

Ladenburg Thalmann & Co. Inc.
999 Vanderbilt Beach Road, Suite 200
Naples, Florida 34108

November 13, 2019

VIA FACSIMILE AND EDGAR

U.S. Securities and Exchange Commission
Division of Corporation Finance
Washington, DC 20549

Re: YIELD10 BIOSCIENCE, INC.
Registration Statement on Form S-1 (Registration No. 333-233683)
Concurrence in Acceleration Request

Ladies and Gentlemen:

Ladenburg Thalmann & Co. Inc. ("Ladenburg"), as representative of the underwriters for the referenced offering, hereby concurs in the request by Yield10 Bioscience, Inc. that the effective date of the above-referenced registration statement be accelerated to 5:00 p.m. (Eastern Time), or as soon as practicable thereafter, on Thursday, November 14, 2019, pursuant to Rule 461 under the Securities Act. Ladenburg affirms that it is aware of its obligations under the Securities Act in connection with this offering.

Very truly yours,

LADENBURG THALMANN & CO. INC.

By: /s/ Nicholas Stergis
Name: Nicholas Stergis
Title: Managing Director