



aTyr Pharma Announces Publication Demonstrating Anti-Fibrotic Effects of ATYR0101 in the Journal of Biological Chemistry

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Findings highlight ATYR0101's potential as a transformative therapy for disrupting the process of chronic tissue fibrosis.

ATYR0101 is currently undergoing IND-enabling studies and expects to be advanced into the clinic in 2027.

SAN DIEGO, Oct. 13, 2026 (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 a publication demonstrating the anti-fibrotic effects of ATYR0101 in the *Journal of Biological Chemistry*. The publication, entitled, "Natural Asp-tRNA Synthetase Fragment Targets Myofibroblasts to Abrogate Tissue Fibrosis," is available on the journal's website and at: [https://www.jbc.org/article/S0021-9258\(26\)02458-0/fulltext](https://www.jbc.org/article/S0021-9258(26)02458-0/fulltext).

ATYR0101 is a fusion protein derived from a proprietary extracellular domain of aspartyl-tRNA synthetase (DARS) that binds to latent transforming growth factor beta binding protein 1 (LTBP-1) to induce myofibroblast apoptosis.

"Fibrosis remains a major global health challenge across multiple organ and tissue systems with limited therapies that only slow disease progression," said Leslie A. Nangle, Ph.D., Vice President, Research at aTyr Pharma. "This publication highlights the novel mechanism by which ATYR0101 disrupts fibrosis through a unique molecular program that facilitates a transition towards a restorative phenotype thus fundamentally altering the underlying fibrotic cellular landscape. These findings suggest that ATYR0101 does not merely stop disease progression but may also facilitate a reversal of fibrotic pathology, providing a differentiated approach to current anti-fibrotic therapies in conditions such as idiopathic pulmonary fibrosis, where more effective treatment options are greatly needed."

The publication describes the mechanism by which ATYR0101 selectively triggers apoptosis in myofibroblasts by targeting LTBP-1 on the extracellular matrix, with ATY0101 induced myofibroblast apoptosis shown to be dependent on active transforming growth factor beta (TGF- β), a central player in the pathogenesis of fibrotic diseases. Furthermore, the pharmacologic activity of ATYR0101 was demonstrated in an in vivo bleomycin lung model of fibrosis, where ATYR0101 showed a significant reduction in both collagen content and Ashcroft score leading to a marked decline in pulmonary fibrosis compared to the use of nintedanib, a known anti-fibrotic, as a control.

About ATYR0101

ATYR0101 is a fusion protein derived from a proprietary extracellular domain of aspartyl-tRNA synthetase (DARS) that binds to latent transforming growth factor beta binding protein 1 (LTBP-1) to induce myofibroblast apoptosis. ATYR0101 interacts with LTBP-1 through a unique way that presents a differentiated approach to targeting fibrosis. ATYR0101 has demonstrated anti-fibrotic effects in models of lung and kidney fibrosis suggesting it may have broad therapeutic potential in multiple fibrotic diseases. ATYR0101 is currently undergoing IND-enabling studies.

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 efzofitmod, a novel 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," "can," "could," "designed," "expects," "intends," "may," "plans," "potential," "upcoming," "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 therapeutic benefits and applications of ATYR0101, including the potential for ATYR0101 to provide a differentiated approach to current anti-fibrotic therapies in conditions such as idiopathic pulmonary fibrosis; timelines, plans and expected results with respect to certain research and development activities and development goals, including IND-enabling studies and our expectation that ATYR0101 will be advanced into the clinic in 2027. 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 our product candidates, the risks inherent in studies of potential medical therapies, the risk that we or future partners may cease or delay preclinical or clinical development activities for any of our existing or future product candidates for a variety of reasons (including difficulties or delays in patient enrollment in planned clinical trials), the possibility that future 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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