

aTyr Pharma Presents Poster on Preclinical Data from ATYR1923 Program at American Thoracic Society 2018 International Conference

May 17, 2018

ATYR1923, an Immuno-Modulatory Therapeutic Candidate with Potential in Interstitial Lung Diseases

SAN DIEGO, May 17, 2018 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq:LIFE), a biotherapeutics company engaged in the discovery and development of innovative medicines based on novel immunological pathways, today announced a poster presentation at the American Thoracic Society (ATS) International Conference to be held from May 18 – 23, 2018 in San Diego, CA. The presentation discusses the preclinical characterization of ATYR1923 as an immunomodulatory therapeutic candidate with potentially broad therapeutic application in interstitial lung diseases.

"We are excited to present a thorough summary of our preclinical work from our ATYR1923 program, specifically as it relates to potential activity in interstitial lung diseases at the ATS International Conference in San Diego next week," commented David King, Ph.D., Chief Scientific Officer of aTyr. "In addition, we recently completed enrollment in our ongoing Phase 1 healthy volunteer study with ATYR1923, dosing 36 subjects across six cohorts at dose levels up to 5 mg/kg. We expect to announce top-line results including pharmacokinetic and safety data from this study next month."

Poster Presentation: Sunday May 20, 2018 from 9:15 - 11:15 AM (CDT)

Title: "Preclinical Characterization of ATYR1923 (iMod.Fc), an Immune-Modulatory Therapeutic with Potentially Broad Application in Interstitial Lung Diseases"

Presenter: Kathleen Ogilvie, Ph.D., aTyr Pharma, Inc.

Conclusions:

- ATYR1923 has been engineered to have a long duration of action and is efficacious in bleomycin-induced lung fibrosis
 preclinical models when administered weekly.
- Data demonstrates that ATYR1923 dosing results in improved lung function and reduced inflammation after bleomycin induced lung injury in rats.
- Pharmacokinetic data in rats and nonhuman primates predict once monthly dosing in patients.
- Favorable safety profile observed from one- and three-month GLP toxicity studies in rats and nonhuman primates at weekly doses up to 60mg/kg with no observed adverse effects.
- Based on the preclinical data, a Phase 1 first-in-human clinical study was initiated.

About aTyr Pharma

aTyr is a clinical-stage biotechnology company engaged in the discovery and clinical development of innovative medicines using its knowledge of tRNA synthetase biology. The company is focused on the therapeutic translation of the Resokine pathway, comprised of extracellular proteins derived from the histidyl tRNA synthetase (HARS) gene family. aTyr's clinical stage ATYR1923 candidate augments the Resokine pathway and is designed to temper immune engagement in interstitial lung diseases. aTyr's immuno-oncology research program, targets the Resokine pathway using antibodies to enhance the immune response in tumor settings. aTyr has built an intellectual property estate, to protect its pipeline, comprising over 250 issued patents or allowed patent applications that are owned or exclusively licensed, including over 300 potential protein compositions derived from tRNA synthetase genes. 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 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 therapeutic benefits and applications of our product candidates, our ability to successfully advance our pipeline or product candidates, undertake certain development activities (such as

clinical trial enrollment, the conduct of clinical trials and the announcement of top-line results), and accomplish certain development goals, and the timing of such events 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 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, 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.