that we or our licensees may not be able to enroll the required number of subjects in planned clinical trials of our product candidates and that such clinical trials may not be successfully completed, that BioCryst or its licensees may not commence as expected additional human clinical trials with our product candidates, that our product candidates may not receive required regulatory clearances from the FDA, that ongoing and future clinical trials may not have positive results, that we or our licensees may not be able to continue future development of our current and future development programs, that our development programs may never result in future product, license or royalty payments being received by BioCryst, that BioCryst may not reach favorable agreements with potential pharmaceutical and biotech partners for further development of its product candidates, that our projected burn rate may not be consistent with our expectations, 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, most recent Registration Statement on Form S-3 (File No. 333-145638), Quarterly Reports on Form 10-Q, current reports on Form 8-K which identify important factors that could cause the actual results to differ materially from those contained in the projections or forward-looking statements.

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