aTyr Pharma Announces FGFR4 as Receptor Target for AARS tRNA Synthetase Fragment

June 14, 2022

Poster to be presented at the Keystone Symposia on Tissue Fibrosis and Repair.

Second tRNA synthetase receptor identified from company's platform.

Findings suggest AARS fragment may have therapeutic potential in fibrosis, inflammation and cancer.

SAN DIEGO, June 14, 2022 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq: LIFE), a biotherapeutics company engaged in the discovery and development of first-in-class medicines from its proprietary tRNA synthetase biology platform, today announced that new findings from its platform will be presented in a poster today at the Keystone Symposia Tissue Fibrosis and Repair: Mechanisms, Human Disease and Therapeutics in Keystone, CO.

The poster presents findings from aTyr's innovative tRNA synthetase platform, whereby selected fragments of Alanyl-tRNA Synthetase (AARS) and Aspartyl-tRNA Synthetase (DARS) were found to bind to the surface of specific human cell types via novel binding partners. Additionally, the target receptor of the fragment AARS-1 was identified as fibroblast growth factor receptor 4 (FGFR4), indicating that AARS-1 may have therapeutic potential in fibrosis, inflammation and cancer. Moreover, the methods utilized in the study can be further employed to identify and validate new molecular targets from aTyr's tRNA synthetase platform.

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

Title: Identification of key extracellular binding proteins implicate role in inflammation and fibrosis for alanyl- and aspartyl-tRNA synthetases
Authors: Ryan A. Adams, Tarsis F. Brust, Yeeting E. Chong, Ann L. Menefee, Andrew Imfeld, Michaela Ferrer, Zachary Fogassy, Alison G. Barber, Suzanne Paz, Leslie A. Nangle. aTyr Pharma, San Diego.
Poster Number: 2022
Poster Session: Poster Session 2
Date: Tuesday, June 14, 2022

"We are very pleased that our novel approach to drug discovery has yielded the identification of a receptor target for yet another tRNA synthetase from our platform," said Sanjay S. Shukla, M.D., M.S., President and CEO of aTyr. "The target receptor identified for the fragment AARS-1, FGFR4, is involved in many cellular processes including cell proliferation, differentiation and tissue repair. FGFR4 is known to play a role in diseases related to inflammation and fibrosis, including conditions where unchecked fibrosis can precede the development of certain cancers. We look forward to further interrogating the interaction between AARS-1 and FGFR4 and the implications for disease in order to explore this synthetase fragment as a potential pipeline candidate."

About aTyr

aTyr is a biotherapeutics company engaged in the discovery and development of first-in-class medicines from its proprietary tRNA synthetase biology platform. aTyr's research and development efforts are concentrated on a newly discovered area of biology, the extracellular functionality and signaling pathways of tRNA synthetases. aTyr has built a global intellectual property estate directed to a potential pipeline of protein compositions derived from 20 tRNA synthetase genes and their extracellular targets. aTyr's primary focus is efzofitimod, a clinical-stage product candidate which binds to the neuropilin-2 receptor and is designed to downregulate immune engagement in fibrotic lung disease. 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 "anticipates," "believes," "estimates," "expects," "intends," "may," "plans," "projects," "seeks," "should," "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 statements regarding potential further research and development activities related to, and potential utility of, the newly identified receptor targets, the potential therapeutic benefits and applications of our current and future product candidates; timelines and plans with respect to certain development activities; and certain development goals. 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 or strategies 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 the COVID-19 pandemic, risks associated with the discovery, development and regulation of our product candidates, the risk that we or our 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 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 Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 filed with the SEC on May 10, 2022 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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