aTyr Pharma Presents Poster Demonstrating Preclinical Effects of Efzofitimod in Rheumatoid Arthritis and Rheumatoid Arthritis-Associated ILD at the ACR Convergence 2023

November 13, 2023

Efzofitimod demonstrated immune regulatory function improving disease outcomes and mitigating fibrosis in animal models.

SAN DIEGO, Nov. 13, 2023 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq: LIFE), a clinical stage biotechnology company engaged in the discovery and development of first-in-class medicines from its proprietary tRNA synthetase platform, today announced a poster presentation for its lead therapeutic candidate, efzofitimod, at the American College of Rheumatology (ACR) Convergence 2023, which is being held November 10 – 15, 2023, in San Diego, CA.

"These data highlight the broad anti-inflammatory potential of efzofitimod in treating immune-driven conditions and strengthen the evidence that neuropilin-2 (NRP2) is an important immune regulator," said Sanjay S. Shukla, M.D., M.S., President and Chief Executive Officer of aTyr. "Although we remain highly focused on our current clinical development program for efzofitimod in interstitial lung disease (ILD), which includes pulmonary sarcoidosis and systemic sclerosis (SSc or scleroderma)-related ILD, this data provides further evidence regarding the potential broader application of efzofitimod in inflammatory diseases beyond these respiratory conditions."

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

Title: Efzofitimod, a First-in-Class NRP2-Targeting Immunomodulator, Ameliorates Rheumatoid Arthritis and Associated Lung Fibrosis in Preclinical Models
Session Title: RA – Treatment Poster II
Session Format: Poster Presentation
Poster Number: 1322
Date and Time: Monday, November 13, 2023, from 9:00 a.m. to 11:00 a.m. PST
Location: Poster Hall, San Diego Convention Center

The poster presents findings from preclinical models of rheumatoid arthritis (RA) and RA-associated ILD (RA-ILD), where NRP2, efzofitimod's binding partner, is known to be expressed on pro-inflammatory synovial macrophages. An animal knockout model for NRP2 demonstrated that NRP2 deficiency exacerbated disease pathology in preclinical models of inflammatory disease. In a model of collagen-induced RA, efzofitimod treatment lowered disease severity and improved remission. Furthermore, in a transgenic mouse model for RA-ILD, treatment with efzofitimod led to a reduction in the number of pro-inflammatory immune cell populations in the lungs and exhibited a noteworthy reduction in RA-induced lung fibrosis. The data indicate a critical role for NRP2 in modulating immune responses and suggest the potential of efzofitimod as a therapeutic intervention for RA-ILD and potentially other immune-mediated diseases.

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 "believes," "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 potential of efzofitimod to improve disease outcomes and mitigate fibrosis in preclinical models of RA and RA-ILD; the potential to be a therapeutic intervention for RA, RA-ILD and other immune-mediated diseases; and the potential applications of efzofitimod. 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.

Contact:
Ashlee Dunston
Director, Investor Relations and Public Affairs
adunston@atyrpharma.com

Source: aTyr Pharma, Inc.