

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported) January 10, 2017

YIELD10 BIOSCIENCE, INC.

(Exact Name of Registrant as Specified in Its Charter)

DELAWARE

(State or Other Jurisdiction of Incorporation)

001-33133

(Commission File Number)

04-3158289

(IRS Employer Identification No.)

19 Presidential Way, Woburn, Massachusetts

(Address of Principal Executive Offices)

01801

(Zip Code)

(617) 583-1700

(Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

On January 10, 2017, Matthew Strobeck, a current director of Yield10 Bioscience, Inc. (the "Company"), tendered his resignation from the Company's board of directors. Mr. Strobeck's resignation is effective as of January 10, 2017 and is not the result of any disagreement with the Company. The Company intends to fill the vacancy on its board resulting from Mr. Strobeck's resignation.

Mr. Strobeck also served on the Company's audit committee during his tenure on the board of directors. His position on the committee will be filled immediately through the board's selection of current independent board member, Celeste Beeks Mastin. Ms. Mastin is the CEO of Distribution International, Inc., a supplier of thermal insulation, safety equipment and environmental products. Among her qualifications, Ms. Mastin holds a bachelor's degree in chemical engineering from Washington State University and a master's degree in business administration from the University of Houston.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

YIELD10 BIOSCIENCE, INC.

Date: January 11, 2017

By:

/s/ Oliver P. Peoples

Oliver P. Peoples, Ph.D.

President and Chief Executive Officer