



aTyr Pharma

aTyr Pharma Announces Issuance of US Patent That Extends Patent Protection of Physiocrines Derived From 20 out of 20 Human tRNA Synthetases

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- Estate Covers over 175 Patents for Physiocrine Biology, a New Class of Potential Targets and Therapeutics -
- Over 100 Patents Issued or Allowed in the Past 12 Months -

SAN DIEGO, March 15, 2017 /PRNewswire/ -- aTyr Pharma, Inc. (Nasdaq: LIFE), a biotherapeutics company engaged in the discovery and development of Physiocrine-based therapeutics to address severe, rare diseases, today announced the issuance of US Patent Number 9,428,743, which represents the successful completion of an important aTyr milestone – the issuance of patents that cover Physiocrines derived from all 20 human tRNA synthetases. In addition, the patent portfolio covers all of aTyr's three current programs in three different therapeutic areas.



"The USPTO issuance of our '743 patent represents one example of the many efforts of our scientists to meticulously explore and validate this new biology that is generating a pipeline of therapeutics based on Physiocrines," said John Mendlein, Ph.D., CEO aTyr Pharma. "From our pioneering scientific efforts, we established an extensive intellectual property estate to protect fundamental discoveries of innovative product opportunities in immunology and beyond, which is rare for a single company or organization to amass this type of patent portfolio. These achievements represent a significant value driver for our company and our stakeholders as we extend our protection to Physiocrine biology from 20 out of 20 human tRNA synthetases."

aTyr's global patent estate includes over 175 issued or allowed patents owned or exclusively licensed by aTyr and its Hong Kong subsidiary, Pangu BioPharma Limited. This patent estate highlights aTyr's unique leadership position in this emerging area of biology. aTyr's achievements build on the important and innovative research from the laboratory of aTyr's founders Dr. Paul Schimmel and Dr. Xiang-Lei Yang at The Scripps Research Institute, which continues to be a source of important innovation. These patents encompass important therapeutic modalities including composition of matter claims to the protein therapeutics, polynucleotide based therapeutics, antibodies and therapeutic methods of use.

About Physiocrines

Physiocrines are naturally occurring human proteins that possess novel *in vivo* biological activity as extracellular signaling molecules. These proteins are derived from the extracellular signaling regions or alternatively spliced variants of tRNA synthetases that modulate a range of cellular activities to maintain homeostasis. They represent a new therapeutic class and novel targets in immunology that may potentially yield innovative medicines for patients with many different types of diseases.

About aTyr Pharma

aTyr Pharma is engaged in the discovery and clinical development of innovative medicines for patients suffering from severe, rare diseases using its knowledge of Physiocrine biology, a newly discovered set of physiological pathways. To date, the company has generated three innovative therapeutic candidate programs based on its knowledge of Physiocrine biology in three different therapeutic areas. aTyr has built an intellectual property estate, to protect its pipeline, comprising over 175 issued patents or allowed patent applications that are owned or exclusively licensed, including over 300 potential Physiocrine-based protein compositions. aTyr's key programs are currently focused on severe, rare diseases characterized by immune imbalance for which there are currently limited or no treatment options. 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 of our Physiocrine-based product candidates, the scope and strength of our intellectual property portfolio, the ability of the Company to undertake certain research and development activities and accomplish certain research and development goals 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, as well as those set forth in our most recent Annual Report on Form 10-K for the year ended December 31, 2015 and in our subsequent SEC filings including our most recent Quarterly Report for the quarter ended September 30, 2016. 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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