PLUS THERAPEUTICS, INC. 4200 Marathon Blvd. Suite 200 Austin, TX 78756

August 15, 2022

VIA EDGAR

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

Re: Plus Therapeutics, Inc. Registration Statement on Form S-1 (File No. 333-266684) Request for Acceleration of Effective Date

Ladies and Gentlemen:

Pursuant to Rule 461 of the General Rules and Regulations under the Securities Act of 1933, as amended, Plus Therapeutics, Inc., a Delaware corporation, hereby requests that the Securities and Exchange Commission accelerate the effective date of the above-referenced Registration Statement on Form S-1 (File No. 333-266684) and declare the Registration Statement effective as of Wednesday, August 17, 2022, at 4:00 p.m., Eastern Daylight Time, or as soon as practicable thereafter.

Please contact William I. Intner of Hogan Lovells US LLP at (410) 659-2778 with any questions. Also, please notify Mr. Intner when this request for acceleration has been granted.

Very truly yours,

PLUS THERAPEUTICS, INC.

By: /s/ Andrew Sims

Name: Andrew Sims Title: Chief Financial Officer

cc: William I. Intner, Hogan Lovells US LLP