October 2, 2017

Pieris Pharmaceuticals Announces Dosing of First Patient in Phase I Trial for Fully Proprietary Lead IO Program, PRS-343

BOSTON, MA -- (Marketwired) -- 10/02/17 -- ***Pieris Pharmaceuticals, Inc.*** (NASDAQ: PIRS), a clinical-stage biotechnology company advancing novel biotherapeutics through its proprietary Anticalin® technology platform for cancer, respiratory and other diseases, today announced that the first patient has been dosed in the Company's Phase I clinical trial of PRS-343, its lead proprietary immuno-oncology drug candidate. PRS-343 is a first-in-class bispecific antibody-Anticalin fusion protein and functions as a tumor-targeted immune costimulatory 4-1BB agonist. The trial, a multicenter, open-label, Phase I dose escalation study that will include expansion cohorts, is designed to determine the safety, tolerability and potential anti-cancer activity of PRS-343 in patients with advanced or metastatic HER2-positive solid tumors for which standard treatment options are not available, are no longer effective, are not tolerated, or the patient has refused standard therapy. Elevated HER2 expression is associated with multiple cancers, including gastroesophageal, bladder, breast and a range of other tumor types.

"We are very pleased to have commenced dosing PRS-343 in this Phase I trial," said Louis Matis, M.D., Senior Vice President and Chief Development Officer of Pieris. "PRS-343 has been designed to selectively activate 4-1BB-expressing T cells within the tumor microenvironment, thus diminishing the likelihood of toxicity from systemic immune activation. PRS-343 has also exhibited HER2 inhibitory activity in preclinical studies, thereby demonstrating the potential to mediate dual anti-tumor effects."

About PRS-343:
PRS-343 is a bispecific monoclonal antibody-Anticalin fusion protein comprised of a HER2 tumor-targeting antibody genetically linked to a potent Anticalin specific for the immune costimulatory TNF family receptor 4-1BB (CD137). PRS-343 is being developed as the first 4-1BB based bispecific therapeutic to mediate the activation of tumor-specific T lymphocytes selectively within the tumor microenvironment (TME). 4-1BB is a potent costimulatory immunoreceptor and an established marker for tumor-specific infiltrating T lymphocytes, and is, therefore, an attractive target for cancer immunotherapy. In *in vivo* preclinical tumor models, PRS-343 has demonstrated potent T lymphocyte activation localized to the TME of established HER2-positive tumors, indicating the potential for both enhanced safety and efficacy.

About HER2-Positive Malignancies:
HER2 is a tyrosine kinase receptor growth-promoting protein found on the surface of some

cancer cells and is associated with aggressive disease progression. Multiple tumor types can express HER2 including breast, gastroesophageal, bladder, biliary (cholangiocarcinoma), colorectal, endometrial, ovarian, non-small cell lung, pancreatic, head and neck, and other cancers.

About Pieris Pharmaceuticals :
Pieris is a clinical-stage biotechnology company that discovers and develops Anticalin protein-based drugs to target validated disease pathways in a unique and transformative way. Our pipeline includes immuno-oncology multi-specifics tailored for the tumor microenvironment, an inhaled Anticalin protein to treat uncontrolled asthma and a half-life-optimized Anticalin protein to treat anemia. Proprietary to Pieris, Anticalin proteins are a novel class of therapeutics validated in the clinic and by partnerships with leading pharmaceutical companies. Anticalin® is a registered trademark of Pieris. 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 and Section 21E of the Securities Exchange Act of 1934. Statements in this press release that are not purely historical are forward-looking statements. Such forward-looking statements include, among other things, references to novel technologies and methods; our business and product development plans; the timing and progress of our studies, including the timing of enrollment and dosing of PRS-343 patients, the enrollment of patients in the PRS-080 multi-dose trial and dosing healthy subjects; our liquidity and ability to fund our future operations; our ability to achieve certain milestones and receive future milestone or royalty payments; or market information. Actual results could differ from those projected in any forward-looking statements due to numerous factors. Such factors include, among others, 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; our ability to address the requests of the FDA; competition in the industry in which we operate 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 SEC available at www.sec.gov, including without limitation the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016 and the Company's Quarterly Reports on Form 10-Q.

Contacts at Pieris:

Company Contact:
Pieris Pharmaceuticals, Inc.
Allan Reine
SVP & Chief Financial Officer
+1-857-444-4276

reine@pieris.com

Investor Relations Contact:
The Trout Group
Thomas Hoffmann
+1-646-378-2931
thoffmann@troutgroup.com

Media Inquiries:
Mario Brkulj
+49-175-5010575
mbrkulj@macbiocom.com

Source: Pieris Pharmaceuticals, Inc.