



Bio-Path Holdings Signs Equity Financing Deal

*Equity Purchase Agreement with Institutional Investor Lincoln Park Capital
To Provide Up To \$7 Million In New Capital*

FOR IMMEDIATE RELEASE

June 4, 2010 HOUSTON, TX – Bio-Path Holdings, Inc., (OTC BB: BPTH) (“Bio-Path”), a biotechnology company with drug development operations in Houston, Texas, announced today that it has signed an equity purchase agreement for up to \$7 million with Lincoln Park Capital Fund, LLC (“LPC”), a Chicago-based institutional investor. Bio-Path is developing a neutral lipid-based liposome delivery technology for nucleic acid cancer drugs (including antisense and siRNA molecules), a delivery technology that forms tiny vehicles to safely deliver these drugs to their intended target cancer cells. The U.S. Food and Drug Administration (FDA) has recently allowed an IND (Investigational New Drug) for the Company’s lead cancer drug candidate liposomal Grb-2 to proceed into clinical trials.

Under the terms of the equity purchase agreement, the Company has the right to sell shares of its common stock to LPC from time to time over a 24-month period in amounts between \$50,000 and \$1,000,000 up to an aggregate amount of \$7 million depending upon certain conditions set forth in the purchase agreement including that a registration statement related to the transaction has been declared effective by the U.S. Securities and Exchange Commission (“SEC”). A more detailed description of the purchase agreement is set forth in the Company’s Current Report on Form 8-K filed with the SEC. Upon signing the agreement, the Company received \$200,000 from LPC as an initial purchase in exchange for 571,429 shares (“Initial Purchase Shares”) of the Company’s common stock and warrants to purchase 571,429 shares of the Company’s common stock at an exercise price of \$1.50 per share. Subsequent purchases of the Company’s common stock by Lincoln Park under the agreement do not include warrants. The proceeds received by the Company under the purchase agreement are expected to be used for the Phase I clinical trial expenses for the Company’s lead cancer compound and for general working capital.

Peter Nielsen, President and Chief Executive Officer of Bio-Path. commented, “Putting in place a strategic equity financing agreement with an institutional investor of the quality and reputation of Lincoln Park Capital is another significant milestone in the development of Bio-Path. I have known Lincoln’s management for several years and

have come to respect their knowledge of the biotech industry and track record with other successful biotech companies like ours. The Lincoln Park financing structure puts in place a significant amount of equity capital for clinical development of our technology, while allowing us to draw on it only as needed, in an effort to minimize dilution for our shareholders. We plan to use these funds to commence our Phase I clinical trial for treating cancer patients with Chronic Myelogenous Leukemia (CML), patients with refractory or relapsed Acute Myeloid Leukemia (AML), Acute Lymphoblastic Leukemia (ALL) and Myelodysplastic Syndrome (MDS).”

Bio-Path’s drug delivery technology distributes nucleic acid drugs systemically, throughout the human body, via simple intravenous infusion. The delivery technology can be applied both to double stranded (siRNA) and single stranded (antisense) nucleic acid compounds with the potential to revolutionize the treatment of cancer and other diseases where drugable targets of disease are well characterized. Bio-Path also anticipates developing liposome tumor targeting technology, representing next-generation enhancements to the Company’s core liposome delivery technology.

The Company also reported that, prior to closing the LPC purchase agreement, it sold \$273,000 of common stock and warrants in a Regulation D private placement offering to accredited investors. A more detailed description of this financing is set forth in the Company’s Current Report on Form 8-K filed with the SEC today. As a result, the Company raised \$473,000 during the month of May 2010 including the Lincoln Park Capital initial purchase.

This press release does not constitute an offer to sell or the solicitation of an offer to buy Bio-Path’s common stock nor shall there be any sale of such common stock in any state or jurisdiction of the United States or any country in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

About Bio-Path Holdings, Inc.

Bio-Path is developing a patented, liposomal drug delivery system and products developed at The University of Texas M. D. Anderson Cancer Center with two clinical cancer drug candidates ready for the clinic and a third siRNA cancer drug undergoing final pre-clinical development.

About Lincoln Park Capital ("LPC")

Lincoln Park Capital is an institutional investor headquartered in Chicago, Ill. LPC's experienced professionals manage a portfolio of investments in public and private entities. These investments are in a wide range of companies and industries emphasizing life sciences, energy and technology. LPC's investments range from multiyear financial commitments to fund growth to special situation financings to long-term strategic capital offering companies certainty, flexibility and consistency. For more information, visit <http://www.LincolnParkCapital.com/>.

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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