



## aTyr Pharma Announces New tRNA Synthetase Discovery Programs

February 11, 2021

*Advancement of selected AARS and DARS fragments primarily targeting cancer*

*Programs will accelerate discoveries initially focusing on natural killer (NK) cell biology*

SAN DIEGO , Feb. 11, 2021 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq: LIFE), a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel biological pathways, today announced that it has initiated two new discovery programs from its tRNA synthetase platform. These programs will investigate the functionality of selected fragments of Alanyl-tRNA Synthetase (AARS) and Aspartyl-tRNA Synthetase (DARS) in immunology, fibrosis and cancer. The announcement comes after the company published a [poster](#) at the 2021 Society for Laboratory Automation and Screening Digital International Conference and Exhibition (SLAS) demonstrating that these extracellular tRNA synthetase fragments bind to innate and adaptive immune cells, including natural killer (NK) cells.

"We are pleased to initiate these discovery programs, which build on our proprietary biology platform and add to our developing pipeline in immunology, fibrosis and oncology," said Sanjay S. Shukla, M.D., M.S., President and Chief Executive Officer of aTyr. "We continue to leverage our broad intellectual property portfolio covering tRNA synthetases and their related signaling pathways to translate this underexplored area of biology into potential first-in-class therapies for diseases with high unmet need."

Initial research will primarily focus on further elucidating the effects of these fragments on NK cell biology in cancer. NK cells play an important role in innate immune responses and may be an important therapeutic target in oncology. The discovery programs will utilize the company's novel approach to identifying target receptors for tRNA synthetase fragments to help characterize the mechanism of action of these proteins.

"These transformative findings, which received an enthusiastic response at SLAS in our poster presentation, highlight the important pathways that extracellular tRNA synthetase fragments interact with, including NK cells. The research approach was similar to the process by which we identified Neuropilin-2 (NRP2) as the target receptor for the HARS fragment that forms the active component of our lead tRNA synthetase derived drug candidate, ATYR1923. This finding has led to advances in our understanding of ATYR1923 and to the development of our panel of selective anti-NRP2 antibodies, including ATYR2810. We look forward to further characterizing AARS and DARS binding targets to help support and guide future drug development," said Dr. Shukla.

### **About aTyr**

aTyr is a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel biological pathways. 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 ATYR1923, a clinical-stage product candidate which binds to the Neuropilin-2 receptor and is designed to down-regulate immune engagement in inflammatory lung diseases. For more information, please visit <http://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 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 Corporate Communications  
[adunston@atyrpharma.com](mailto:adunston@atyrpharma.com)

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