



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

June 10, 2025

Walter V. Klemp
President, Chief Executive Officer and Chairman
Moleculin Biotech, Inc.
5300 Memorial Drive, Suite 950
Houston, TX 77007

Re: Moleculin Biotech, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed June 6, 2025
File No. 333-287727

Dear Walter V. Klemp:

We have reviewed your amended registration statement and have the following comments.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe a comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to this letter, we may have additional comments.

Amendment No. 1 to Registration Statement on Form S-1

Risk Factors

Risks Related to this Offering

Your ownership may be diluted if additional capital stock is issued to raise capital . . . , page 7

1. We note your disclosure on page 6 that you will require additional capital funding and on page 8 that you believe the net proceeds from this offering will satisfy your capital needs into the third or fourth quarter of 2025. Please revise to add risk factor disclosure regarding the risk that future issuances of your capital stock in the near term may result in triggering the reset provision in your Series E Warrants and increase the number of shares of common stock underlying each warrant.

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Description of Common Warrants

Series E Warrant

Duration and Exercise Price, page 17

2. We note your disclosure on page 17 that a future offering conducted at a purchase price per share less than the exercise price of the Series E warrants would result in an adjustment to the number of shares underlying each Series E warrant. Please revise this section to explain the reset provisions by providing examples illustrating the impact to the number of shares underlying the warrants under various pricing scenarios. Revise here and on the coverpage to highlight the maximum number of shares issuable upon exercise of the warrants assuming a reset at the floor price. Also, revise your Risk Factor section to reflect the risks of dilution and, to the extent not prohibited, short-selling activity by Series E warrant holders.

Please contact Daniel Crawford at 202-551-7767 or Joe McCann at 202-551-6262 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Cavas Pavri, Esq.