aTyr Pharma, Inc. 10240 Sorrento Valley Road, Suite 300 San Diego, CA, 92121

November 16, 2023

VIA EDGAR

U.S. Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549

Attn: Daniel Crawford **Re: aTyr Pharma, Inc.**

Registration Statement on Form S-3 (File No. 333-275455)

Request for Acceleration of Effective Date

Ladies and Gentlemen:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, aTyr Pharma, Inc. (the "*Company*") hereby requests that the Securities and Exchange Commission (the "*Commission*") accelerate the effective date of the above-referenced Registration Statement on Form S-3 (the "*Registration Statement*") and declare the Registration Statement effective as of 4:00 p.m. Eastern time, on November 20, 2023, or as soon thereafter as possible, or at such other time as the Company or its legal counsel, Cooley LLP, may request by telephone to the staff of the Commission. The Company hereby authorizes each of Charles J. Bair and Katherine Denby of Cooley LLP to make such a request on its behalf.

Once the Registration Statement has been declared effective, please orally confirm that event with Katherine Denby of Cooley LLP at (202) 776-2070 or kdenby@cooley.com.

Sincerely,

ATYR PHARMA, INC.

By: /s/ Jill Broadfoot

Jill Broadfoot

Chief Financial Officer