



aTyr Pharma

aTyr Pharma Presents Compelling Preclinical Data Highlighting Potential of ATYR1923 to Regulate Myeloid Cell Biology During Lung Inflammation

February 27, 2019

Poster presentation at the Keystone Symposia 2019 Conference: Myeloid Cells (B7)

SAN DIEGO, Feb. 27, 2019 (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 Keystone Symposia 2019 Conference in Santa Fe, New Mexico from February 24-28, 2019.

"We are pleased to present these important preclinical findings at Keystone Symposia 2019, the first evidence of ATYR1923's ability to bind to NRP-2 and down-regulate myeloid cells, specifically neutrophils," said Dr. Sanjay Shukla, President and Chief Executive Officer of aTyr. "With ATYR1923 currently being evaluated in a Phase 1b/2a clinical study in patients suffering from pulmonary sarcoidosis, these findings help support our belief in the mechanism of action of ATYR1923 to suppress immune engagement in this and other serious and potentially debilitating interstitial lung diseases."

Poster Presentation: Wednesday, February 27, 2019 from 1:30-3:00pm (MST)

Title: "ATYR1923 Reduces Neutrophil Infiltration in an Acute Lipopolysaccharide (LPS) Lung Injury Model"

Presenter: Suzanne Paz, Ph.D., aTyr Pharma, Inc.

This poster describes a preclinical study to determine if aTyr Pharma's lead clinical candidate, ATYR1923, can influence myeloid cell migration. ATYR1923 was administered intravenously to C57BL/6 mice 24 hours prior to LPS challenge by airway administration to generate acute lung inflammation.

Multi-color flow cytometry was used for immunophenotyping analysis and detection of NRP-2 levels on surfaces of various immune cell populations. *In vitro*, mouse bone-marrow derived macrophages (BMDM), human THP-1 monocytic cells, and primary human dendritic cells (DCs) were used to confirm induction of NRP-2 cell surface expression following activation.

Conclusions:

- This presentation highlights how ATYR1923 binds to both human and mouse NRP-2.
- NRP-2 is detected on the cell surface of myeloid cells both *in vitro* and *in vivo*.
- NRP-2 was induced following activation of TLR found on the cell surface (mainly TLR1, 2, 4, 5 & 6), but not endosomal TLR ligands (TLR3, 7/8, & 9).
- ATYR1923 significantly decreased the CD11b+ population following LPS installation in the lung, which was ascribed to an inhibitory effect on neutrophil infiltration.
- These findings highlight the potential of ATYR1923 to regulate myeloid cell biology during lung inflammation.

A copy of the poster can be found here: [ATYR1923 Poster](#)

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>.

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 product candidates, undertake certain development activities (such as the initiation of clinical trials, 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. 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. 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, 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 our 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 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.

Contact:

Joyce Allaire

Managing Director, LifeSci Advisors, LLC

jallaire@lifesciadvisors.com



Source: aTyr Pharma, Inc.