BIO-PATH HOLDINGS REPORTS FIRST QUARTER 2022 FINANCIAL RESULTS

Conference Call to be Held Today at 8:30 A.M. ET

HOUSTON—May 17, 2022 – 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 its financial results for the first quarter ended March 31, 2022 and provided an update on recent corporate developments.

"Throughout the first quarter, we continued to advance our mission to deliver a better path for cancer patients. With ongoing progress across multiple of our DNAbilize antisense RNAi nanoparticle drug candidates, we are bringing a gentler solution to fight tough cancers," said Peter Nielsen, President and Chief Executive Officer of Bio-Path Holdings. "Specifically, we were delighted to have compelling preclinical data in support of our ongoing clinical development program for BP1003 presented at this year's American Association for Cancer Research Annual Meeting. These data show that BP1003 combination therapy enhances the efficacy of current standard of care chemotherapies in breast and ovarian cancer models, underscoring its potential in these hard-to-treat cancers and validating our plans to enter human clinical trials in patients with advanced solid tumors."

"In addition to advancing our important clinical work, we also enhanced our corporate Board with the addition of new director, Aline Sherwood. Aline is a seasoned biotechnology communications professional who brings valuable industry expertise that will be increasingly vital as we advance the important clinical work we are undertaking in the fight against cancer," added Mr. Nielsen

Recent Corporate Highlights

- **Presented BP1003 Data at 2022 American Association for Cancer Research (AACR) Annual Meeting.** In April, Bio-Path presented a poster highlighting preclinical BP1003 data at the 2022 AACR Annual Meeting. The poster, titled "Targeting STAT3 with novel liposome-incorporated antisense oligonucleotide technology enhances the efficacy of paclitaxel (taxol) or 5-fluorouracil (5- FU) in breast and ovarian cancer cells," was presented by Dr. Maria Gagliardi, Research Scientist at Bio-Path Holdings.

- **Appointed Aline Sherwood to Board of Directors.** In April, Bio-Path announced the appointment of Aline Sherwood to the Company's Board of Directors. Ms. Sherwood is Principal of Scienta Communications, an independent communications consultancy

providing strategic public relations and corporate communications counsel to life sciences companies.

Financial Results for the First Quarter Ended March 31, 2022

- The Company reported a net loss of $3.4 million, or $0.47 per share, for the three months ended March 31, 2022, compared to a net loss of $2.4 million, or $0.43 per share, for the three months ended March 31, 2021.

- Research and development expense for the three months ended March 31, 2022 increased to $2.1 million, compared to $1.3 million for the three months ended March 31, 2021 primarily due to increased clinical trial expenses for startup costs related to our Phase 1 clinical trial of BP1002 in refractory/relapsed AML patients and timing of activities for our Phase 1 clinical trial of BP1002 in lymphoma.

- General and administrative expense for the three months ended March 31, 2022 increased to $1.3 million, compared to $1.2 million for the three months ended March 31, 2021 primarily due to increased stock-based compensation expense.

- As of March 31, 2022, the Company had cash of $21.2 million**,** compared to $23.8 million as of December 31, 2021. Net cash used in operating activities for the three months ended March 31, 2022 was $2.5 million compared to $1.6 million for the comparable period in 2021.

Conference Call and Webcast Information

Bio-Path Holdings will host a conference call and webcast today at 8:30 a.m. ET to review these first quarter 2022 financial results and to provide a general update on the Company. To access the conference call please dial (844) 815-4963 (domestic) or (210) 229-8838 (international) and refer to the conference ID 9488426. A live audio webcast of the call and the archived webcast will be available in the Media section of the Company's website at www.biopathholdings.com.

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, has been cleared by the FDA and Phase 1 studies in solid tumors will commence in 2022. 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, in 2022.

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, 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, 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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