

Unity Biotechnology, Inc.  
3280 Bayshore Blvd, Suite 100  
Brisbane, California 94005

June 4, 2019

**VIA EDGAR**

Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street, N.E.  
Washington, DC 20549

Attention: Sonia Bednarowski

**Re: Unity Biotechnology, Inc.  
Registration Statement on Form S-3 (Registration No. 333-231893)**

Ladies and Gentlemen:

In accordance with Rule 461 of Regulation C of the General Rules and Regulations under the Securities Act of 1933, as amended, we hereby request acceleration by the Securities and Exchange Commission (the "**Commission**") of the effective date of the above-referenced Registration Statement on Form S-3 (the "**Registration Statement**") of Unity Biotechnology, Inc. (the "**Company**"). We respectfully request that the Registration Statement become effective as of 4:00 p.m., Washington, D.C. time, on June 6, 2019, or as soon as practicable thereafter.

Thank you for your assistance in this matter.

Very truly yours,

**Unity Biotechnology, Inc.**

By: /s/ Robert C. Goeltz II

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Robert C. Goeltz II  
Chief Financial Officer

CC: Keith R. Leonard, Unity Biotechnology, Inc.  
Tamara L. Tompkins, Unity Biotechnology, Inc.  
Brian J. Cuneo, Latham & Watkins LLP  
Miles P. Jennings, Latham & Watkins LLP