



aTyr Pharma Presents Findings Further Validating NRP2 as a Potential Regulator of Solid Tumor Progression

January 25, 2021

Poster highlights NRP2 expression on immune cells in the tumor microenvironment.

Company's lead NRP2 antibody, ATYR2810, is in development for oncology.

SAN DIEGO, Jan. 25, 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 will present a poster and participate in a live Q&A session at the [Virtual Keystone Symposia: Tumor Metabolism and the Microenvironment](#), which is being held January 25 – 28, 2021. The abstract and poster are available on the Keystone Symposia website.

The poster presents preclinical findings demonstrating that Neuropilin-2 (NRP2) was highly expressed on key immune cells implicated in regulating cancer progression, including myeloid derived suppressor cells (MDSCs), tumor associated macrophages (TAMs) generated from triple negative breast cancer cell lines, mature dendritic cells (DCs), and inducible T regulatory cells (Tregs). Further research showed that MDSCs and TAMs suppressed T cell proliferation and activation.

Details of the abstract and poster presentation are as follows:

Title: Neuropilin-2 is Expressed on Immune Cells Present in the Tumor Microenvironment, and May Contribute to the Suppression of Immune Regulation Leading to Progression and Metastasis of Cancer

Authors: Samantha Tyler, Michaela Ferrer, Clara Polizzi, Rodrigo Da Silva, Lisa Eide, Kendall Walwick, Matt Seikkula, Christoph Burkart, Suzanne Paz, Leslie Nangle. aTyr Pharma, San Diego, CA.

Session: Poster Session 2

Live Q&A Date and Time: January 27, 2021, 4:00 – 5:00PM EST

The poster is also available on the aTyr website.

"As we continue to explore the role of NRP2 in the progression of certain aggressive tumors, we are pleased to demonstrate for the first time that NRP2 is highly expressed on key immune cells in the tumor microenvironment that are implicated in regulating the progression of tumors and their metastasis," said Sanjay S. Shukla, M.D., M.S., President and Chief Executive Officer of aTyr. "These findings support the potential of NRP2 as a target for cancer therapeutics, possibly through the immune regulation of the tumor microenvironment. Our panel of highly specific antibodies selectively targeting NRP2, such as our lead IND candidate ATYR2810, may present differentiated approaches to treating certain aggressive cancers where NRP2 is implicated."

About NRP2

Neuropilin-2 (NRP2) is a cell surface receptor that plays a key role in lymphatic development and in regulating inflammatory responses. In many forms of cancer, high NRP2 expression is associated with worse outcomes. NRP2 can interact with multiple ligands and co-receptors through distinct domains to influence their functional roles, making it a potential drug target with multiple distinct therapeutic applications. NRP2 interacts with type 3 semaphorins and plexins to impact inflammation and with forms of vascular endothelial growth factor (VEGF) and their receptors, to impact lymphangiogenesis. In addition, NRP2 modulates interactions between CCL21 and CCR7 potentially impacting homing of dendritic cells to lymphoid organs. aTyr is currently investigating NRP2 receptor biology, both internally and in collaboration with key academic thought leaders, as a novel target for new product candidates for a variety of diseases, including cancer and inflammation.

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 therapeutic benefits and applications of NRP2 antibodies, including ATYR2810; timelines and plans with respect to certain development activities (such as the timing of data from clinical trials); 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.

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Source: aTyr Pharma, Inc.