



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

July 21, 2023

Oliver Peoples  
President & Chief Executive Officer  
YIELD10 BIOSCIENCE, INC.  
19 Presidential Way  
Woburn, Massachusetts 01801

**Re: YIELD10 BIOSCIENCE, INC.**  
**Registration Statement on Form S-1**  
**Filed July 14, 2023**  
**File No. 333-273240**

Dear Oliver Peoples:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Jessica Ansart at 202-551-4511 with any questions.

Sincerely,

Division of Corporation Finance  
Office of Industrial Applications and  
Services

cc: Megan Gates