BioCryst Announces Positive Phase 1 Results with BCX9250, an Oral ALK-2 Inhibitor for Treatment of Fibrodysplasia Ossificans Progressiva

December 21, 2020

RESEARCH TRIANGLE PARK, N.C., Dec. 21, 2020 (GLOBE NEWSWIRE) -- BioCryst Pharmaceuticals, Inc. (Nasdaq: BCRX) today announced that in a Phase 1 clinical trial with BCX9250, an oral activin receptor-like kinase-2 (ALK-2) inhibitor discovered and developed by BioCryst for the treatment of fibrodysplasia ossificans progressiva (FOP), BCX9250 was safe and well tolerated at all doses studied, with linear and dose-proportional exposure supporting once-daily dosing.

FOP is an ultra-rare, severely disabling condition characterized by the irregular formation of bone outside the normal skeleton, also known as heterotopic ossification (HO). HO can occur in muscles, tendons and soft tissue. Patients with FOP become bound by this irregular ossification over time, with restricted movement and fused joints, resulting in deformities and premature mortality. There are currently no approved treatments for FOP.

The randomized, double-blind, placebo-controlled dose-ranging trial evaluated safety, tolerability and pharmacokinetics of single ascending doses (SAD) and multiple ascending doses (MAD) of BCX9250 in healthy subjects.

The SAD study was designed to randomize four cohorts of eight subjects each to receive oral BCX9250 (n=6) or placebo (n=2) at dose levels of 5 mg, 10 mg, 15 mg and 25 mg. Subjects in the 15 mg cohort also received a second single dose to evaluate food effect on absorption of BCX9250.

The MAD study was designed to randomize four cohorts of 12 subjects each to receive oral BCX9250 (n=10) or placebo (n=2) at dose levels of 5 mg, 10 mg, 15 mg and 20 mg once daily (QD) for seven days.

Drug exposure increased with dose in an approximately linear and dose-proportional manner. Drug levels after a high fat meal were similar to those after dosing on an empty stomach. Drug exposure (area under the curve) at 20 mg QD in the MAD was similar to that achieved with doses that suppressed HO in a nonclinical model of activity of orally dosed BCX9250. Additional data can be found in slides in the investors section of the company's website at https://ir.biocryst.com/.

In both the SAD and the MAD studies, oral BCX9250 was safe and well tolerated, with no serious adverse events, no study discontinuations due to adverse events, no grade 3 or 4 adverse events and no clinically significant changes in vital signs, electrocardiograms or safety laboratory parameters. No safety signals were seen.

"FOP is a devastating condition with no approved treatments. These encouraging Phase 1 results provide hope for patients and their families, and we look forward to speaking with expert physicians, patient advocates and regulators about the next steps to advance the program," said Dr. Bill Sheridan, chief medical officer of BioCryst.

In preclinical studies, BCX9250 demonstrated potency for the target kinase, selectivity, safety and strong suppression of HO in animal models.

About BCX9250

Discovered by BioCryst, BCX9250 is a novel, oral, inhibitor of the ALK-2 enzyme. The ALK-2 enzyme is a part of the normal signaling pathway for bone formation and responds to binding its specific ligands (bone morphogenic proteins, BMPs) by stimulating normal bone growth and renewal in healthy children and adults. Specific activating mutations of the ALK-2 gene are seen in all cases of FOP. An activating mutation in ALK-2 is necessary for the disease to occur, making the ALK-2 enzyme an ideal drug target for treatment of FOP.

About BioCryst Pharmaceuticals

BioCryst Pharmaceuticals discovers novel, oral, small-molecule medicines that treat rare diseases in which significant unmet medical needs exist and an enzyme plays a key role in the biological pathway of the disease. Oral, once-daily ORLADEYO™ (berotralstat) is approved in the United States for the prevention of HAE attacks in adults and pediatric patients 12 years and older, and under regulatory review for approval in Japan and the European Union. BioCryst has several ongoing development programs including BCX9930, an oral Factor D inhibitor for the treatment of complement-mediated diseases, galidesivir, a potential treatment for COVID-19, Marburg virus disease and Yellow Fever, and BCX9250, an ALK-2 inhibitor for the treatment of fibrodysplasia ossificans progressiva. RAPIVAB® (peramivir injection), a viral neuraminidase inhibitor for the treatment of influenza, is BioCryst's first approved product and has received regulatory approval in the U.S., Canada, Australia, Japan, Taiwan and Korea. Post-marketing commitments for RAPIVAB are ongoing. For more information, please visit the Company's website at www.biocryst.com.

Forward-Looking Statements

This press release contains forward-looking statements, including statements regarding BioCryst's plans for its BCX9250 program. These statements involve known and unknown risks, uncertainties and other factors which may cause actual results and developments of such program to be materially different from those 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 are 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: the ongoing COVID-19 pandemic, which could create challenges in all aspects of BioCryst's business, including without limitation delays, stoppages, difficulties and increased expenses with respect to BioCryst's and its partners' development, regulatory processes and supply chains, negatively impact BioCryst's ability to access the capital or credit markets to finance its operations, or have the effect of heightening many of the risks described below or in the documents BioCryst files periodically with the Securities and Exchange Commission; ongoing and future preclinical and clinical development of BCX9250 may not

have positive results; BioCryst may not be able to enroll the required number of subjects in planned clinical trials of product candidates; BioCryst may not advance human clinical trials with product candidates as expected; the FDA, EMA, PMDA or other applicable regulatory agency may require additional studies beyond the studies planned for product candidates, may not provide regulatory clearances which may result in delay of planned clinical trials, may impose certain restrictions, warnings, or other requirements on product candidates, may impose a clinical hold with respect to such product candidates, or may withhold market approval for product candidates; product candidates, if approved, may not achieve market acceptance; BioCryst's ability to successfully develop and commercialize its product candidates, manage its growth, and compete effectively; risks related to the international expansion of BioCryst's business.; and actual financial results may not be consistent with expectations, including that operating expenses and cash usage may not be within management's expected ranges. 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, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, all of which identify important factors that could cause the actual results to differ materially from those contained in BioCryst's forward-looking statements.

BCRXW

Contact:
John Bluth
+1 919 859 7910
jbluth@biocryst.com

Catherine Collier Kyroulis
+1 917 886 5586
ckyroulis@biocryst.com