

aTyr Pharma Announces Partner Kyorin Pharmaceutical, Co., Ltd. Doses First Subjects in Phase 1 Trial of ATYR1923 in Japan

September 15, 2020

Study will evaluate the safety, pharmacokinetics and immunogenicity of ATYR1923 in Japanese healthy volunteers

SAN DIEGO, Sept. 15, 2020 (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 its partner Kyorin Pharmaceutical Co., Ltd., or Kyorin, a wholly owned subsidiary of Kyorin Holdings, Inc., has dosed the first subjects in a Phase 1 trial of aTyr's lead therapeutic candidate ATYR1923 (known as KRP-R120 in Japan).

The Phase 1 trial, which is being conducted by Kyorin, is a placebo-controlled study to evaluate the safety, pharmacokinetics and immunogenicity of ATYR1923 in 32 healthy Japanese male volunteers. Assuming successful completion of the study, Kyorin would then be able to initiate patient trials in interstitial lung diseases (ILDs) in Japan.

"ATYR1923 is a potential first-in-class immunomodulator and may present a promising new approach to treating ILDs," said Dr. Sanjay Shukla, M.D., M.S., President and Chief Executive Officer of aTyr. "To date, ATYR1923 has had a favorable safety profile in trials conducted in the U.S. and Australia. We look forward to the outcome of this study in a Japanese population as we continue to advance our ILD program globally."

"We are pleased to initiate clinical development of ATYR1923 in Japan by dosing the first healthy volunteers in this study," said Yutaka Ogihara, President and Chief Executive Officer of Kyorin Holdings, Inc. "This trial is an important step towards offering a potential new treatment to ILD patients in Japan."

Kyorin is aTyr's partner for the development and commercialization of ATYR1923 for ILDs in Japan. As per the agreement, aTyr previously received an \$8 million upfront payment and is eligible to receive up to \$167 million in the aggregate upon the achievement of certain development, regulatory and sales milestones, as well as tiered royalties on the net sales in Japan. Kyorin has the exclusive rights to commercialize ATYR1923 in Japan for ILDs.

About ATYR1923

aTyr is developing ATYR1923 as a potential therapeutic for patients with inflammatory lung diseases. ATYR1923, a fusion protein comprised of the immuno-modulatory domain of histidyl tRNA synthetase fused to the FC region of a human antibody, is a selective modulator of neuropilin-2 that downregulates the innate and adaptive immune response in inflammatory disease states. aTyr is currently enrolling a proof-of-concept Phase 1b/2a trial evaluating ATYR1923 in patients with pulmonary sarcoidosis, a form of interstitial lung disease. This Phase 1b/2a study is a multi-ascending dose, placebo-controlled, first-in-patient study of ATYR1923 that has been designed to evaluate the safety, tolerability, steroid sparing effect, immunogenicity and pharmacokinetics profile of multiple doses of ATYR1923. In response to the COVID-19 pandemic, aTyr recently initiated a Phase 2 clinical trial with ATYR1923 in COVID-19 patients with severe respiratory complications. This Phase 2 study is a randomized, double blind, placebo-controlled study that has been designed to evaluate the safety and preliminary efficacy of a single dose of ATYR1923.

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.

About Kyorin

Trusted among patients and professionals in the medical industry, Kyorin Pharmaceutical Co., Ltd. strives to be a company that contributes to public health and is recognized as one with social significance by improving its presence in specific therapeutic areas and through global discovery of novel drugs. Kyorin Pharmaceutical Co., Ltd. uses a franchise customer strategy where its marketing efforts are focused on respiratory, otolaryngology and urology. In drug discovery, it is deploying 'selection and concentration' and promoting activities aimed at first-in-class drug discovery, such as actively searching for and introducing external drug discovery themes as well as multi-tiered program development. For more information, please visit http://www.kyorin-pharm.co.ip.

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 the potential therapeutic benefits and applications of ATYR1923; timelines and plans with respect to certain development activities (such as the scope and timelines of clinical trials), 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 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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