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Pieris Pharmaceuticals Presents Positive Data for Its Lead Bispecific Drug Candidate, PRS-343, at the 2016 CRI-CIMT-EATI-AACR International Cancer Immunotherapy Conference

Novel 4-1BB/HER2 Bispecific Demonstrates Differentiation Over Conventional 4-1BB mAb and HER2 mAb Approaches

BOSTON, MA -- (Marketwired) -- 09/26/16 -- ***Pieris Pharmaceuticals, Inc***. (NASDAQ: PIRS), a biotechnology company advancing novel biotherapeutics through its proprietary Anticalin® technology platform, announced that it has today presented new preclinical data demonstrating *in vivo* efficacy of its lead 4-1BB (CD137)-based bispecific cancer immunotherapeutic drug candidate, PRS-343, at the 2016 CRI-CIMT-AACR International Cancer Immunotherapy Conference - Translating Science into Survival, taking place in New York City.

The *in vivo* data show that treatment of HER2-positive tumor-bearing animals with PRS-343 provided dose-dependent, dual anti-tumor activity by increasing the frequency of tumor-infiltrating lymphocytes via bispecific targeting of 4-1BB and HER2, as well as mediating tumor growth inhibition by direct antagonism of HER2 on tumor cells. In contrast, an agonistic anti-4-1BB benchmark monoclonal antibody (mAb) displayed neither tumor growth inhibition nor enhanced lymphocyte infiltration into tumors compared to an isotype control mAb, but preferentially activated T cells systemically, resulting in significant toxicity. A copy of the poster can be viewed and downloaded by clicking http://www.pieris.com/pirs-cri-poster-2016.

Louis Matis, M.D., Pieris SVP and Chief Development Officer, commented, "These new data support a differentiated mode of action for PRS-343 and demonstrate the potential benefits of tumor microenvironment-localized costimulatory T cell activation for both reduced systemic toxicity and higher efficacy in comparison to conventional agonistic anti-4-1BB mAbs. We look forward to the initiation of our phase 1 clinical trial of PRS-343 for the treatment of cancer patients planned for the first half of 2017."

About PRS-343
PRS-343 is a bispecific monoclonal antibody/Anticalin fusion protein comprised of a HER2

tumor-targeting mAb 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 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 (TILs), 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 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 to treat uncontrolled asthma and a half-life-optimized Anticalin to treat anemia. Proprietary to Pieris, Anticalins are a novel class of protein therapeutics validated in the clinic and by partnerships with leading pharmaceutical companies. Anticalin®, Anticalins® are registered trademarks 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, including our planned clinical trials; our liquidity and ability to fund our future operations; 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; 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, 2014 and the Company's Quarterly Reports on Form 10-Q.

Company Contact:
Pieris Pharmaceuticals, Inc.
Darlene Deptula-Hicks
SVP & Chief Financial Officer
+1-603-553-5803
deptula@pieris.com

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

Media Inquiries:
Gretchen Schweitzer
+49 172 861 8540
gschweitzer@macbiocom.com

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