



DIVISION OF  
CORPORATION FINANCE

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

June 13, 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. 2 to Registration Statement on Form S-1  
Filed June 11, 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. Unless we note otherwise, any references to prior comments are to comments in our June 10, 2025 letter.

Amendment No. 2 to Registration Statement on Form S-1

Risk Factors Related to this Offering, page 6

1. We note your revised risk factor disclosure on page 8 regarding an existing stockholders' equity continued listing deficiency. In light of your current stock price, the dilution from this offering, and the floor price for the Series E warrant reset, please add a risk factor addressing the potential for a continued listing deficiency related to your bid price. To the extent that a reverse stock split would likely be required to address a bid price deficiency, please address risks related to conducting a reverse split. Without limitation, please explain, if true, that a reverse stock split would trigger a reset to the Series E warrants potentially resulting in a significant decrease to the exercise price of the warrants and significant increase to the number of common shares underlying the Series E warrants.

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2. Please revise to discuss, as applicable, risks related to Nasdaq's potential use of its discretionary authority under Listing Rule 5101 to delist a company's securities based on public interest concerns raised by the issuance of warrants with features that could result in substantial dilution to shareholders.

Duration and Exercise Price, page 17

3. We note your revised disclosure in response to prior comment 2. Please revise to clarify, if true, that the 160,714,286 figure is the maximum number of common shares underlying the warrants regardless of how many times the reset provision is triggered in the future.

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.