Bio-Path Holdings to Present Data at 2024 European Hematology Association Congress

Presentation Includes Positive Results from Interim Analysis of Phase 2 Clinical Trial of Prexigebersen in Acute Myeloid Leukemia (AML)

HOUSTON—May 24, 2024 – 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 announced an upcoming poster presentation at the 2024 European Hematology Association (EHA) Congress, taking place June 13-16, 2024 in Madrid, Spain.

Jorge Cortes, M.D., Director of the Georgia Cancer Center, will present interim results from the Company's Phase 2 study of prexigebersen (BP1001) in combination with decitabine and venetoclax for the treatment of acute myeloid leukemia (AML). The data show prexigebersen continues to be well-tolerated and has now demonstrated compelling efficacy results in two reporting cohorts including evaluable newly diagnosed AML patients and evaluable refractory/relapsed AML patients, both of which exceeded outcomes with frontline therapy.

"We look forward to Dr. Cortes' presentation of these very compelling data, which continue to demonstrate prexigebersen's potential as a safe and effective treatment for AML," said Peter Nielsen, Chief Executive Officer of Bio-Path. "We are particularly enthusiastic with its improvement over frontline therapy and are eager to have these data presented before an audience of the world's leading hematologists at EHA."

Details for the poster presentation are as follows:

Title: Interim Safety and Efficacy of BP1001 in a Phase II Acute Myeloid Leukemia Study
Date and Time: Friday, June 14, 2024 at 6:00 PM CEST
Location: IFEMA Madrid Recinto Ferial, Hall 7
Abstract Number: P536

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 BP1001-A, a drug product modification of prexigebersen, is in a Phase 1/1b study for solid tumors. The Company's second product, BP1002, which targets the Bcl-2 protein, is being evaluated for the treatment of blood cancers and solid tumors, including lymphoma and acute myeloid leukemia. In addition, an IND

is expected to be filed for BP1003, a novel liposome-incorporated STAT3 antisense oligodeoxynucleotide developed by Bio-Path as a specific inhibitor of STAT3.

For more information, please visit the Company's website at 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 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, 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, the maintenance of intellectual property rights, that patents relating to existing or future patent applications will be issued or that any issued patents will provide meaningful protection of our drug candidates, the impact, risks and uncertainties related to global pandemics, including the COVID-19 pandemic, and actions taken by governmental authorities or others in connection therewith, 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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