Bio-Path Holdings Presents at 2020 American Association for Cancer Research Annual Meeting

HOUSTON—April 27, 2020 – Bio-Path Holdings, Inc., (NASDAQ: BPTH), a biotechnology company leveraging its proprietary DNAbilize™ liposomal delivery and antisense technology to develop a portfolio of targeted nucleic acid cancer drugs, today announces the presentation of a poster highlighting the clinical trial design of its Phase 1 study of BP1002 at the 2020 American Association for Cancer Research (AACR) Annual Meeting being held virtually from April 27-28, 2020.

The poster, titled, "A Phase I Clinical Trial to Study the Safety, Pharmacokinetics, and Efficacy of BP1002 (L-Bcl-2) Antisense Oligonucleotide in Patients with Advanced Lymphoid Malignancies," was presented virtually by Dr. Ana Tari Ashizawa, Senior Vice President of Research, Development and Clinical Design at Bio-Path Holdings.

"We are particularly pleased to have our Phase 1 clinical development program for BP1002 as a potential therapy for lymphoma and chronic lymphocytic leukemia patients highlighted in a poster at this important scientific meeting," stated Peter Nielsen, President and Chief Executive Officer of Bio-Path Holdings. "We believe this poster will enhance visibility for our Bcl-2 program among an audience of world-leading oncologists and cancer researchers."

The Phase 1 clinical trial is expected to be conducted at several leading cancer centers, including The University of Texas MD Anderson Cancer Center, the Georgia Cancer Center and the Sarah Canon Research Institute. Initially, a total of six evaluable patients will be treated with BP1002 monotherapy in a standard 3+3 design, with a starting dose of 20 mg/m2. The approved treatment cycle is two doses per week over four weeks, resulting in eight doses administered over 28 days. The primary objective of the study is to evaluate the safety and tolerability of escalating doses of BP1002.

BP1002 targets the protein Bcl-2, which is responsible for driving cell survival in up to 60% of all cancers. High expression of Bcl-2 has been correlated with adverse prognosis for patients diagnosed with relapsed, aggressive non-Hodgkin's lymphoma. Preclinical studies have shown BP1002 to be a potent inhibitor against the Bcl-2 target, and Bio-Path believes that its benign safety profile should enable BP1002 combination therapy with approved agents.

About Bio-Path Holdings, Inc.

Bio-Path is a biotechnology company developing DNAbilize®, a novel technology that has yielded a pipeline of RNAi nanoparticle drugs that can be administered with a simple intravenous transfusion. Bio-Path's lead product candidate, prexigebersen (BP1001,

targeting the Grb2 protein), is in a Phase 2 study for blood cancers and is under consideration by the FDA to commence Phase 1 studies in solid tumors. This is followed by BP1002, targeting the Bcl-2 protein, where it will be evaluated in lymphoma and solid tumors clinical studies.

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

Forward-Looking Statements

This press release contains forward-looking statements that are made pursuant to the safe harbor provisions of the federal securities laws. These statements are based on management's current expectations and accordingly are subject to uncertainty and changes in circumstances. Any express or implied statements contained in this press release that are not statements of historical fact may be deemed to be forward-looking statements. Any statements that are not historical facts contained in this release are forward-looking statements that involve risks and uncertainties, including the impact, risks and uncertainties related to COVID-19 and actions taken by governmental authorities or others in connection therewith, 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 Bio-Path's most recent Annual Report on Form 10- K, in any subsequent quarterly reports on Form 10-Q and in other reports that Bio-Path files with the Securities and Exchange Commission from time to time. 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.

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