lung disease (ILD) a group of immune-mediated disorders which cause progressive fibrosis of lung tissue. Sarcoidosis in the lymph nodes, but can affect almost any organ. Sarcoidosis in the lungs is called pulmonary sarcoidosis and 90% of patients present before the age of 50 years, with the incidence peaking at 20 to 39 years. The disorder usually begins in the lungs, skin or cells, in one or more organs in the body. Sarcoidosis affects people of all ages, but typically presents before the age of 30 years.

Sarcoidosis is an inflammatory disease characterized by the formation of granulomas, clumps of inflammatory cells, in one or more organs in the body. Sarcoidosis affects people of all ages, but typically presents before the age of 50 years, with the incidence peaking at 20 to 39 years. The disorder usually begins in the lungs, skin or lymph nodes, but can affect almost any organ. Sarcoidosis in the lungs is called pulmonary sarcoidosis and 90% or more of patients with sarcoidosis have lung involvement. Pulmonary sarcoidosis is a major form of interstitial lung disease (ILD) a group of immune-mediated disorders which cause progressive fibrosis of lung tissue.

Researchers from The Hong Kong University of Science and Technology (HKUST) credited with important translational science and early discovery work

SAN DIEGO AND HONG KONG – January 17, 2019 – aTyr Pharma, Inc. (Nasdaq: LIFE), a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel immunological pathways, today recognized the collaboration between its Hong Kong subsidiary, Pangu BioPharma (Pangu), and The Hong Kong University of Science and Technology (HKUST) for contributions leading to the discovery of aTyr’s lead clinical candidate, ATYR1923, which is currently being evaluated in a Phase Ib/2a study in patients with pulmonary sarcoidosis. In a joint press conference, aTyr leadership, together with HKUST, recognized researchers from both organizations for their seminal basic and translational research leading to the discovery of extracellular signaling functions of RNA synthetases.

HKUST researchers with support from Pangu were instrumental in discovering a splice variant of histidyl-ribozyme synthetase (HARS) that liberates the smaller, active immuno-modulatory (iMod) domain from the full-length RNA synthetase and has been shown to modulate the immune system. ATYR1923 is a fusion protein comprised of the iMod domain fused to the FC region of a human antibody. To date, researchers at HKUST have discovered over 200 novel compositions that are covered in issued patents and have published six articles detailing their research in peer-reviewed scientific journals.

Dr. Sanjay SHUKLA, President, Chief Executive Officer and Director of aTyr, said, “We are advancing our lead candidate ATYR1923 through clinical development in patients suffering from pulmonary sarcoidosis, a rare form of fibrotic lung disease with no known cure and of growing importance worldwide, including China. We are grateful to HKUST researchers for essential collaborative efforts that made this important milestone possible.”

Prof. ZHANG Mingjie, Chair Professor of the Division of Life Science and Kerry Holdings Professor of Science at HKUST and project coordinator of the Pangu collaboration, commented, “The important discoveries that continue to emerge from this collaboration between Pangu and HKUST serve as an excellent example of the potential role that Hong Kong’s translational science and early discovery capabilities can play in the development of potentially life-changing therapies for patients worldwide.”

Prof. Paul SCHIMMEL, Co-founder and Director of aTyr Pharma and Senior Visiting Fellow at HKUST’s Institute for Advanced Study (IAS), commented, “Our understanding of RNA synthetase biology was greatly enhanced by the joint efforts of the research teams at aTyr and Pangu/HKUST. We see the potential to replicate this model with many of the novel forms of RNA synthetases covered in our expansive and largely untapped intellectual property portfolio that includes more than 300 issued or pending patents covering both biologically active variants and engineered forms of human RNA synthetases. Each of these protein compositions offers opportunities for potential development of therapeutics to treat a wide array of conditions.”

About ATYR1923

aTyr is developing ATYR1923 as a potential therapeutic for patients with interstitial lung diseases. ATYR1923, a fusion protein comprised of the immuno-modulatory domain of histidyl RNA synthetase (HARS) fused to the FC region of a human antibody, is a selective modulator of Neuruplin-2 that downregulates the innate and adaptive immune response in inflammatory disease states. aTyr initiated a proof-of-concept Phase 1b/2a trial evaluating ATYR1923 in patients with pulmonary sarcoidosis in the fourth quarter of 2018. This Phase 1b/2a study is a multiple-ascending dose, placebo-controlled, first-in-patient study of ATYR1923 that has been designed to evaluate the safety, tolerability, adrenal sparing effect, immunogenicity and pharmacokinetics (PK) profile of multiple doses of ATYR1923. For the Phase 1b/2a trial, aTyr is collaborating with the Foundation for Sarcoidosis Research (FSR), the nation’s leading nonprofit organization dedicated to finding a cure for sarcoidosis and improving care for sarcoidosis patients. Under the terms of the collaboration, FSR will assist with clinical trial site initiation and patient enrollment.

About Pulmonary Sarcoidosis

Sarcoidosis is an inflammatory disease characterized by the formation of granulomas, clumps of inflammatory cells, in one or more organs in the body. Sarcoidosis affects people of all ages, but typically presents before the age of 50 years, with the incidence peaking at 20 to 39 years. The disorder usually begins in the lungs, skin or lymph nodes, but can affect almost any organ. Sarcoidosis in the lungs is called pulmonary sarcoidosis and 90% or more of patients with sarcoidosis have lung involvement. Pulmonary sarcoidosis is a major form of interstitial lung disease (ILD) a group of immune-mediated disorders which cause progressive fibrosis of lung tissue.
Estimates of prevalence vary; however, aTyr believes that approximately 200,000 Americans live with pulmonary sarcoidosis. The prognosis for patients with pulmonary sarcoidosis ranges from benign and self-limiting to chronic, debilitating disease with mortality.

About The Hong Kong University of Science and Technology
The Hong Kong University of Science and Technology (HKUST) (www.ust.hk) is a world-class research university that focuses on science, technology and business as well as humanities and social science. HKUST offers an international campus, and a holistic and interdisciplinary pedagogy to nurture well-rounded graduates with global vision, a strong entrepreneurial spirit and innovative thinking. HKUST attained the highest proportion of internationally excellent research work in the Research Assessment Exercise 2014 of Hong Kong’s University Grants Committee, and is ranked as the world's best young university in Times Higher Education’s Young University Rankings 2018. Its graduates were ranked 16th worldwide and top in Greater China in Global Employability University Survey 2018.

About aTyr
aTyr is a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel immunological pathways. aTyr’s research and development efforts are concentrated on a newly discovered area of biology, the extracellular functionality 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. aTyr is focused on the therapeutic translation of the Resokine pathway, comprised of extracellular proteins derived from the histidyl tRNA synthetase gene family. ATYR1923 is a clinical-stage product candidate which binds to the neuropilin-2 receptor and is designed to down-regulate immune engagement in interstitial lung diseases and other immune-mediated diseases. For more information, please visit http://www.atyrpharma.com.

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