Bio-Path Holdings, Inc.

Bio-Path Holdings Begins Enrollment in Fourth Cohort of Phase I Clinical Trial of Lead Product Candidate Liposomal Grb-2 in Leukemias

July 25, 2012 HOUSTON, TX – Bio-Path Holdings, Inc., (OTC BB: BPTH) ("Bio-Path"), a biotechnology company developing a liposomal delivery technology for nucleic acid cancer drugs, today announced that it has begun enrolling patients into the fourth dosage cohort in its Phase I clinical trial of its lead product candidate, BP-100-1.01 (Liposomal Grb-2), which is being evaluated as a systemic treatment for blood cancers including acute myeloid leukemia (AML), chronic myelogenous leukemia (CML), acute lymphoblastic leukemia (ALL) and myelodysplastic syndrome (MDS). The Phase I trial will include five cohorts in total. The trial is being conducted at The University of Texas MD Anderson Cancer Center.

Liposomal Grb-2 is systemically delivered by intravenous injection. In the fourth cohort, patients will receive a dose of 40 mg/m^2 twice a week for four weeks, for a total of eight doses. The current protocol for the clinical trial includes dose escalation of 5, 10, 20, 40 and 50 mg/m^2. The expected dose for treatment is 45 mg/m^2 based on pre-clinical studies in animals.

Earlier this year, Bio-Path upgraded its substance and drug supplier to meet increased demand for the drug. The step-up in the supply of Liposomal Grb-2 was necessary based upon projected treatments for patients in the clinical trial, and the increased number of patients who, in the principle investigators' opinion, stabilized from treatment with Liposomal Grb-2 and were to receive extended treatment.

"The arrival of the latest batch of drug product from our new supply chain and the opening of the fourth cohort of our clinical trial are important steps for the Company," said Peter Nielsen, President and Chief Executive Officer of Bio-Path. "Establishing the new, higher capacity supply chain for our drug candidate was an essential to ensure adequate future supply needed to support increased usage of Liposomal Grb-2 in blood cancers, as well as treatments for other cancer indications that may be developed."

About Bio-Path's Delivery Technology

Bio-Path's drug delivery technology involves microscopic-sized liposome particles that distribute nucleic acid drugs systemically and safely throughout the human body, via simple intravenous infusion. The delivery technology can be applied both to single stranded (antisense) nucleic acid compounds and double stranded (siRNA) with the potential to revolutionize the treatment of cancer and other diseases where drugable targets of disease are well characterized. The Company's current focus is on developing liposomal antisense drug candidates. Bio-Path also anticipates developing liposome tumor targeting technology, representing next-generation enhancements to the Company's core liposome delivery technology.

About Growth Receptor Bound protein-2 (Grb-2)

The adaptor protein Growth Receptor Bound protein-2 (Grb-2) is essential to cancer cell signaling because it is utilized by oncogenic tyrosine kinases to induce cancer progression. Suppressing the function or expression of Grb2 should interrupt its vital signaling function and have a therapeutic application in cancer. BP-100.1.01 is a neutral-charge, liposome-incorporated antisense drug substance designed to inhibit Grb-2 expression.

About Bio-Path Holdings, Inc.

Bio-Path is a biotechnology company focused on developing therapeutic products utilizing its proprietary liposomal delivery technology designed to systemically distribute nucleic acid drugs throughout the human body with a simple intravenous transfusion. Bio-Path's lead product candidate, Liposomal Grb-2, is in a Phase I study for blood cancers. Bio-Path's second drug candidate, also a liposomal antisense drug, is ready for the clinic where it will be evaluated in lymphoma and solid tumors.

Any statements that are not historical facts contained in this release are forward-looking statements that involve risks and uncertainties, including Bio-Path's ability to raise needed additional capital on a timely basis in order for it to continue its operations, have success in the clinical development of its technologies, the timing of enrollment and release of data in such clinical studies and the accuracy of such data, limited patient populations of early stage clinical studies and the possibility that results from later stage clinical trials with much larger patient populations may not be consistent with earlier stage clinical trials, and such other risks which are identified in the Company's most recent Annual Report on Form 10-K and in any subsequent quarterly reports on Form 10-Q. These documents are available on request from Bio-Path Holdings or at www.sec.gov. Bio-Path disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

For more information, please visit the Company's website at http://www.biopathholdings.com.

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