Rein Therapeutics Presents Two Posters at the American Thoracic Society 2025 International Conference

May 19, 2025

Presentations further support the dual mechanism of LTI-03 and the development of Cav1-related peptides for the treatment of idiopathic pulmonary fibrosis (IPF)

Company recently initiated RENEW Phase 2 trial evaluating the safety, tolerability and efficacy of LTI-03 in IPF

AUSTIN, Texas, May 19, 2025 /PRNewswire/ -- Rein Therapeutics ("Rein") (NASDAQ: RNTX), a biopharmaceutical company advancing a novel pipeline of first-in-class medicines to address significant unmet medical needs in orphan pulmonary and fibrosis indications, today announced that the Company and its collaborators presented two posters supporting the potential therapeutic effectiveness of LTI-03 in idiopathic pulmonary fibrosis (IPF) at the American Thoracic Society (ATS) 2025 International Conference.

"The presentations delivered at ATS today provide further support for the dual mechanism of our lead asset, LTI-03, which has demonstrated sustained alveolar epithelial cell survival as well as inhibition of profibrotic signaling," said Cory Hogaboam, Ph.D., Chief Scientific Officer of Rein Therapeutics and Professor of Medicine in the Women's Guild Lung Institute at Cedars Sinai Medical Center. "Our first presentation highlighted LTI-03's potent modulatory effects on profibrotic proteins and transcripts as well as its ability to dose-dependently increase the production of soluble receptor of advanced glycation end-products, or solRAGE, without inducing cellular necrosis. Our second presentation used alveolar organoid systems derived from donor or IPF lung epithelial cells to demonstrate LTI-03's potential to promote and sustain type 2 alveolar epithelial cell, or AEC2, viability in the IPF lung as well as its ability to support AEC2 to type 1 alveolar epithelial cell, or AEC1, differentiation. We continue to be encouraged by the body of evidence supporting the potential of LTI-03 to treat IPF, for which novel treatment options are needed. These findings are in line with the promising data that we reported from the Phase 1b trial of LTI-03 in IPF, and we look forward to sharing topline interim data from our recently initiated Phase 2 RENEW IPF trial in the first half of next year."

The first poster, entitled, "Pre-clinical Proof-of-concept of Anti-fibrotic Activity of Caveolin-1 Scaffolding Domain Peptide LTI-03 in Ex Vivo Precision Cut Lung Slices (PCLS) from Patients with Idiopathic Pulmonary Fibrosis," evaluates the antifibrotic effects of LTI-03, Rein's novel, multi-pathway, Caveolin-1 (Cav1)-related peptide currently in a Phase 2 trial for the treatment of IPF, and of nintedanib, a current standard of care treatment for IPF, in PCLS from 12 patients with end-stage disease. The PCLS samples were treated every 12 hours with one of 0.5 µM, 3.0 µM or 10.0 µM of LTI-03; 0.1 µM or 10.0 µM of nintedanib; or 10.0 µM of placebo, for five to seven days.

Key Takeaways

- LTI-03 broadly attenuated profibrotic transcripts and proteins and the corresponding pathways of these factors, further supporting LTI-03's ability to inhibit profibrotic signaling.
- LTI-03 dose-dependently stimulated production of solRAGE, a factor indicative of AEC1 health that is a critically important aspect of IPF and has gone largely unaddressed by current treatment options.
- LTI-03 reduced the expression of profibrotic proteins in IPF PCLS, including Col-1α1 and platelet-derived growth factor receptor beta (PDGFRB).

- Unlike nintedanib, LTI-03 did not induce cellular necrosis or apoptosis.

The second poster, entitled, "Evaluating Alveolar Regenerative Properties of Caveolin Scaffolding Peptides (CSD) in Three Dimensional (3D) Alveolospheres from IPF and Normal Donor Lung Samples," further explores the effects of LTI-03 and nintedanib on AEC2s in the normal and IPF lung. In these studies, the effects of LTI-2355, Rein's second generation Cav1-related peptide that is in preclinical development, were also examined.

Eight (8) IPF lung explants and 10 normal donor lungs were processed to obtain lung epithelial cell preparations, from which AEC2s were isolated for lung organoid generation. Previous studies completed by Rein and others indicate that there is a significant decrease in the abundance of AEC2s in the IPF lung as compared to a normal lung, in turn impairing AEC2 to AEC1 differentiation and alveolar regeneration. The AEC2s from IPF and normal lung organoids were treated with 0.5 µM, 3.0 µM or 10.0 µM of either LTI-03, LTI-2355 or placebo, or 80.0 nM of nintedanib. Treatments were refreshed every other day in these lung organoid cultures for up to 28 days.

Key Takeaways

- Cav1 scaffolding domain peptides LTI-03 or LTI-2355 sustained AEC2s in IPF lung organoids or alveolospheres, further supporting LTI-03's ability to promote alveolar epithelial cell survival.
- At the 10.0 µM dose, both LTI-03 and LTI-2355 increased the size of IPF alveolospheres compared to placebo at Day 28.
- Both LTI-03 and LTI-2355 appeared to protect normal lung alveolopheres, while nintedanib demonstrated significant growth-inhibiting or toxic effects on normal donor lung organoids at Day 28.

About IPF

IPF is a chronic lung disease characterized by progressive tissue scarring that prevents proper lung function. It is a progressive, fatal, age-associated lung disease affecting approximately 100,000 people in the United States[1]. IPF typically presents in adults 65 or older and is usually fatal within two to five years after diagnosis[2].

About LTI-03 and Caveolin-1 (Cav1)

LTI-03 is a seven amino acid peptide, the sequence of which is derived from the caveolin scaffolding domain (CSD), an important binding region of the Cav1 protein. Cav1 normally serves a critical function in the prevention of fibrosis by maintaining a balance between pathways that both initiate and arrest lung repair and cell movement. Through the CSD, caveolin interacts with multiple signaling molecules, all of which possess a caveolin binding domain region. Cav1 expression is decreased in IPF lung tissues and has been demonstrated to decrease during the fibrotic phase of bleomycin, or BLM, lung injury in mice. Restoring the balance of important biological signals in the lung may not only slow lung function decline but could also restore healthy lung function through the protection of healthy epithelial cells.

About Rein Therapeutics

Rein Therapeutics is a clinical-stage biopharmaceutical company advancing a novel pipeline of first-in-class therapies to address significant unmet medical needs in orphan pulmonary and fibrosis indications. Rein's lead product candidate, LTI-03, is a novel, synthetic peptide with a dual mechanism targeting alveolar epithelial cell survival as well as inhibition of profibrotic signaling. LTI-03 has received Orphan Drug Designation in the U.S. A Phase 2 clinical trial of LTI-03 for the treatment of idiopathic pulmonary fibrosis was initiated in May 2025. Rein's second product candidate, LTI-01, is a proenzyme that has completed Phase 1b and Phase 2a clinical trials for the treatment of loculated pleural effusions. LTI-01 has received Orphan Drug Designation in the U.S. and E.U. and Fast Track Designation in the U.S. For more information, please visit the company's website at reintx.com, or follow them on LinkedIn and X.

References

[1]Pergolizzi, Jr., J., LeQuang, J., Varrassi, M., Breve, F., Magnusson, P., Varrassi, G., (2023). What Do We Need to Know About Rising Rates of Idiopathic Pulmonary Fibrosis? A Narrative Review and Update. Springer Nature, Published online 2023 Jan 24. Doi: 10.1007/s12325-022-02395-9.

[2]Nathan et al. "Long-term Course and Prognosis of Idiopathic Pulmonary Fibrosis in the New Millennium". Chest Journal Volume 140, ISSUE 1, P221-229, July 2011.

Forward-Looking Statements

This press release may contain forward-looking statements of Rein Therapeutics, Inc. ("Rein", the "Company", "we", "our" or "us") within the meaning of the Private Securities Litigation Reform Act of 1995, including statements with respect to: the RENEW Phase 2 clinical trial of LTI-03, including with respect to the timing of the trial and the assumption that the Company will raise the funds necessary to conduct the trial; the therapeutic potential of LTI-03 and LTI-2355; and future expectations, plans and prospects for the Company. We use words such as "anticipate," "believe," "estimate," "expect," "hope," "intend," "may," "plan," "predict," "project," "target," "potential," "would," "can," "could," "should," "continue," and other words and terms of similar meaning to help identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including risks and uncertainties related to: the ability of the Company to obtain the cash resources to fund the RENEW Phase 2 trial through its completion and the Company's operations for the anticipated periods and the Company's ability to manage

unplanned cash requirements; changes in applicable laws or regulations; the possibility that the Company may be adversely affected by other economic, business, and/or competitive factors, including risks inherent in pharmaceutical research and development, such as adverse results in the Company's drug discovery, preclinical and clinical development activities; the risk that the results of preclinical studies and early clinical trials may not be replicated in later clinical trials, including in the RENEW Phase 2 trial, or that partial results of a trial will be indicative of the full results of the trial; the Company's ability to enroll patients in its clinical trials; and the risk that any of its clinical trials may not commence, continue or be completed on time, or at all; the Company's ability to successfully integrate Qureight Ltd.'s deep-learning platform into the RENEW Phase 2 trial; decisions made by the U.S. Food and Drug Administration and other regulatory authorities, investigational review boards at clinical trial sites and publication review bodies with respect to our development candidates; as well as the risks and uncertainties discussed in the "Risk Factors" section of the Company's Annual Report on Form 10-K for the year ended December 31, 2024, which is on file with the United States Securities and Exchange Commission (the "SEC") and in subsequent filings that the Company files with the SEC. These forward-looking statements should not be relied upon as representing the Company's view as of any date after the date of this press release, and we expressly disclaim any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

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