

aTyr Pharma Announces Leadership Transition

November 1, 2017

- Dr. John Mendlein Transitions from CEO to Non-Executive Board Member,

Dr. Sanjay Shukla Appointed President and CEO -

SAN DIEGO, Nov. 01, 2017 (GLOBE NEWSWIRE) -- aTyr Pharma, Inc. (Nasdaq:LIFE), a biotherapeutics company engaged in the discovery and development of immunology-based protein therapeutics to treat patients suffering from severe, rare immune-mediated diseases, as well as various cancers, announced that today Sanjay Shukla, M.D., M.S., who joined aTyr Pharma as Chief Medical Officer in March 2016, will succeed John Mendlein, Ph.D., as President and Chief Executive Officer. Dr. Shukla will also join aTyr's Board of Directors. Dr. Mendlein, who has served as Chief Executive Officer since September 2011 and as a member of the Board of Directors since July 2010, will continue to serve on the Board of Directors of aTyr Pharma.

"This is an excellent time for aTyr as we are well-positioned for future growth with strong leadership to drive forward our shared vision to develop meaningful medicines for patients with rare muscle and lung diseases, as well as to serve cancer patients with products based on our new immunooncology platform, ORCA," said John Mendlein, outgoing-CEO of aTyr Pharma. "After six incredible years as CEO, I am very pleased to pass the leadership torch to Sanjay and continue to advise him as a board member. Having worked extensively with Sanjay, I am confident he will continue to elevate aTyr to greater heights for patients and all stakeholders alike. I would like to express my immense gratitude to all our amazing employees, board, patients, and investors for all that we have accomplished so far at aTyr."

"We are truly grateful for John's leadership in guiding aTyr through several key milestones, including bringing the first Physiocrine-based therapeutic into the clinic, building a well-capitalized, NASDAQ-traded company, growing a robust pipeline of three biologic programs and solidifying aTyr's intellectual property estate for an entire new class of proteins," said John Clarke, chairman of aTyr Pharma's board. "We thank John for his leadership and accomplishments at aTyr and wish him well in all his future endeavors. Looking forward, we are excited about this transition and confident that under Sanjay's leadership, aTyr will continue to grow and successfully deliver upon its important mission."

Dr. Shukla will continue aTyr's mission to develop innovative new protein therapeutics based on its knowledge of Physiocrine biology. Dr. Shukla served as aTyr's Chief Medical Officer since March 2016 and has over twenty years of leadership experience in both large pharma and biotech companies. Since joining aTyr, Dr. Shukla led the completion of three Phase 1b/2 Resolaris[™] clinical trials and two long-term safety extension studies for the treatment of rare muscular dystrophies and has advanced the iMod.Fc program for the treatment of interstitial lung diseases towards the clinic with a Phase 1 trial expected to commence this quarter.

"I am excited for the opportunity to lead aTyr at such a productive time for the company," said Sanjay Shukla, President and CEO of aTyr Pharma. "Our team has made tremendous progress in elucidating the biology and laying the groundwork for the potential therapeutic applications of this groundbreaking new science, under John's leadership. I am ready to lead our team forward to continue to build on this strong foundation of success. Our mission remains steadfast and during this quarter we intend to bring a second Physiocrine-based therapeutic candidate into the clinic with an iMod.Fc Phase 1 trial and select an antibody to develop as an IND candidate from our ORCA program."

About aTyr Pharma

aTyr Pharma is engaged in the discovery and clinical 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 therapeutic programs with three different biologic modalities based on its knowledge of the Resokine pathway to treat patients suffering from severe, rare immune-mediated diseases, as well as various cancers. The Resolaris and iMod.Fc programs are agonists of the Resokine pathway designed to temper immune system engagement in diseases characterized by excessive immune cell involvement. aTyr's third program, ORCA, represents a novel, proprietary pathway in immuno-oncology that utilizes antibody approaches to block the Resokine pathway and 'release multiple brakes' on the immune system in the tumor cell environment. 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 <u>http://www.atyrpharma.com</u>.

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 timing of our clinical trials and IND candidate selection 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.

Contact:

Mark Johnson Sr. Director, Investor Relations mjohnson@atyrpharma.com 858-223-1163

Source: aTyr Pharma, Inc.