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) May 11, 2017

YIELD10 BIOSCIENCE, INC.

(Exact Name of Registrant as Specified in Its Charter)

DELAWARE

(State or Other Jurisdiction of Incorporation)

001-33133 04-3158289

(Commission File Number) (IRS Employer Identification No.)

19 Presidential Way, Woburn, Massachusetts

01801

(Address of Principal Executive Offices)

(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):

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (17 CFR §230.405) or Rule 12b-2 of the Securities Exchange Act of 1934 (17 CFR §240.12b-2).

Emerging growth company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

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Item 2.02 Results Of Operations and Financial Condition.

On May 11, 2017, Yield10 Bioscience, Inc. issued a press release announcing the financial results for its fiscal quarter ended March 31, 2017. A copy of the press release is attached hereto as Exhibit 99.1. This information, including Exhibit 99.1, shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or incorporated by reference in any filing under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit
No. Description

99.1 Press Release dated May 11, 2017.

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: May 11, 2017 By: /s/ Oliver P. Peoples

Oliver P. Peoples

President & Chief Executive Officer

INDEX TO EXHIBITS

Exhibit
No. Description

99.1 Press Release dated May 11, 2017.



Yield10 Bioscience Announces First Quarter 2017 Financial Results

WOBURN, Mass. - May 11, 2017 - Yield10 Bioscience, Inc. (NASDAQ:YTEN) today reported financial results for the three months ended March 31, 2017.

Yield10 Bioscience kicked off the year with new branding, reflecting the mission to target the critical unmet need in agriculture based on the anticipated "yield gap" between agricultural supply and the growing global population. The Company's strategy is to leverage its track record in innovation and metabolic engineering in living systems to discover and develop novel yield trait genes that can be deployed in commercial crops to produce step-changes in yield.

The Company is executing a research and development plan for 2017 aimed at generating a range of important proof points in key crops. For example, in the second quarter, Yield10 will begin the 2017 field testing program to evaluate its second generation (or improved) version of the C3003 yield trait genes in Camelina. In this field test, first generation C3003 will also be evaluated for the first time in canola under field test conditions.

"We expect to report data from the study in the fourth quarter, which will represent another key milestone in the evaluation of this promising trait in oilseed crops," commented Oliver Peoples, Ph.D., President and Chief Executive Officer. "We are also making progress introducing C3003 into soybean and we are on track to obtain initial data in this crop in late 2017 or early 2018. In addition, we expect to have C3003 seed yield data from studies in rice in 2018."

In 2017, Yield10 is also intensifying its efforts to evaluate genome editing targets for improving seed yield, seed composition and/or biomass yield in commercial crops. The Company believes that strategies based on C3004, a trait that complements C3003, and on C3007, an oil content boosting trait that the Company has an option to in-license, have the potential to provide a path to commercialization based on achieving "unregulated" status from USDA-APHIS. If this status is achieved, this could significantly reduce the time and cost of launching new yield traits. These traits also complement the work Yield10 is doing with C3003 in oilseed crops, adding to a robust portfolio of yield traits targeting oilseed crops. In addition, Yield10 is advancing research with a number of genome editing targets from the C4000 series of traits, which could provide new strategies to increase biomass yield in forage and other crops.

"In addition to generating a range of proof points, we also anticipate reaching corporate milestones in 2017, including forming collaborations, strengthening our balance sheet, capturing new sources of grant funding and filing for additional intellectual property around our crop science discoveries," said Dr. Peoples.

FIRST QUARTER 2017 FINANCIAL OVERVIEW

Yield10 Bioscience is managed with an emphasis on cash flow and deploys its financial resources in a disciplined manner to achieve its key strategic objectives. The Company ended the first quarter with \$4.9 million in unrestricted cash and cash equivalents. The Company's net cash used in operating activities during the three months ended March 31, 2017 was \$2.4 million, which was a decrease of \$4.1 million from the \$6.5 million used for operating activities during the three months ended March 31, 2016. The decrease in cash usage is primarily the result of the Company's lower net loss after discontinued operations of \$2.1 million for the three months ended March 31, 2017, compared to a net loss of \$6.5 million for the three months ended March 31, 2016. The \$4.4 million improvement is primarily due to a reduction in operating expenses associated with the Company's strategic restructuring, including a significant reduction in its full-time workforce.

The Company anticipates that it will need approximately \$7.5 to \$8.0 million of cash during 2017, including anticipated payments for remaining restructuring costs. The Company's present capital resources are not sufficient to fund its planned operations for a twelve month period and, therefore, raise substantial doubt about the Company's ability to continue as a going concern. The Company's ability to continue operations after its current cash resources are exhausted depends on its ability to obtain additional financing, including public or private equity financing, secured or unsecured debt financing, receipt of additional government research grants as well as licensing or other collaborative arrangements.

Continuing Operations

For the three months ending March 31, 2017, the Company reported a net loss from continuing operations of \$2.1 million, or \$0.07 per share, as compared to net loss from continuing operations of \$3.5 million, or \$0.13 per share, for the three months ended March 31, 2016.

Total research grant revenue for the three months ended March 31, 2017 was \$0.3 million, compared to \$0.2 million recorded for the three months ended March 31, 2016. Research and development expenses and general and administrative expense from continuing operations were \$1.1 million and \$1.3 million, respectively, for the three months ended March 31, 2017 compared to \$1.4 million and \$2.3 million for the three months ended March 31, 2016.

Discontinued Operations

In July 2016, the Board of Directors of the Company approved a strategic restructuring plan under which Yield10 Bioscience became the Company's core business. As a result of this strategic shift, the Company completed the sale of its biopolymer assets in September 2016 in a transaction that met the requirements for discontinued operations reporting. The Company's financial statements for the three months ended March 31, 2016 have therefore been prepared to reflect the Company's former biopolymer operations as a discontinued operation. Net loss and net loss per share from discontinued operations were \$3.0 million and \$0.11, respectively, for the three months ended March 31, 2016.

Conference Call Information

Yield10 Bioscience management will host a conference call today at 4:30 p.m. (ET) to discuss first quarter results. The Company also will provide an update on the business and answer questions from the investor community. A live webcast of the call with slides can be accessed through the Company's website at www.yield10bio.com in the investor relations section. To participate in the call, dial toll-free 877-709-8150 or 201-689-8354 (international).

To listen to a telephonic replay of the conference call, dial toll-free 877-660-6853 or 201-612-7415 (international) and enter pass code 13658898. The replay will be available for 14 days. In addition, the webcast will be archived on the Company's website in the investor relations section.

About Yield10 Bioscience

Yield10 Bioscience, Inc. is focused on developing new technologies for producing step-change improvements in crop yield to enhance global food security. Yield10 is leveraging an extensive track record of innovation based around optimizing the flow of carbon intermediates in living systems. By working on new approaches to improve fundamental elements of plant photosynthetic efficiency and optimizing carbon metabolism to direct more carbon to seed production, Yield10 is advancing several yield traits it has developed in crops such as Camelina, canola, soybean and corn. Yield10 is based in Woburn, MA.

For more information visit www.yield10bio.com (YTEN-E)

Safe Harbor for Forward-Looking Statements

This press release contains forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. The forward-looking statements in this release do not constitute guarantees of future performance. Investors are cautioned that statements in this press release which are not strictly historical statements, including, without limitation, expectations regarding Yield10's research and development activities, collaborations, intellectual property and value creation as well as the Company's restructuring costs, cash position, cash forecasts, ability to obtain sufficient financing to continue operating, headcount forecasts, the reproducibility of data from field tests, the translation of yield improvements from Camelina to other crops, the potential to produce improvements in seed and/or biomass yield, the timing of completion of additional greenhouse and field test studies and receipt of data from those studies, and progress of Yield10 Bioscience, Inc., constitute forward-looking statements. Such forward-looking statements are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated, including the risks and uncertainties detailed in Yield10 Bioscience's filings with the Securities and Exchange Commission. Yield10 Bioscience assumes no obligation to update any forward-looking information contained in this press release or with respect to the announcements described herein.

Contacts:

Yield10 Bioscience: Lynne H. Brum, (617) 682-4693, LBrum@yield10bio.com

Investor Relations Contact: Amato and Partners, LLC 90 Park Avenue, 17th Floor New York, NY 10016 admin@amatoandpartners.com (FINANCIAL TABLES FOLLOW)

YIELD10 BIOSCIENCE, INC. CONSOLIDATED STATEMENTS OF OPERATIONS UNAUDITED

(In thousands, except share and per share amounts)

	Three Month	Three Months Ended Ma	
	2017		2016
Revenue:			
Grant revenue	\$ 32	4 \$	157
Total revenue	32	1	157
Expenses:			
Research and development	1,10)	1,428
General and administrative	1,27	5	2,272
Total expenses	2,38	5	3,700
Loss from continuing operations	(2,06	 L)	(3,543)
Other (expense) income, net	(3	L)	3
Net loss from continuing operations	(2,09	<u>2)</u>	(3,540
Discontinued operations:			
Loss from discontinued operations	_	_	(2,958)
Total loss from discontinued operations		_	(2,958)
Net loss	\$ (2,09	2) \$	(6,498
Basic and Diluted net loss per share:			
Net loss from continuing operations	\$ (0.0	7) \$	(0.13)
Net loss from discontinued operations	_	-	(0.11)
Net loss per share	\$ (0.0	7) \$	(0.24)
Number of shares used in per share calculations:			
Basic & Diluted	28,399,81	1	27,367,305

YIELD10 BIOSCIENCE, INC. CONSOLIDATED BALANCE SHEETS UNAUDITED

(In thousands, except share and per share amounts)

	March 31, 2017		December 31, 2016	
Assets			-	
Current Assets:				
Cash and cash equivalents	\$	4,875	\$	7,309
Accounts receivable		210		66
Due from related parties		_		1
Unbilled receivables		114		121
Prepaid expenses and other current assets		460		363
Total current assets		5,659		7,860
Restricted cash		432		432
Property and equipment, net		1,686		1,739
Deferred equity financing costs		622		622
Other assets		95		95
Total assets	\$	8,494	\$	10,748
Liabilities and Stockholders' Equity				
Current Liabilities:				
Accounts payable	\$	51	\$	56
Accrued expenses		2,536		2,702
Total current liabilities		2,587		2,758
Lease incentive obligation, net of current portion		1,100		1,132
Contract termination obligation, net of current portion		246		489
Total liabilities		3,933		4,379
Commitments and contingencies				
Stockholders' Equity:				
Preferred stock (\$0.01 par value per share); 5,000,000 shares authorized; no shares issued or outstanding	g	_		_
Common stock (\$0.01 par value per share); 250,000,000 shares authorized at March 31, 2017 and December 31, 2016; 28,402,471 and 28,342,625 shares issued and outstanding at March 31, 2017 and				
December 31, 2016, respectively		284		283
Additional paid-in capital		339,811		339,527
Accumulated other comprehensive loss		(85)		(84)
Accumulated deficit		(335,449)		(333,357)
Total stockholders' equity		4,561		6,369
Total liabilities and stockholders' equity	\$	8,494	\$	10,748

YIELD10 BIOSCIENCE, INC. CONSOLIDATED STATEMENTS OF CASH FLOWS UNAUDITED (In thousands)

		Three Months Ended March 31,		
		2017	2016	
Cash flows from operating activities				
Net loss	\$	(2,092) \$	(6,498)	
Adjustments to reconcile net loss to cash used in operating activities:				
Depreciation		53	122	
Charge for 401(k) company common stock match		23	155	
Stock-based compensation		264	591	
Changes in operating assets and liabilities:				
Accounts receivable		(144)	(34)	
Due from related parties		1	(58)	
Unbilled receivables		7	97	
Inventory		_	(41)	
Prepaid expenses and other assets		(97)	280	
Accounts payable		(5)	71	
Accrued expenses		(168)	(1,051)	
Contract termination obligation and other long-term liabilities		(275)	(150)	
Deferred revenue		_	(10)	
Net cash used in operating activities		(2,433)	(6,526)	
Cash flows from investing activities				
Purchase of property and equipment		_	(161)	
Change in restricted cash		_	(307)	
Net cash used by investing activities		_	(468)	
Effect of exchange rate changes on cash and cash equivalents		(1)	(4)	
Net decrease in cash and cash equivalents		(2,434)	(6,998)	
Cash and cash equivalents at beginning of period		7,309	12,269	
Cash and cash equivalents at end of period	\$	4,875 \$	5,271	
Supplemental disclosure of non-cash information:				
Purchase of property and equipment included in accounts payable and accrued expenses	\$	— \$	476	
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