

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

Yield10 Bioscience, Inc.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies: _____

(2) Aggregate number of securities to which transaction applies: _____

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined): _____

(4) Proposed maximum aggregate value of transaction: _____

(5) Total fee paid: _____

- Fee paid previously with preliminary materials.

- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid: _____

(2) Form, Schedule or Registration Statement No.: _____

(3) Filing Party: _____

(4) Date Filed: _____

**YIELD10 BIOSCIENCE, INC.
19 Presidential Way
Woburn, Massachusetts 01801
(617) 583-1700**

**ADDITIONAL INFORMATION REGARDING THE ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON TUESDAY, MAY 19, 2020**

The following Notice of Change of Location relates to the proxy statement (the "Proxy Statement") of Yield10 Bioscience, Inc. (the "Company"), dated March 24, 2020, furnished to shareholders of the Company in connection with the solicitation of proxies by the Board of Directors of the Company for use at the Annual Meeting of Shareholders (the "Annual Meeting") to be held on Tuesday, May 19, 2020. This Supplement is being filed with the Securities and Exchange Commission and is being made available to shareholders on or about May 6, 2020.

THE NOTICE SHOULD BE READ IN CONJUNCTION WITH THE PROXY STATEMENT.

**NOTICE OF CHANGE OF LOCATION
OF ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON MAY 19, 2020**

To the Stockholders of Yield10 Bioscience, Inc.:

Due to the emerging public health impact of the coronavirus pandemic or COVID-19 and to support the health and well-being of the Company's shareholders, employees and their families, NOTICE IS HEREBY GIVEN that the Annual Meeting of Shareholders (the "Annual Meeting") of Yield10 Bioscience, Inc. has been changed to a virtual meeting format. As previously announced, the Annual Meeting will be held on Tuesday, May 19, 2020, at 9:30 a.m. EDT. We advised in our Notice of Annual Meeting of Stockholders that this meeting may be held by means of remote communication. In light of public health concerns related to the coronavirus outbreak, this confirms that the Annual Meeting will be held in a virtual meeting format only. You will not be able to attend the Annual Meeting physically.

Access to the Audio Webcast of the Annual Meeting.

As described in the proxy materials for the Annual Meeting previously distributed, you are entitled to participate in the Annual Meeting if you were a shareholder as of the close of business on March 23, 2020, the record date. Stockholders who wish to attend the Annual Meeting must pre-register at <http://viewproxy.com/yield10bio/2020/>. You will receive an event passcode to attend the meeting, and a virtual control number to vote if proper documentation is provided. The live audio webcast of the Annual Meeting can be accessed by stockholders on the day of the meeting at <http://viewproxy.com/yield10bio/2020/vm>.

Technical assistance will be available during the Annual Meeting live audio webcast. We encourage you to access the meeting by 9:00 a.m. EDT on May 19, 2020 in advance of the designated start time to allow time to log-in and address any technical difficulties before the Annual Meeting live audio webcast begins. If you encounter any difficulties accessing the Annual Meeting live audio webcast, please email VirtualMeeting@viewproxy.com or call 866-612-8937.

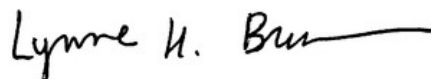
Submitting Questions during the Annual Meeting.

Shareholders will be provided an opportunity to ask questions of the Board of Directors and management during the meeting using the directions on the meeting website that day.

Voting.

Whether or not stockholders plan to attend the virtual meeting, all stockholders are encouraged to vote their shares in advance at www.proxyvote.com, or by telephone or mail, as communicated in the previously-distributed proxy materials for the Annual Meeting. Stockholders will have the opportunity to vote their shares during the Annual Meeting by following the instructions available on the meeting website during the Annual Meeting. Stockholders will not receive a new proxy card reflecting the change to a virtual meeting and may continue to use the proxy card included with the proxy materials previously distributed.

By Order of the Board of Directors,



LYNNE H. BRUM

Secretary

Woburn, Massachusetts

May 6, 2020