

aTyr Pharma Doses First Subjects in Phase 1 Trial of iMod.Fc (ATYR1923)

November 27, 2017

- Second Physiocrine-based therapeutic candidate enters the clinic -

- Top-line data expected in 2Q 2018 -

- iMod.Fc (ATYR1923) to target interstitial lung diseases with an immune component -

SAN DIEGO, Nov. 27, 2017 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq:LIFE), a biotherapeutics company engaged in the discovery and development of immuno-modulatory protein therapeutics to treat patients suffering from rare, severe, immune-mediated diseases, as well as various cancers, today announced that it has dosed the first subjects in a Phase 1 trial of iMod.Fc (ATYR1923), aTyr's first engineered Physiocrine and second therapeutic candidate, in development for the treatment of interstitial lung diseases (ILDs).

"The initiation of this study of iMod.Fc represents a significant milestone in the advancement of our programs and marks the second therapeutic candidate leveraging our understanding of the Resokine pathway to enter the clinic," said Sanjay Shukla, M.D., M.S., President and CEO of aTyr Pharma. "We look forward to announcing top-line results from this study in the second quarter of 2018, which we will use to guide our future development plans for iMod.Fc as we explore the potential of the Resokine pathway in restoring tissue homeostasis in patients with interstitial lung disease."

This first-in-human, randomized, double-blind, placebo-controlled study is designed to investigate the safety, tolerability, immunogenicity, pharmacokinetics and pharmacodynamics of intravenous iMod.Fc (ATYR1923) in healthy volunteers. Subjects will be randomized to one of six cohorts and receive a single infusion of iMod.Fc (ATYR1923) or placebo. Doses of iMod.Fc (ATYR1923) will range from 0.03 mg/kg up to 5.0 mg/kg. Primary outcome measures will assess safety and tolerability in subjects for up to one month following dosing.

For additional information on this study, please visit $\underline{www.anzctr.org.au}.$

About iMod.Fc (ATYR1923)

aTyr Pharma engineered the first Physiocrine fusion protein, iMod.Fc (ATYR1923), to enhance the pharmacokinetic properties of the Physiocrine protein in vivo. The company is developing iMod.Fc (ATYR1923) as a potential therapeutic for patients with rare pulmonary diseases with an immune or fibrotic component, including interstitial lung diseases. This fusion protein, which utilizes the Fc region of an antibody, also potentially represents a novel Fc-Physiocrine platform for future Physiocrine-based therapies.

About Interstitial Lung Diseases

Interstitial lung disease refers to a complex group of pulmonary disorders primarily affecting the pulmonary interstitium. Most of these disorders cause progressive scarring of lung tissue, eventually affecting the ability to breathe and the transfer of oxygen into the bloodstream. ILDs can develop in response to environmental injury, auto-immune mediated inflammation, or from unknown causes. The spectrum of ILDs includes idiopathic pulmonary fibrosis, sarcoidosis, hypersensitivity pneumonitis, and connective tissue disease-associated ILDs among others.

About Physiocrines

Physiocrines comprise naturally occurring proteins that aTyr believes promote homeostasis, a fundamental process of restoring stressed or diseased tissue to a healthier state. Physiocrines are extracellular signaling regions of tRNA synthetases, an ancient family of enzymes that catalyze a key step in protein synthesis. Physiocrines offer the opportunity for modulating biological pathways through newly discovered, naturally occurring mechanisms, many of which may provide advantages over other types of immune-modulatory therapeutics, including the potential for improved patient outcomes and reduced side effect profiles.

About aTvr Pharma

aTyr Pharma is engaged in the discovery and development of innovative medicines for patients using its knowledge of Physiocrine biology, a newly discovered set of immunological and physiological pathways. To date, aTyr has generated three innovative and unique development programs based on its knowledge of the Resokine pathway to treat patients suffering from rare, severe, immune-mediated diseases, as well as various cancers. aTyr's two lead programs, Resolaris and iMod.Fc, are agonists of the Resokine pathway designed to temper immune engagement in diseases characterized by excessive immune cell involvement. aTyr's third program, ORCA, represents a preclinical research program that targets a novel, proprietary immuno-oncology pathway using antibodies to enhance the immune response in tumor settings. aTyr has built an intellectual property estate, to protect its pipeline, comprising over 220 issued patents or allowed patent applications that are owned or exclusively licensed, including over 300 potential Physiocrine-based protein compositions. For more information, please visit https://www.atyrpharma.com.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Litigation Reform Act. 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, including statements regarding the potential and potential therapeutic benefits of Resolaris, iMod.Fc, or potential product candidates from our ORCA program, the ability of the Company to successfully advance its pipeline or product candidates, undertake certain development activities (such as clinical trial enrollment and the conduct of clinical trials) and accomplish certain development goals and the timing of such activities and development goals, the timing of our clinical trials, our ability to receive regulatory approvals for, and commercialize, our product candidates and of reporting results from our clinical trials, and the scope and strength of our intellectual property portfolio 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 those forward-looking statements are reasonable, we can give no assurance that the plans, intentions, expectations or strategies will be attained or achieved. Furthermore, actual results may differ materially from those described in the forward-looking statements and will be affected by a variety of risks and factors that are beyond our control including, without limitation, risks associated with the discovery, development and regulation of our Physiocrine-based product candidates, the risk that we may cease or delay preclinical or clinical development activities for any of its existing or future product candidates for a variety of reasons (including difficulties or delays in patient enrollment in planned clinical trials), and the risk that we may not be able to raise the additional funding required for its business and product development plans, as well as those set forth in our most recent Annual Report on Form 10-K for the year ended December 31, 2016 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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