Pliant Therapeutics Presents Data from its Bexotegrast Program at the American Thoracic Society International Conference

May 24, 2023

SOUTH SAN FRANCISCO, Calif., May 24, 2023 (GLOBE NEWSWIRE) -- Pliant Therapeutics, Inc. (Nasdaq: PLRX), a clinical stage biotechnology company focused on discovering and developing novel therapeutics for the treatment of fibrosis, today announced that it presented Phase 2a clinical data and preclinical data of bexotegrast (PLN-74809) this week as part of the American Thoracic Society (ATS) 2023 International Conference, held from May 19 through May 24, 2023.

“Data presented at this year’s ATS conference highlight some of the strong foundational work conducted and encouraging interim clinical results from our Phase 2a INTEGRIS-IPF trial that warrant the progression of bexotegrast into late-stage clinical development,” said Éric Lefebvre, M.D., Chief Medical Officer at Pliant Therapeutics.

PLN-74809 Shows Favorable Safety and Tolerability and Indicates Antifibrotic Activity in a Phase 2a Study for the Treatment of Idiopathic Pulmonary Fibrosis

In an oral presentation, Lisa H. Lancaster, M.D., Professor of Medicine at Vanderbilt University Medical Center and principal investigator of the INTEGRIS-IPF Phase 2a trial, reviewed 12-week data from the trial. Results showed that bexotegrast was well tolerated across all four dose groups with bexotegrast-treated participants experiencing a reduction in forced vital capacity (FVC) decline over 12 weeks versus placebo, on and off background therapy. A dose-dependent downwards trend was observed in the proportion of participants with forced vital capacity precent predicted (FVCpp) decline ≥10%, a well-established predictor of death and disease progression in IPF. Qualitative lung fibrosis (QLF) imaging showed a dose-dependent antifibrotic effect with no or limited progression at the two highest doses and a decrease in serum biomarkers of collagen synthesis (PRO-C3 and PRO-C6) and ITGB6 was observed relative to placebo.

Combining Dual αVβ6/αVβ1 Integrin Inhibitor, PLN-74809, With Standard-of-Care Therapies Has a Synergistic Effect on Reducing Fibrogenic Gene Expression in Fibrotic Human Lung Slices

Fibrotic human precision-cut lung slices were cultured to investigate the individual and combined effects of bexotegrast and nintedanib or pirfenidone on the expression of genes related to the pathogenesis of idiopathic pulmonary fibrosis (IPF). Results from a differential gene expression analysis suggest the mechanism of action of bexotegrast may be both independent of, and complementary to, that of currently approved therapies.

Dual αVβ6/αVβ1 Integrin Inhibitor PLN-74809 Attenuates Pathologic Fibroblasts in Human Fibrotic Lung Explant Tissue

In an oral presentation, Mahru, An, Ph.D., Principal Scientist at Pliant presented results from a study examining fibrotic human precision-cut lung slices that were treated with bexotegrast, a dual $\alpha_V\beta_6/\alpha_V\beta_1$ integrin inhibitor, to assess the effect of pro-fibrotic gene expression levels thought to be important in fibrotic diseases, including IPF. Bexotegrast demonstrated reductions in pro-fibrotic gene expression within unique cell populations including on a number of CTHRC1-high expressing fibroblasts, pro-fibrotic genes, including COL1A1 and VIM, and in $\alpha_V\beta_6$-expressing aberrant basaloid cells that reside adjacent to areas of acute lung injury. Results also demonstrated the utility of combining single cell transcriptomic techniques with fibrotic human tissue to evaluate the mechanism of action of novel anti-fibrotic therapies, such as bexotegrast.

Posters presented at the 2023 ATS Conference are available on Pliant’s website under the Publications section at https://pliantrx.com/publications.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "may," "will," "expect," "anticipate," "estimate," "intend," and similar expressions (as well as other words or expressions referencing future events, conditions, or circumstances) are intended to identify forward-looking statements. These statements include those regarding future development of bexotegrast. Because such statements deal with future events and are based on our current expectations, they are subject to various risks and uncertainties and actual results, performance or achievements of Pliant Therapeutics could differ materially from those described in or implied by the statements in this press release. These forward-looking statements are subject to risks and uncertainties, including those related to the development and commercialization of our product candidates, including any delays in our ongoing or planned preclinical or clinical trials, the impact of the COVID-19 pandemic on our business, operations, clinical supply and plans, our reliance on third parties for critical aspects of our development operations, the risks inherent in the drug development process, the risks regarding the accuracy of our estimates of expenses and timing of development, our capital requirements and the need for additional financing, and our ability to obtain and maintain intellectual property protection for our product candidates. These and additional risks are discussed in the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2022, as updated by our Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, which are available on the SEC's website at www.sec.gov. Unless otherwise noted, Pliant is providing this information as of the date of this news release and does not undertake any obligation to update any forward-looking statements contained in this document as a result of new information, future events or otherwise.

About Pliant Therapeutics, Inc.

Pliant Therapeutics is a clinical stage biopharmaceutical company focused on discovering and developing novel therapies for the treatment of fibrosis. Pliant's lead product candidate, bexotegrast (PLN-74809), is an oral small molecule dual selective inhibitor of αvß6 and αvß1 integrins that is in

development in the lead indications for the treatment of idiopathic pulmonary fibrosis, or IPF, and primary sclerosing cholangitis, or PSC. Bexotegrast has received Fast Track Designation and Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) in IPF and PSC and Orphan Drug Designation from the European Medicines Agency in IPF and PSC. Pliant is currently conducting a Phase 2a trial of bexotegrast in the PSC and is planning a Phase 2b trial in IPF. Pliant has also developed PLN-1474, a small molecule, selective inhibitor of αvß1 for the treatment of nonalcoholic steatohepatitis, or NASH with liver fibrosis. Pliant is initiating a Phase 1 study for its third clinical program, PLN-101095, a small molecule, dual-selective inhibitor of αvß8 and αvß1 integrins, that is being developed for the treatment of solid tumors. In addition to clinical stage programs, Pliant currently has a preclinical program targeting muscular dystrophies. For additional information about Pliant Therapeutics, visit www.PliantRx.com and follow us on Twitter, LinkedIn, Facebook and YouTube.

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