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Pieris Pharmaceuticals Announces Presentation of Encouraging Preclinical Data for PRS-400 at ATS 2023 International Conference

BOSTON, MA / ACCESSWIRE / May 22,2023 / Pieris Pharmaceuticals, Inc. (Nasdaq:PIRS), a clinical-stage biotechnology company advancing novel biotherapeutics through its proprietary Anticalin® technology platform for respiratory diseases, cancer, and other indications, announced the presentation of preclinical data from the Company's inhaled Jagged-1 targeting program, PRS-400, at the annual American Thoracic Society (ATS) International Conference being held in Washington, D.C. May 19-24, 2023. The poster presentation will be available on May 22, 2023, from 2:15 PM to 4:15 PM (Session B107, 711) and demonstrates that Pieris' lead candidate has reached desired *in vitro* and *ex vivo* potency goals while also demonstrating *in vivo* proof of concept when locally administered to the lung, showing the promise of PRS-400 as an inhaled therapy for patients with muco-obstructive lung diseases. A copy of the poster can be viewed HERE.

PRS-400 is a potentially novel intervention for mucus hypersecretion as it both inhibits the formation of mucus-secreting cells and stimulates the creation of mucus-clearing cells, thereby addressing mucus-driven diseases at the root. Jagged-1, one of five human Notch receptor ligand members, is involved in cell fate specification in the lung, and aberrant Jagged-1/Notch signaling drives a pro-secretory cell phenotype leading to mucus hypersecretion. As the Notch signaling pathway has fundamental roles in multiple other organs, a systemically administered intervention may have undesirable side effects. PRS-400 offers a potential solution to this challenge when administered locally to the lung by targeting Jagged-1 expressed on lung epithelial cells and avoiding undesired target engagement peripherally.

As shown in the poster presentation, Pieris' lead candidate reduced mucin expression and differentiation of goblet (mucus-producing) cells under pro-inflammatory conditions *ex vivo.* Further, the lead candidate dose-dependently reduced mucin expression and drove the differentiation of mucus-secreting goblet cells to a ciliated cell phenotype in both prophylactic and therapeutic models of disease *in vivo*. Additional preclinical studies are ongoing to support the advancement of PRS-400 to clinical development, with development candidate nomination anticipated in the second half of this year.

"The localized administration of an inhaled Anticalin therapeutic candidate targeting Jagged-1 has the potential to address mucus dysregulation, an underlying pathogenic driver of many serious lung diseases," said Shane Olwill, Ph.D., Chief Development Officer of Pieris. "This

program is a first-in-class opportunity offering the potential for patients to exit the vicious cycle of mucus hypersecretion, inflammation and infection observed in chronic airway diseases, and we are highly encouraged with these data."

About PRS-400:

PRS-400 is an inhaled Anticalin protein targeting Jagged-1 with potential in a wide range of respiratory diseases driven by mucus hypersecretion. PRS-400 is designed to exert clinical activity by disrupting mucus-mediated pathology in the airways, while minimizing systemic target exposure outside the lungs. PRS-400 is advancing toward development candidate nomination later this year.

About Pieris Pharmaceuticals*:*

Pieris is a clinical-stage biotechnology company that combines leading protein engineering capabilities and deep understanding into molecular drivers of disease to develop medicines that drive local biology to produce superior clinical outcomes for patients. Our pipeline is focused on inhalable Anticalin proteins to treat respiratory diseases and locally-activated bispecifics for immuno-oncology. Proprietary to Pieris, Anticalin proteins are a novel class of therapeutics validated in the clinic and by strong partnerships with leading pharmaceutical companies. For more information, visit www.pieris.com.

Forward-looking Statements*:*

This press release contains forward-looking statements as that term is defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Statements in this press release that are not purely historical are forward-looking statements. Such forward-looking statements include, among other things, the potential of our programs and collaborations, including PRS-400; the advancement of our proprietary and co-development programs into and through the clinic and the expected timing for reporting data; the therapeutic potential of our Anticalin platform; our continued progress in the area of co-stim bispecifics and inhaled therapeutics; and the advancement and funding of our developmental programs generally. Actual results could differ from those projected in any forward-looking statement due to numerous factors. Such factors include, among others, the fact that preclinical data and interim clinical results may not necessarily be indicative of future results; our ability to satisfy any closing conditions for future financings; the amounts of anticipated funding actually received for our continued development programs and our actual reductions in spending as compared to anticipated cost reductions; our ability to raise the additional funding we will need to continue to pursue our business and product development plans; the inherent uncertainties associated with developing new products or technologies and operating as a development stage company; our ability to develop, complete clinical trials for, obtain approvals for and commercialize any of our product candidates, including our ability to recruit and enroll patients in our studies; competition in the industry in which we operate; delays or disruptions due to COVID-19 or geopolitical issues, including the conflict in Ukraine; and market conditions. These forward-looking statements are made as of the date of this press release, and we assume no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements, except as required by law. Investors should consult all of the information set forth herein and should also refer to the risk factor disclosure set forth in the reports and other documents we file

with the Securities and Exchange Commission, or the SEC, available at www.sec.gov, including, without limitation, the Company's most recent Annual Report on Form 10-K, the Company's Quarterly Reports on Form 10-Q, and subsequent filings with the SEC.

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