

VOR BIOPHARMA INC.
100 Cambridgepark Drive, Suite 101
Cambridge, MA 02140

March 16, 2022

Via EDGAR

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

Attn: Michael Davis

Re: **Vor Biopharma Inc.**
Registration Statement on Form S-3 (File No. 333-263541)
Request for Acceleration of Effective Date

Acceleration Request

Requested Date: March 18, 2022
Requested Time: 4:00 p.m. Eastern Time

Mr. Davis:

In accordance with Rule 461 under the Securities Act of 1933, as amended, the undersigned registrant (the "**Registrant**") hereby requests that the Securities and Exchange Commission take appropriate action to cause the above-referenced Registration Statement on Form S-3 (File No. 333-263541) (the "**Registration Statement**") to become effective on March 18, 2022, at 4:00 p.m. Eastern Time, or as soon thereafter as is practicable.

Once the Registration Statement has been declared effective, please orally confirm that event with Richard Segal of Cooley LLP, counsel to the Registrant, at (617) 937-2332.

[Signature page follows]

Very truly yours,

Vor Biopharma Inc.

By: /s/ Robert Ang

Robert Ang

Chief Executive Officer and Director

cc:

Robert Ang, Vor Biopharma Inc.
Anthony Joyce, Vor Biopharma Inc.
Richard Segal, Cooley LLP
Daniel I. Goldberg, Cooley LLP