

aTyr Pharma Announces Appointment of Timothy P. Coughlin to its Board of Directors

April 10, 2017

SAN DIEGO – April 10, 2017 – 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 appointment of Timothy P. Coughlin to its board of directors. Mr. Coughlin served as Chief Financial Officer of Neurocrine Biosciences from September 2006 to February 2017. Mr. Coughlin brings to the board his extensive background in financial and accounting matters for public companies and leadership experience with high-growth clinical stage companies in the biotechnology industry.



"This is an exciting time for aTyr," said Mr. Coughlin. "aTyr has a unique approach to pharmaceutical development given its leadership position in Physiocrine-based product biology across three important therapeutic areas. I look forward to contributing to aTyr potentially bringing these highly innovative products to patients."

"We are incredibly pleased to welcome Mr. Coughlin to our board of directors," said John Mendlein, PhD, CEO. "Tim's industry expertise makes him an excellent addition for aTyr as a board member. With over a decade in leadership at Neurocrine Biosciences, Tim's experience will provide valuable guidance as we create long-term value for our stockholders."

About Timothy P. Coughlin

Timothy P. Coughlin served as Chief Financial Officer of Neurocrine Biosciences, Inc. from September 2006 to February 2017, where he previously served as Vice President, Controller. Prior to joining Neurocrine in 2002, he was with Catholic Health Initiatives, a nationwide integrated healthcare delivery system, where he served as Vice President, Financial Services. Mr. Coughlin also served as a Senior Manager in the Health Sciences practice of Ernst & Young LLP and its predecessors from 1989 to 1999. Mr. Coughlin currently serves on the board of directors of Retrophin, Inc. and Fate Therapeutics, Inc., two biotechnology companies where he chairs the audit committees and is also a member of the compensation committee and nominating committee. Mr. Coughlin holds a master's degree from San Diego State University and a bachelor's degree from Temple University and is a certified public accountant in both California and Pennsylvania.

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 Resolaris™ or Stalaris™, the ability of the Company to undertake certain development activities (such as clinical trial enrollment and the conduct of clinical trials) and accomplish certain development goals, the timing of initiation of additional clinical trials and of reporting results from our clinical trials and 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, 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