



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

DIVISION OF  
CORPORATION FINANCE

September 24, 2025

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

**Re: Moleculin Biotech, Inc.**  
**Registration Statement on Form S-3**  
**Filed September 19, 2025**  
**File No. 333-290418**

Dear Walter Klemp:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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 Jessica Dickerson at 202-551-8013 with any questions.

Sincerely,

Division of Corporation Finance  
Office of Life Sciences

cc: Cavas S. Pavri, Esq.