Pliant Therapeutics Reports Positive Results of Phase 1 Clinical Study Support Advancement of PLN-74809 for Idiopathic Pulmonary Fibrosis

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Preclinical Studies Demonstrating Anti-fibrotic Effect of Integrin Inhibitor to be Presented at American Thoracic Society International Conference

SOUTH SAN FRANCISCO, CA — April 9, 2019 — Pliant Therapeutics, Inc., a biotechnology company focused on discovering, developing and commercializing treatments for fibrotic diseases, today announced the successful completion of its first-in-human clinical study of its lead product candidate, PLN-74809. The small molecule inhibitor of the $\alpha_V\beta_6$ and $\alpha_V\beta_1$ integrins was shown to be safe and well tolerated in healthy volunteers, and the results support further development in patients with idiopathic pulmonary fibrosis (IPF), a chronic and progressive fibrotic lung disease with few treatment options.

The randomized, double-blind, placebo-controlled study of PLN-74809 clearly demonstrated the small molecule's good oral bioavailability in humans and its dose-proportional pharmacokinetics after a single dose and following 14 days of once-daily administration, at doses ranging from 10 to 75 mg. The compound was well-tolerated across all doses in 71 study participants and its long half-life supports once-daily dosing.

"Less than six months after initiating our first-in-human study evaluating PLN-74809, we're pleased to report that the compound has a favorable safety, tolerability and pharmacokinetic profile, which warrants advancing it to the next stage of development," said Éric Lefebvre, M.D., chief medical officer of Pliant Therapeutics. "We are now progressing with Phase 1b evaluation of PLN-74809 to assess its effects on TGF-β activation in alveolar macrophages collected from healthy volunteers and plan to initiate our Phase 2a program in IPF patients in the second half of 2019."

Pliant also announced its researchers and collaborators will make two oral presentations and host two posters highlighting related studies at the American Thoracic Society International Conference in Dallas, Texas, May 17-22, 2019. A study that builds on Pliant-sponsored research presented at last year's ATS conference supporting the non-invasive assessment of $\alpha_V\beta_6$ expression as a diagnostic, prognostic and therapy monitoring tool for interstitial lung disease received the ATS 2019 Science and Innovation Center Abstract Award and will be highlighted in an oral session. Additional presentations characterize differentiated translational studies that validate the integrin targets of PLN-74809 for the reduction of fibrogenesis in mouse and human tissue models of IPF. Details for the oral and poster presentations at ATS 2019 are as follows:

ATS 2019 Science and Innovation Center Abstract Award
Oral Presentation: Quantification of Integrin $\alpha_V\beta_6$ in Fibrotic Interstitial Lung Disease with a Cystine Knot PET Tracer: A First in Human Study
Presenting Author: Joshua Mooney, Ph.D.
Authors: Richard Kimura, Haiwei Henry Guo, Tushar Desai, Andrea Otte, Scott Turner, Gunilla Jacobson, Shyam Srinivas, Sanjiv Gambhir
Session: Complex Cell Behaviors in Pulmonary Fibrosis
Date & Time: Monday, May 20, 2019, 3:45 p.m. – 4:00 p.m. CST

Oral Presentation: Dual $\alpha_V\beta_6/\alpha_V\beta_1$ Inhibitor PLN-74809 Reduces Fibrogenesis in *Ex Vivo* and *In Vivo* Models of IPF
Presenting Author: Martin Decaris, Ph.D.
Authors: Johanna Schaub, Chun Chen, Jake Cha, Gail Lee, Megi Rexhepaj, Vikram Rao, Prerna Kotak, Lisa Hooi, Jianfeng Wu, Shamra Martin, Tony Chen, Manuel Munoz, Timothy Hom, Katerina Leftheris, David Morgans, Scott Turner, Patrick Andre
Session: Towards the Next IPF Therapies
Date & Time: Wednesday, May 22, 2019, 9:15 a.m. – 9:30 a.m. CST

Poster Title: Urine Proteomics Identifies Novel Biomarkers of IPF Disease Progression and Resolution
Authors: Martin Decaris, Megi Rexhepaj, Jakob Vowinkel, Nicholas Dupuis, Ying Wei, Lida Hariri, John Greenland, Harold Chapman, Joyce Lee, Paul Wolters, Scott Turner
Session: Emerging Concepts in Lung Fibrosis
Date & Time: Sunday, May 19, 2019, 9:15 a.m. – 11:15 a.m. CST

Poster Title: Identification and PK/PD Assessment of an Oral, Selective $\alpha_V\beta_6/\alpha_V\beta_1$ Dual Antagonist for the Treatment of Idiopathic Pulmonary Fibrosis
Authors: Scott Turner, Eve-Irene Lepist, Fernando Rock, Martin Dacaris, Johanna Schaub, Chun Chen, Patrick Andre
Session: Mechanisms of Pulmonary Fibrosis
Date & Time: Tuesday, May 21, 2019, 11:15 a.m. – 1:00 p.m. CST

About PLN-74809

Pliant's therapeutic approach focuses on fibrotic tissue-specific inhibition of integrins and the TGF-β pathway. Proprietary small molecule PLN-74809 is an oral dual selective inhibitor of the tissue-specific $\alpha_V\beta_6$ and $\alpha_V\beta_1$ integrins. In preclinical studies, PLN-74809 selectively blocks the integrin mediated activation of TGF-β, preventing the growth of fibrotic tissue within the lung. Pliant also expects to evaluate PLN-74809 in other fibrotic diseases with unmet clinical needs, including primary sclerosing cholangitis (PSC), a chronic progressive disorder characterized by inflammation and

fibrosis of the bile ducts in the liver.

The U.S. Food and Drug Administration has granted orphan drug designation to PLN-74809 for the indications of idiopathic pulmonary fibrosis and primary sclerosing cholangitis.

About Pliant Therapeutics

Pliant Therapeutics is a clinical stage biotechnology company targeting the key biological pathways driving fibrosis. Pliant has leveraged its powerful product discovery engine to develop a portfolio of novel therapeutics that seek to halt progression of multiple life-threatening fibrotic diseases. The company's lead product candidate, PLN-74809, is a selective inhibitor of $\alpha_v\beta_1$ and $\alpha_v\beta_6$ integrin receptors that play a key role in multiple fibrotic pathways. PLN-74809 has received Orphan Designation from the FDA in both idiopathic pulmonary fibrosis and primary sclerosing cholangitis, and is being studied in an ongoing Phase 1 clinical trial. Pliant's second product candidate, PLN-1474, is a selective inhibitor of $\alpha_v\beta_1$, targeting late-stage liver fibrosis and is currently in IND-enabling studies. For more information, please visit www.pliantrx.com.

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