



December 23, 2024

U.S. Securities and Exchange Commission
Division of Corporation Finance
Office of Life Sciences
100 F Street, N.E.
Washington, D.C. 20549
Attention: Vanessa Robertson/Daniel Gordon

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

Ladies and Gentlemen:

This letter sets forth responses of X4 Pharmaceuticals, Inc. (the “Company” or “we”) to the comments of the staff of the Division of Corporation Finance (the “Staff”) of the U.S. Securities and Exchange Commission (the “Commission”) set forth in your letter dated December 13, 2024, with respect to the Form 10-K for the fiscal year ended December 31, 2023 (the “Form 10-K”) and the Form 10-Q for the quarterly period ended September 30, 2024 (the “Form 10-Q”).

The text of the Staff’s comments have been included in this letter for your convenience, and the Company’s responses to the comments have been provided immediately thereafter.

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. Staff’s comment: 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.

Response:

The Company acknowledges the Staff’s comment. In its SEC filings, commencing with the Form 10-K for the year period ending December 31, 2024 and continuing with the Form 10-Q for the quarterly period ending March 31, 2025 and onward, the Company will break out research and development expense between direct and unallocated for all periods presented similar to our disclosure in the 10-K for the year ended December 31, 2023, which will reconcile to total research and development expense on our Statements of Operations. We plan to disclose the direct research and development expenses by product candidates that are in or have entered into clinical development. For our Form 10-K for the year period ending December 31, 2024, our direct research and development expenses are expected to include the following product candidates: X4P-001 (Mavorixafor), X4P-002 and X4P-003.

We hope that the foregoing has been responsive to the Staff's comments. If you have any questions related to this letter, please contact me at 1-857-529-6333 (Ext: 8820).

Sincerely,

/s/ Adam S. Mostafa
Adam S. Mostafa
Chief Financial Officer

Via E-mail:

cc: Gabriela Morales-Rivera
Goodwin Procter LLP

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