

June 6, 2024

Jill Broadfoot
Chief Financial Officer
aTYR PHARMA INC
10240 Sorrento Valley Road
Suite 300
San Diego, CA 92014

Re: aTYR PHARMA INC
Form 10-K for

Fiscal Year Ended December 31, 2023

File No. 001-37378

Dear Jill Broadfoot:

We have limited our review of your filings to the financial statements and related disclosures and have the following comment.

Please respond to this letter within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe a comment applies to your facts and circumstances, please tell us why in your response.

After reviewing your response to this letter, we may have additional comments.

Form 10-K for Fiscal Year Ended December 31, 2023

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
Research and development expenses, page 68

1. We note from the pipeline table on page 6 that you have multiple products in clinical development for several indications. Please revise future filings to disclose the costs incurred during each period presented for each of your key research and development product candidates. If you do not track your research and development costs by project, disclose that fact and explain why you do not maintain and evaluate research and development costs by project. Also, revise to provide other quantitative and qualitative disclosures that give more transparency as to the type of research and development expenses incurred (i.e., by nature or type of expense) which should reconcile to total research and development expenses on your Statements of Operations.

Jill Broadfoot
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FirstName LastName

In closing, we remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Lynn Dicker at 202-551-3616 or Kevin Kuhar at 202-551-3662 with any questions.

Sincerely,

Corporation Finance
Sciences

Division of
Office of Life