

October 20, 2022

VIA EDGAR

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

**Re: Unity Biotechnology, Inc.
Registration Statement on Form S-3 (File No. 333-267886)
Request for Acceleration of Effective Date**

To the addressee set forth above:

In accordance with Rule 461 under the Securities Act of 1933, as amended, Unity Biotechnology, Inc. (the "**Company**") hereby requests the acceleration of the effective date of the above-referenced Registration Statement on Form S-3 (File No. 333-267886) (the "**Registration Statement**") so that it will become effective on October 24, 2022, at 4:30 p.m., Eastern Time, or as soon thereafter as practicable, or at such later time as the Company or its legal counsel may request via telephone call to the staff of the Division of Corporation Finance of the U.S. Securities and Exchange Commission. Please contact Brian Cuneo of Latham & Watkins LLP, counsel to the Company, at (650) 463-3014, to provide notice of effectiveness of the Registration Statement, or if you have any other questions or concerns regarding this matter.

Thank you for your assistance in this matter.

Sincerely,

Unity Biotechnology, Inc.

By: /s/ Alexander Nguyen

Alexander Nguyen
General Counsel

CC: Anirvan Ghosh, Ph.D., Unity Biotechnology, Inc.
Lynne Sullivan, Unity Biotechnology, Inc.
Brian J. Cuneo, Latham & Watkins LLP
Erica Kassman, Latham & Watkins LLP