aTyr Pharma Presents Three Posters on Efzofitimod at the American Thoracic Society (ATS) 2025 International Conference

May 19, 2025

Blinded baseline demographics and disease characteristics for ongoing Phase 3 EFZO-FIT™ study of efzofitimod in pulmonary sarcoidosis largely balanced and representative of targeted trial population.

Real-world evidence shows target market for efzofitimod in pulmonary sarcoidosis is higher than previously estimated with increased morbidity.

Treatment practices in the U.S. show approximately 75% of diagnosed pulmonary sarcoidosis patients require treatment with steroids.

SAN DIEGO, May 19, 2025 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq: ATYR) ("aTyr" or the "Company"), a clinical stage biotechnology company engaged in the discovery and development of first-in-class medicines from its proprietary tRNA synthetase platform, today announced three poster presentations for its lead therapeutic candidate, efzofitimod, at the American Thoracic Society (ATS) 2025 International Conference, which is being held May 16 – 21, 2025, in San Francisco, CA.

"New real-world evidence underscores the growing burden of patients living with pulmonary sarcoidosis and the continued reliance on oral corticosteroids as the standard of care, despite their limited clinical evidence and toxic side effects. These findings highlight a clear and urgent need for safer, more effective treatments for patients with this chronic disease," said Sanjay S. Shukla, M.D., M.S., President and Chief Executive Officer of aTyr.

"Furthermore, we are pleased to report that we have enrolled a cohort of pulmonary sarcoidosis patients in our ongoing Phase 3 EFZO-FIT™ study that we believe is well balanced across multiple demographic and disease characteristics and reflective of a moderate to severe patient population that we see as the target market for efzofitimod. We believe efzofitimod shows great promise to be a transformative therapy in this underserved market and we look forward to sharing topline results in the third quarter of this year."

Details of the poster presentations appear below. The posters will be available on the aTyr website once presented.

Title: Real-World Treatment Patterns Among Pulmonary Sarcoidosis Patients with Parenchymal Involvement in the US
Session: The Inflamed Lung: Sarcoidosis and Autoimmune Disease
Poster Board Number: P51
Date and Time: Sunday, May 18, 2025 from 11:30AM – 1:15PM PT
Location: Moscone Center, San Francisco, CA

Treatments used in real-world clinical management for pulmonary sarcoidosis patients with parenchymal involvement in the U.S. were evaluated using claims databases. Key data include:

- Glucocorticoids remain the most common treatment, with usage rates higher than previously reported
- Most patients on second-line advanced therapies continue glucocorticoid use, highlighting challenges with tapering despite safety concerns and treatment guidelines
- Treatment intensity escalates over time, with patients progressing rapidly to later-line therapies
- 10% of non-incident patients required high-cost, off-label biologics within three years

Title: EFZO-FIT™, the Largest Placebo-Controlled Trial in Pulmonary Sarcoidosis
Session: Repair My Broken Lungs
Poster Board Number: P536
Date and Time: Monday, May 19, 2025 from 11:30AM – 1:15PM PT
Location: Moscone Center, San Francisco, CA

The poster describes the Phase 3 EFZO-FIT™ study design and includes blinded baseline demographics and disease characteristics:

- 268 patients enrolled; 264 dosed and included in the analysis
- Patient population consistent with moderate to severe chronic symptomatic pulmonary sarcoidosis
- Mean baseline oral corticosteroid dose was 10.55 mg
- 38.3% of patients were on steroid-sparing immunosuppressants at baseline
- Four unblinded data and safety monitoring board reviews recommended the continuation of the trial without modification, citing no undue safety risk

Title: Incidence, Prevalence, and Mortality of Pulmonary Sarcoidosis with Parenchymal Involvement in the US
Session: Current Insights into Risk, Diagnosis, and Treatment of Occupational and Environmental Lung Diseases
Poster Board Number: P991
Date and Time: Tuesday, May 20, 2025 from 11:30AM – 1:15PM PT
Location: Moscone Center, San Francisco, CA

Epidemiology and longitudinal analyses were conducted to assess incidence, prevalence, mortality and hospitalization rates of pulmonary sarcoidosis patients with parenchymal involvement in the U.S. Key data found:

- Approximately 158,900 people in the U.S. have pulmonary sarcoidosis with parenchymal involvement
- An estimated 30,000 new cases diagnosed annually
- The disease disproportionately affects women and Black individuals
- 1 in 8 patients are hospitalized within 3 years; average stay > 5 days
- 40% of patients are over age 65
- Mortality among patients aged 65-74 is nearly double that of general population (15.4% vs 8.0%)

About Efzofitimod

Efzofitimod is a first-in-class biologic immunomodulator in clinical development for the treatment of interstitial lung disease (ILD), a group of immune-mediated disorders that can cause inflammation and fibrosis, or scarring, of the lungs. Efzofitimod is a tRNA synthetase derived therapy that selectively modulates activated myeloid cells through neuropilin-2 to resolve inflammation without immune suppression and potentially prevent the progression of fibrosis. aTyr is currently investigating efzofitimod in the global Phase 3 EFZO-FIT™ study in patients with pulmonary sarcoidosis, a major form of ILD, and in the Phase 2 EFZO-CONNECT™ study in patients with systemic sclerosis (SSc, or scleroderma)-related ILD. These forms of ILD have limited therapeutic options and there is a need for safer and more effective, disease-modifying treatments that improve outcomes.

About aTyr

aTyr is a clinical stage biotechnology company leveraging evolutionary intelligence to translate tRNA synthetase biology into new therapies for fibrosis and inflammation. tRNA synthetases are ancient, essential proteins that have evolved novel domains that regulate diverse pathways extracellularly in humans. aTyr's discovery platform is focused on unlocking hidden therapeutic intervention points by uncovering signaling pathways driven by its proprietary library of domains derived from all 20 tRNA synthetases. aTyr's lead therapeutic candidate is efzofitimod, a first-in-class biologic immunomodulator in clinical development for the treatment of interstitial lung disease, a group of immune-mediated disorders that can cause inflammation and progressive fibrosis, or scarring, of the lungs. For more information, please visit www.atyrpharma.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are usually identified by the use of words such as "anticipate," "believes," "designed," "could," "can," "expects," "intends," "may," "plans," "potential," "will," and variations of such words or similar expressions. We intend these forward-looking statements to be covered by such safe harbor provisions for forward-looking statements and are making this statement for purposes of complying with those safe harbor provisions. These forward-looking statements include, among others, statements regarding the clinical development for efzofitimod, including our expectations with respect to the appropriateness of baseline demographic and patient characteristics of enrollees in our EFZO-FIT™ study, conduct, timing and results (including the timing of receipt of topline data) of our EFZO-FIT™ study, the epidemiology and treatment practices for pulmonary sarcoidosis in the U.S, and the potential for efzofitimod to be a transformative therapy. These forward-looking statements also reflect our current views about our plans, intentions, expectations, strategies and prospects, which are based on the information currently available to us and on assumptions we have made. Although we believe that our plans, intentions, expectations, strategies and prospects, as reflected in or suggested by these forward-looking statements, are reasonable, we can give no assurance that the plans, intentions, expectations, strategies or prospects will be attained or achieved. All forward-looking statements are based on estimates and assumptions by our management that, although we believe to be reasonable, are inherently uncertain. Furthermore, actual results may differ materially from those described in these forward-looking statements and will be affected by a variety of risks and factors that are beyond our control including, without limitation, uncertainty regarding geopolitical and macroeconomic events, risks associated with the discovery, development and regulation of efzofitimod, the risk that we or our partners may cease or delay preclinical or clinical development activities for efzofitimod for a variety of reasons (including difficulties or delays in patient enrollment in planned clinical trials), the possibility that existing collaborations could be terminated early, and the risk that we may not be able to raise the additional funding required for our business and product development plans, as well as those risks set forth in our most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and in our other SEC filings. Except as required by law, we assume no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

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Source: aTyr Pharma, Inc.