UNITED STATES SECURITIES AND EXCHANGE COMMISSION September 21, 2017

ORDER GRANTING CONFIDENTIAL TREATMENT UNDER THE SECURITIES EXCHANGE ACT OF 1934

aTyr Pharma, Inc.

File No. 001-37378 - CF#35451

aTyr Pharma, Inc. submitted an application under Rule 24b-2 requesting confidential treatment for information it excluded from an exhibit to a Form 10-Q filed on August 14, 2017.

Based on representations by aTyr Pharma, Inc. that this information qualifies as confidential commercial or financial information under the Freedom of Information Act, 5 U.S.C. 552(b)(4), the Division of Corporation Finance has determined not to publicly disclose it. Accordingly, excluded information from the following exhibit will not be released to the public for the time period specified:

Exhibit 10.1 through November 18, 2020

For the Commission, by the Division of Corporation Finance, pursuant to delegated authority:

Brent J. Fields Secretary