BIO-PATH HOLDINGS REPORTS SECOND QUARTER 2019 FINANCIAL RESULTS

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

HOUSTON—August 15, 2019 – Bio-Path Holdings, Inc., (NASDAQ:BPTH), a biotechnology company leveraging its proprietary DNAbilize® antisense RNAi nanoparticle technology to develop a portfolio of targeted nucleic acid cancer drugs, today announced its financial results for the second quarter ended June 30, 2019 and provided an update on recent corporate developments.

"Throughout the second quarter we continued to execute on our clinical development plans for our innovative RNAi nanoparticle therapeutics. We are excited to begin dosing patients in the amended cohorts of our Phase 2 study of prexigebersen, which will first evaluate the safety of prexigebersen in combination with decitabine in untreated AML and high risk MDS patients and refractory/relapsed AML and high risk MDS patients, and then evaluate the efficacy of the triple combination of prexigebersen + decitabine + venetoclax in those patient groups," said Peter Nielsen, President and Chief Executive Officer of Bio-Path Holdings.

"We are also looking forward to completing Investigational New Drug (IND) enabling studies of BP1003, a novel liposome-incorporated STAT3 oligodeoxynucleotide inhibitor for the treatment of pancreatic cancer, and to file an IND application for a Phase 1 study of BP1003 for the treatment of pancreatic cancer in 2020. We are particularly excited to launch this program as it will be our first-in-human validation of this cutting-edge therapy in an especially challenging cancer indication that has limited treatment options," added Mr. Nielsen.

Recent Corporate Highlights

- **Presented Preclinical Data at American Association for Cancer Research Annual Meeting 2019.** In April 2019, Bio-Path presented data from preclinical studies supporting the potential of BP1003, a novel liposome-incorporated STAT3 oligodeoxynucleotide inhibitor, for the treatment of pancreatic cancer, non-small cell lung cancer (NSCLC) and acute myelogenous leukemia (AML). These data were presented in a poster at the American Association for Cancer Research (AACR) Annual Meeting 2019 in Atlanta, GA.

Financial Results for the Second Quarter Ended June 30, 2019

- The Company reported a net loss of $2.5 million, or $0.87 per share, for the three months ended June 30, 2019, compared to a net loss of $1.7 million, or $2.96 per share, for the three months ended June 30, 2018.

- Research and development expenses for the three months ended June 30, 2019 increased to $1.5 million, compared to $0.8 million for the three months ended June 30, 2018 primarily due to the commencement of activities related to Stage 2 of our Phase 2 clinical trial in AML to include venetoclax combination treatment with prexigebersen and two cohorts of patients.

- General and administrative expenses for the three months ended June 30, 2019 increased to $1.0 million, compared to $0.9 million for the three months ended June 30, 2018 primarily due to increased legal fees and insurance costs.

- As of June 30, 2019, the Company had cash of $17.1 million, compared to $1.0 million at December 31, 2018. Net cash used in operating activities for the six months ended June 30, 2019 was $4.2 million compared to $3.4 million for the comparable period in 2018. Net cash provided by financing activities for the six months ended June 30, 2019 was $20.3 million.

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 second quarter 2019 financial results and to provide a general update on the Company. To access the conference call, please call (844) 815-4963 (domestic) or (210) 229-8838 (international) and refer to conference ID 3792557. 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 the treatment of blood cancers and is in the process of filing an IND for a Phase 1 clinical trial for solid tumors. The Company is also developing BP1002, which targets the Bcl-2 protein and is expected to be evaluated for the treatment of lymphoma and solid tumors. In addition, BP1003, a novel liposome-incorporated STAT3 antisense oligodeoxynucleotide developed by Bio-Path as a specific inhibitor of STAT3, is expected to enter Phase 1 studies in 2020.

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 Bio-Path's ability to raise needed additional capital on a timely basis in order for it to continue its operations, Bio-Path's ability to 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, risks relating to maintaining Bio-Path's listing on the Nasdaq Capital Market 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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