

DIVISION OF CORPORATION FINANCE

June 4, 2021

Walter V. 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 May 28, 2021 File No. 333-256627

Dear Mr. 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 Ada D. Sarmento at 202-551-3798 with any questions.

Sincerely,

Division of Corporation Finance Office of Life Sciences

cc: Cavas S. Pavri, Esq.