

December 13, 2024

Adam Mostafa
Chief Financial Officer
X4 Pharmaceuticals, Inc
61 North Beacon Street, 4th Floor
Boston, MA 02134

Re: X4 Pharmaceuticals, Inc
Form 10-K for fiscal year ended December 31, 2023
Form 10-Q for the quarterly period ended September 30, 2024
File No. 001-38295

Dear Adam Mostafa:

We have limited our review of your filing 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-Q for the quarterly period ended September 30, 2024
Management's Discussion and Analysis of Financial Condition and Results of Operations
Results of Operations
Research and Development Expenses, page 30

1. We note that you did not break out research and development expense between direct and unallocated for all periods presented similar to your disclosure in the 10-K for the year ended December 31, 2023. Please confirm that you will break out research and development expense in future filings similar to the format of the 10-K. Alternatively, provide us with other quantitative or qualitative disclosure to be included in future filings that provides 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 expense on the Statements of Operations.

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,

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action or absence of action by the staff.

Please contact Vanessa Robertson at 202-551-3649 or Daniel Gordon at 202-551-3486 with any questions.

Sincerely,

Division of Corporation
Office of Life Sciences

Finance