aTyr Pharma Announces Research Study with Stanford Medicine

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Study to explore role of the Company's anti-NRP2 antibodies in glioblastoma multiforme (GBM), the most common type of primary brain cancer.

SAN DIEGO, July 30, 2024 (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 that it has entered into a research agreement with Stanford Medicine. Michael Lim, M.D., Chair of the Department of Neurosurgery at Stanford Medicine, will serve as the principal investigator for the study. Dr. Lim's research focuses on understanding the basic mechanisms of immunosuppression in glioblastoma multiforme (GBM).

"We know that the immune system plays an important role in GBM recurrence, and we have studied stimulating myeloid cells as a way to reverse immunosuppression in the tumor microenvironment," said Dr. Lim. "We look forward to looking at the role in which anti-neuropilin-2 (NRP2) antibodies in combination with other therapies may play in reactivating the immune system in order to reduce tumor recurrence."

The research collaboration aims to explore the role of the Company's novel function blocking antibodies against NRP2 in combination with chemotherapy to evaluate their role in reversing immune evasion in GBM. If preliminary studies are successful, the researchers plan to evaluate the NRP2 antibodies in combination with other immunomodulating agents, such as anti-PD-1, STING, or anti-CSF-1R, to address multiple targets of myeloid and T cell immunosuppression for the potential treatment of GBM.

"We are pleased to initiate this research collaboration with Stanford Medicine and Dr. Lim, a leader in immunotherapy for brain tumors, to explore the potential for combination therapy with NRP2-targeted antibodies in GBM," said Sanjay S. Shukla, M.D., M.S., President and Chief Executive Officer of aTyr. "While we are focused on advancing our tRNA synthetase derived therapies, we believe NRP2 may play an important yet largely underappreciated role in immune cross talk in many cancers, including GBM. This study presents an important opportunity to enhance our mechanistic understanding regarding the role of NRP2 in mediating immune suppression in an extremely aggressive cancer where there is a high unmet medical need."

GBM is a fast-growing and aggressive brain tumor that invades the nearby brain tissue but does not typically spread to other organs. GBM can result in death in less than 6 months. Current standard of care includes surgery followed by radiation and chemotherapy, which can extend survival but is not curative and the rate of recurrence is high. Research that explores the underlying causes and mechanism of recurrence may lead to new treatments that can address and help manage recurrence, which are greatly needed.

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 "aim," "anticipate," "believes," "designed," "can," "expects," "intends," "may," "opportunity," "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 therapeutic benefits and applications of NRP2 antibodies; timelines, plans and expected results with respect to certain research and development activities and the expected personnel involved in such activities; potential benefits of collaborations; 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, 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 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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