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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549  
**FORM 10-Q**

**QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.**

For the quarterly period ended March 31, 2018

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_  
Commission file number 001-33133

**YIELD10 BIOSCIENCE, INC.**

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**19 Presidential Way**  
**Woburn, MA**  
(Address of principal executive offices)

**(617) 583-1700**  
(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report.)

**04-3158289**  
(I.R.S. Employer  
Identification No.)

**01801**  
(Zip Code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting  
company)

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant 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.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The number of shares outstanding of the registrant's common stock as of May 8, 2018 was 9,991,977.

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**Yield10 Bioscience, Inc.**  
**Form 10-Q**  
**For the Quarter Ended March 31, 2018**

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**PART I. FINANCIAL INFORMATION**  
**ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**

**YIELD10 BIOSCIENCE, INC.**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**  
**UNAUDITED**

(in thousands, except share and per share data)

	March 31, 2018	December 31, 2017
<b>Assets</b>		
Current Assets:		
Cash and cash equivalents	\$ 7,583	\$ 14,487
Short-term investments	3,991	—
Accounts receivable	42	54
Unbilled receivables	36	65
Prepaid expenses and other current assets	442	311
Total current assets	12,094	14,917
Restricted cash	317	317
Property and equipment, net	1,526	1,539
Other assets	103	109
Total assets	\$ 14,040	\$ 16,882
<b>Liabilities and Stockholders' Equity</b>		
Current Liabilities:		
Accounts payable	\$ 80	\$ 76
Accrued expenses	1,352	2,299
Total current liabilities	1,432	2,375
Lease incentive obligation, net of current portion	973	1,005
Total liabilities	2,405	3,380
Commitments and contingencies (Note 8)		
Stockholders' Equity:		
Series A Convertible Preferred Stock (\$0.01 par value per share); 5,000,000 shares authorized at March 31, 2018 and December 31, 2017; 0 and 1,826 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	—	818
Common stock (\$0.01 par value per share); 40,000,000 shares authorized at March 31, 2018 and December 31, 2017; 9,968,455 and 9,089,159 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	100	91
Additional paid-in capital	356,667	355,431
Accumulated other comprehensive loss	(89)	(85)
Accumulated deficit	(345,043)	(342,753)
Total stockholders' equity	11,635	13,502
Total liabilities and stockholders' equity	\$ 14,040	\$ 16,882

*The accompanying notes are an integral part of these interim unaudited condensed consolidated financial statements*

**YIELD10 BIOSCIENCE, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
**UNAUDITED**  
(in thousands, except share and per share data)

	Three Months Ended March 31,	
	2018	2017
<b>Revenue:</b>		
Grant revenue	\$ 60	\$ 324
Total revenue	60	324
<b>Expenses:</b>		
Research and development	1,094	1,109
General and administrative	1,273	1,276
Total expenses	2,367	2,385
Loss from operations	(2,307)	(2,061)
<b>Other income (net):</b>		
Interest income, net	35	1
Other expense, net	(18)	(32)
Total other income (expense), net	17	(31)
Net loss	\$ (2,290)	\$ (2,092)
Basic and diluted net loss per share	\$ (0.24)	\$ (0.74)
<b>Number of shares used in per share calculations:</b>		
Basic & Diluted	9,698,726	2,839,963

*The accompanying notes are an integral part of these interim unaudited condensed consolidated financial statements*

**YIELD10 BIOSCIENCE, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)**  
**UNAUDITED**  
**(in thousands)**

	<b>Three Months Ended March 31,</b>	
	<b>2018</b>	<b>2017</b>
Net loss:	\$ (2,290)	\$ (2,092)
Other comprehensive loss		
Change in unrealized gain (loss) on investments	1	—
Change in foreign currency translation adjustment	(5)	(1)
Total other comprehensive loss	(4)	(1)
Comprehensive loss	\$ (2,294)	\$ (2,093)

*The accompanying notes are an integral part of these interim unaudited condensed consolidated financial statements*

**YIELD10 BIOSCIENCE, INC.**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**UNAUDITED**  
**(in thousands)**

	Three Months Ended March 31,	
	2018	2017
<b>Cash flows from operating activities</b>		
Net loss	\$ (2,290)	\$ (2,092)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation	47	53
Charge for 401(k) company common stock match	46	23
Stock-based compensation	281	264
Changes in operating assets and liabilities:		
Accounts receivables	12	(144)
Due from related party	—	1
Unbilled receivables	29	7
Prepaid expenses and other assets	(125)	(97)
Accounts payable	(27)	(5)
Accrued expenses	(971)	(168)
Contract termination obligation and other long-term liabilities	(32)	(275)
Net cash used for operating activities	(3,030)	(2,433)
<b>Cash flows from investing activities</b>		
Purchase of property and equipment	(3)	—
Purchase of short-term investments	(4,002)	—
Proceeds from the sale and maturity of short-term investments	11	—
Net cash used for investing activities	(3,994)	—
<b>Cash flows from financing activities</b>		
Proceeds from warrants exercised	124	—
Net cash provided by financing activities	124	—
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(4)	(1)
Net decrease in cash, cash equivalents and restricted cash	(6,904)	(2,434)
Cash, cash equivalents and restricted cash at beginning of period	14,804	7,741
Cash, cash equivalents and restricted cash at end of period	\$ 7,900	\$ 5,307
<b>Supplemental disclosure of non-cash information:</b>		
Purchase of property and equipment included in accounts payable and accrued expenses	\$ 31	\$ —

*The accompanying notes are an integral part of these interim unaudited condensed consolidated financial statements*

**YIELD10 BIOSCIENCE, INC.**  
**NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**  
**UNAUDITED**

*(All dollar amounts, except share and per share amounts, are stated in thousands)*

**1. NATURE OF BUSINESS AND BASIS OF PRESENTATION**

Yield10 Bioscience, Inc. ("Yield10 Bioscience," "Yield10," or the "Company") is an agricultural bioscience company focusing on the development of new technologies to enable step-change increases in crop yield to enhance global food security. The Company considers 10-20 percent increases in crop yield to be step-change increases. According to a United Nations report, food production must be increased by over 70 percent in the next 35 years to feed the growing global population, which is expected to increase from 7 billion to more than 9.6 billion by 2050. During that time period, there will be a reduction in available arable land as a result of infrastructure growth and increased pressure on scarce water resources. Harvestable food production per acre and per growing season must be increased to meet this demand. At the same time, in light of the increasing focus on health and wellness, food safety and sustainability in developed countries, the Company anticipates a rise in demand for new varieties of food and food ingredients with improved nutritional properties. Further, concerns about food safety have led to the concept of "seed to plate," or "farm to fork," with a focus on stringent quality control along the entire value chain. If this concept takes hold with consumers, it is likely to require identity preservation from seed to harvest and involve contract farming. This concept has been initially implemented in agricultural biotechnology, in products such as high oleic canola and soybean. Consumer demand for identity preserved specialty ingredients is also expected to rise, and the Company believes that Yield10's crop yield technologies and crop genome-editing platform could be useful in this emerging field.

The foundation technology of Yield10 was based on using two proprietary advanced biotechnology trait gene discovery platforms to improve fundamental crop yield through enhanced photosynthetic carbon capture and increased carbon utilization efficiency to increase seed yield. These platforms are based on the principle that plants which capture and utilize carbon more efficiently will enable more robust crops capable of increased seed yield. Yield10 is working to develop, translate and demonstrate the commercial value of a number of novel yield trait genes from these discovery platforms in major crops. The Company's "Smart Carbon Grid for Crops" metabolic engineering platform has already proven useful in identifying a number of its C3000 series of traits, including the novel yield trait gene C3003 which will be field tested in Camelina and canola in the 2018 growing season. The Company's "T3 Platform," is based on mining transcription factor network data sets and led to the identification of its C4001, C4002 and C4003 global transcription factor gene traits. These gene traits enabled the Company to engineer switchgrass plants with high rates of photosynthesis and increased biomass yield. The Company is currently repeating its work with C4001 and C4003 in rice and wheat and plan to do so in corn.

Yield10 is currently combining the two trait gene discovery platforms to create an integrated system for identifying key plant gene combinations for modification using genome editing to improve crop performance. Advanced metabolic flux analysis forms the foundation of the GRAIN platform the Company is developing based on Yield10 scientists unique 20-plus years of experience successfully deploying advanced metabolic flux analysis to address critical bottlenecks in carbon metabolism. Based on elements of the GRAIN platform that the Company is already working on, it has identified the C4004 through C4027 series of transcription factor genes that are down-regulated in the Company's high-photosynthesis engineered switchgrass plants as well as a number of new gene targets related to the Company's lead C3003 yield trait. New tools for genome-editing continue to develop at a fast pace and be deployed against known targets which for the most part are focused on changing seed or seed oil composition. However, identifying gene combinations remain an unmet need.

The Company is currently progressing the development of its lead yield trait genes in canola, soybean, rice and wheat to provide step-change yield solutions for enhancing global food security. Yield10 Bioscience is headquartered in Woburn, Massachusetts and has an additional agricultural science facility with greenhouses in Saskatoon, Saskatchewan, Canada.

The accompanying condensed consolidated financial statements are unaudited and have been prepared by Yield10 in accordance with accounting principles generally accepted in the United States of America ("GAAP") and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in the Company's annual consolidated financial statements have been condensed or omitted. The year-end condensed consolidated balance sheet data was derived from audited financial statements, but does not include all disclosures required by GAAP. The condensed consolidated financial statements, in the opinion of management, reflect all adjustments (consisting only of normal recurring adjustments) necessary for a fair statement of the financial position and results of operations for the interim periods ended March 31, 2018 and March 31, 2017.

The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for any future period or the entire fiscal year. These interim consolidated financial statements should be read in

conjunction with the audited consolidated financial statements for the year ended December 31, 2017, which are contained in the Company's Annual Report on Form 10-K filed with the SEC on March 12, 2018.

As of March 31, 2018, the Company held unrestricted cash, cash equivalents and short-term investments of \$11,574. The Company follows the guidance of ASU 2014-15, *Presentation of Financial Statements-Going Concern (Subtopic 205-40)* in order to determine whether there is substantial doubt about its ability to continue as a going concern for one year after the date its financial statements are issued. Based on its cash forecast, management expects that the Company's present capital resources will be sufficient to fund its planned operations for at least the next twelve month period from the date these unaudited financial statements are issued.

If the Company issues equity or debt securities to raise additional funds, (i) the Company may incur fees associated with such issuance, (ii) its existing stockholders may experience dilution from the issuance of new equity securities, (iii) the Company may incur ongoing interest expense and be required to grant a security interest in Company assets in connection with any debt issuance, and (iv) the new equity or debt securities may have rights, preferences and privileges senior to those of the Company's existing stockholders. In addition, utilization of the Company's net operating loss and research and development credit carryforwards may be subject to significant annual limitations under Section 382 of the Internal Revenue Code of 1986 due to ownership changes resulting from equity financing transactions. If the Company raises additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to its potential products or proprietary technologies, or grant licenses on terms that are not favorable to the Company.

## 2. ACCOUNTING POLICIES

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board ("FASB") or other standard setting bodies that the Company adopts as of the specified effective date. During the three months ended March 31, 2018, the Company adopted the following new accounting guidance.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The ASU is the result of a joint project by the FASB and the International Accounting Standards Board ("IASB") to clarify the principles for recognizing revenue and to develop a common revenue standard for GAAP and International Financial Reporting Standards ("IFRS") that would: remove inconsistencies and weaknesses in the treatment of this area between GAAP and IFRS, provide a more robust framework for addressing revenue issues, improve comparability of revenue recognition practices across entities, jurisdictions, industries, and capital markets, improve disclosure requirements and resulting financial statements, and simplify the presentation of financial statements. The core principle of the new guidance is that an entity should recognize revenue to depict the transfer of promised goods or services in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Company adopted the new standard effective January 1, 2018 using the modified retrospective method and determined that its grant revenue, which is its sole source of revenue, does not fall within the guidance of the new standard. The Company will review future customer revenue agreements against the guidance provided by ASU No. 2014-09 to ensure that revenue is recorded appropriately.

In January 2016 the FASB issued ASU No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*. This new standard amended certain aspects of accounting and disclosure requirements for financial instruments, including the requirement that equity investments with readily determinable fair values are to be measured at fair value with any changes in fair value recognized in a company's statements of operations. Prior to adoption of ASU 2016-01, companies recognized changes in fair value in accumulated other comprehensive income (loss), net. Equity investments that do not have readily determinable fair values may be measured at fair value or at cost minus impairment adjusted for changes in observable prices. In addition, a valuation allowance should be evaluated on deferred tax assets related to available-for-sale debt securities in combination with other deferred tax assets. The Company adopted this new standard on January 1, 2018, using the modified retrospective method, and determined that it did not have a material impact on the Company's financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. The new standard clarifies certain aspects of the statement of cash flows, including the classification of debt prepayment or debt extinguishment costs, settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance policies, distributions received from equity method investees and beneficial interests in securitization transactions. The new standard also clarifies that an entity should determine each separately identifiable source or use within the cash receipts and cash payments on the basis of the nature of the underlying cash flows. In situations in which cash receipts and payments have aspects of more than one class of cash flows and cannot be separated by source or use, the appropriate classification should depend on the activity that is likely to be the predominant source or use of



cash flows for the item. The Company adopted this new standard on January 1, 2018 and determined that it did not have a material impact on the Company's financial statements.

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfer of Assets Other Than Inventory*. This new standard eliminates the deferral of the tax effects of intra-entity asset transfers other than inventory. As a result, the income tax consequences from the intra-entity transfer of an asset other than inventory and associated changes to deferred taxes will be recognized when the transfer occurs. The Company adopted this new standard on January 1, 2018 and determined that it did not have a material impact on the Company's financial statements.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* ("ASU 2016-18"). The new standard provides uniform guidance for the classification and presentation of changes in restricted cash on the statement of cash flows under Topic 230, *Statement of Cash Flows*. ASU 2016-18 requires that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash. Therefore, amounts included in restricted cash should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. ASU 2016-18 was effective for the Company for its fiscal year beginning January 1, 2018, including interim periods, and requires a retrospective presentation of each period presented. As a result, the Company's Condensed Consolidated Statement of Cash Flows for the three months ended March 31, 2018 and March 31, 2017 have been prepared in accordance with the new requirements of ASU 2016-18.

Other than the new standards described above, there have been no material changes in accounting policies since the Company's fiscal year ended December 31, 2017, as described in Note 2 to the consolidated financial statements included in its Annual Report on Form 10-K for the year then ended.

New pronouncements that are not yet effective but may impact the Company's financial statements in the future are described below.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The new standard requires that all lessees recognize the assets and liabilities that arise from leases on the balance sheet and disclose qualitative and quantitative information about its leasing arrangements. The new standard will be effective for Yield10 Bioscience on January 1, 2019. The Company is in the process of evaluating the impact of this new guidance.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*. The new standard changes the impairment model for most financial assets and certain other instruments. Under the new standard, entities holding financial assets and net investment in leases that are not accounted for at fair value through net income are to be presented at the net amount expected to be collected. An allowance for credit losses will be a valuation account that will be deducted from the amortized cost basis of the financial asset to present the net carrying value at the amount expected to be collected on the financial asset. The new standard will be effective for the Company on January 1, 2020. The Company is in the process of evaluating the impact of this new guidance.

#### Principles of Consolidation

The Company's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America. The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany transactions were eliminated, including transactions with its Canadian subsidiary, Metabolix Oilseeds, Inc.

#### Cash, Cash Equivalents and Restricted Cash

The Company considers all highly liquid investments purchased with an original maturity date of ninety days or less at the date of purchase to be cash equivalents.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the Company's Condensed Consolidated Balance Sheets included herein:

	<b>March 31, 2018</b>	<b>December 31, 2017</b>
Cash and cash equivalents	\$ 7,583	\$ 14,487
Restricted cash	317	317
Total cash, cash equivalents and restricted cash shown in the condensed consolidated statements of cash flows	<u>\$ 7,900</u>	<u>\$ 14,804</u>

Amounts included in restricted cash represent those required to be set aside by contractual agreement. Restricted cash of \$317 at March 31, 2018 and December 31, 2017 primarily consists of funds held in connection with the Company's lease agreement for its Woburn, Massachusetts facility.

### **Investments**

The Company considers all investments purchased with an original maturity date of more than ninety days at the date of purchase and a maturity date of one year or less at the balance sheet date to be short-term investments. All other investments are classified as long-term. The Company held no long-term investments at March 31, 2018 and no short or long-term investments at December 31, 2017.

Other-than-temporary impairments of equity investments are recognized in the Company's statements of operations if the Company has experienced a credit loss and has the intent to sell the investment or if it is more likely than not that the Company will be required to sell the investment before recovery of the amortized cost basis. Realized gains and losses, dividends, interest income and declines in value judged to be other-than-temporary credit losses are included in other income (expense). Any premium or discount arising at purchase is amortized and/or accreted to interest income.

### **Restructuring**

In 2016, the Company announced a strategic restructuring under which Yield10 Bioscience became its core business and its biopolymer operations were discontinued. The Company records estimated restructuring charges for employee severance and contract termination costs as a current period expense as those costs become contractually fixed, probable and estimable. Obligations associated with these charges are reduced or adjusted as payments are made or the Company's estimates are revised.

### **Use of Estimates**

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of grant revenue and expenses during the reporting periods. Actual results could differ from those estimates.

### **Foreign Currency Translation**

Foreign denominated assets and liabilities of the Company's wholly owned foreign subsidiaries are translated into U.S. dollars at the prevailing exchange rates in effect on the balance sheet date. Revenues and expenses are translated at average exchange rates prevailing during the period. Any resulting translation gains or losses are recorded in accumulated other comprehensive income (loss) in the consolidated balance sheet. When the Company dissolves, sells or substantially sells all of the assets of a consolidated foreign subsidiary, the cumulative translation gain or loss of that subsidiary is released from comprehensive income (loss) and included within its consolidated statement of operations during the fiscal period when the dissolution or sale occurs.

### **Income Taxes**

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. A valuation allowance is provided to reduce the deferred tax asset to a level which, more likely than not, will be realized.

In December 2017, the Tax Cuts and Jobs Act, or the Tax Act ("TCJA"), was signed into law. Among other things, the Tax Act permanently lowers the corporate federal income tax rate to 21% effective for tax years including or commencing January 1, 2018. As a result of the reduction of the corporate federal income tax rate, GAAP requires companies to revalue their deferred tax assets and deferred tax liabilities as of the date of enactment, with the resulting tax effects accounted for in the reporting period of enactment. The Company's preliminary estimate of the TCJA and the remeasurement of its deferred tax assets and liabilities is subject to change as additional information becomes available, but no later than one year from the enactment of the TCJA.

### Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash, cash equivalents and investments. The Company has historically invested its cash equivalents in highly rated money market funds, corporate debt, federal agency notes and U.S. treasury notes. Investments, when purchased, are acquired in accordance with the Company's investment policy which establishes a concentration limit per issuer.

At March 31, 2018, 77% of the Company's total accounts and unbilled receivables of \$78 are due from U.S. government grants.

### 3. BASIC AND DILUTED NET INCOME (LOSS) PER SHARE

Basic net income (loss) per share is computed by dividing net income (loss) by the weighted-average number of common shares outstanding. Diluted net income (loss) per share is computed by dividing net income (loss) by the weighted-average number of dilutive common shares outstanding during the period. Diluted shares outstanding is calculated by adding to the weighted shares outstanding any potential (unissued) shares of common stock from outstanding stock options and warrants based on the treasury stock method, as well as weighted shares outstanding of any potential (unissued) shares of common stock from restricted stock units. In periods when a net loss is reported, all common stock equivalents are excluded from the calculation because they would have an anti-dilutive effect, meaning the loss per share would be reduced. Therefore, in periods when a loss is reported, there is no difference in basic and dilutive loss per share. Common stock equivalents include stock options, restricted stock awards and warrants.

On May 26, 2017, the Company effected a 1-for-10 reverse stock split of its common stock. The calculation of basic and diluted net loss per share, as presented in the accompanying condensed consolidated statement of operations, have been determined based on a retroactive adjustment of weighted average shares outstanding for all periods presented.

The number of shares of potentially dilutive common stock presented on a weighted average basis, related to options, restricted stock units and warrants (prior to consideration of the treasury stock method) that were excluded from the calculation of dilutive shares since the inclusion of such shares would be anti-dilutive for the three months ended March 31, 2018 and March 31, 2017, respectively, are shown below. Issued and outstanding warrants shown in the table below are described in greater detail in Note 10, contained herein.

	Three Months Ended March 31,	
	2018	2017
Options	700,722	616,188
Restricted stock units	14,259	21,642
Warrants	10,597,486	393,300
Total	11,312,467	1,031,130

### 4. INVESTMENTS

Investments consist of the following:

March 31, 2018	Accumulated Cost	Unrealized		Market Value
		Gain	(Loss)	
Short-term investments				
Government securities	\$ 3,990	\$ 1	\$ —	\$ 3,991
Total	\$ 3,990	\$ 1	\$ —	\$ 3,991

The Company considers all highly liquid investments purchased with an original maturity date of more than ninety days at the date of purchase to be cash equivalents, and investments purchased with an original maturity date of ninety days or more at the date of purchase and a maturity date of one year or less at the balance sheet date to be short-term investments. All other investments are classified as long-term. There were no long-term investments as of March 31, 2018 or December 31, 2017, and no short-term investments at December 31, 2017.

The Company reviews investments for other-than-temporary impairment whenever the fair value of an investment is less than the amortized cost and evidence indicates that an investment's carrying amount is not recoverable within a reasonable period of time. Other-than-temporary impairments of investments are recognized in the Company's condensed consolidated

statements of operations if the Company has experienced a credit loss and has the intent to sell the investment or if it is more likely than not that the Company will be required to sell the investment before recovery of the amortized cost basis. Evidence considered in this assessment includes reasons for the impairment, compliance with the Company's investment policy, the severity and the duration of the impairment and changes in value subsequent to the end of the period. Realized gains and losses, dividends, interest income and declines in value judged to be other-than-temporary credit losses are included in other income (expense). Any premium or discount arising at purchase is amortized and/or accreted to interest income.

## 5. FAIR VALUE MEASUREMENTS

The Company has certain financial assets recorded at fair value which have been classified as either Level 1 or 2 within the fair value hierarchy as described in the accounting standards for fair value measurements. Fair value is the price that would be received from the sale of an asset or the price paid to transfer a liability in an orderly transaction between independent market participants at the measurement date. Fair values determined by Level 1 inputs utilize observable data such as quoted prices in active markets. Fair values determined by Level 2 inputs utilize data points other than quoted prices in active markets that are observable either directly or indirectly. Fair values determined by Level 3 inputs utilize unobservable data points in which there is little or no market data, which require the reporting entity to develop its own assumptions. The fair value hierarchy level is determined by the lowest level of significant input. At March 31, 2018 and December 31, 2017, the Company did not own any Level 3 financial assets.

The Company's financial assets classified as Level 2 at March 31, 2018, were initially valued at the transaction price and subsequently valued utilizing third party pricing services. Because the Company's investment portfolio may include securities that do not always trade on a daily basis, the pricing services use many observable market inputs to determine value including reportable trades, benchmark yields and benchmarking of like securities. The Company validates the prices provided by the third party pricing services by reviewing their pricing methods and obtaining market values from other pricing sources. After completing the validation procedures, the Company did not adjust or override any fair value measurements provided by these pricing services as of March 31, 2018.

The tables below present information about the Company's assets that are measured at fair value on a recurring basis as of March 31, 2018 and December 31, 2017 and indicate the fair value hierarchy of the valuation techniques utilized to determine such fair value.

Description	Fair value measurements at reporting date using			
	Quoted prices in active markets for identical assets	Significant other observable inputs	Significant unobservable inputs	Balance as of
	(Level 1)	(Level 2)	(Level 3)	March 31, 2018
Cash equivalents:				
Money market funds	\$ 4,044	\$ —	\$ —	\$ 4,044
U.S. government and agency securities	—	2,997	—	2,997
Short-term investments:				
U.S. government and agency securities	—	3,991	—	3,991
Total	\$ 4,044	\$ 6,988	\$ —	\$ 11,032

Description	Fair value measurements at reporting date using			
	Quoted prices in active markets for identical assets	Significant other observable inputs	Significant unobservable inputs	Balance as of
	(Level 1)	(Level 2)	(Level 3)	December 31, 2017
Cash equivalents:				
Money market funds	\$ 11,025	\$ —	\$ —	\$ 11,025
Total	\$ 11,025	\$ —	\$ —	\$ 11,025

The Company considers all highly liquid investments purchased with an original maturity date of ninety days or less at the date of purchase to be cash equivalents, and investments purchased with an original maturity date of more than ninety days at the date of purchase and a maturity date of one year or less at the balance sheet date to be short-term investments. All other investments are classified as long-term. There were no long-term investments as of March 31, 2018 or December 31, 2017, and no short-term investments at December 31, 2017.

## 6. ACCRUED EXPENSES

Accrued expenses consisted of the following at:

	March 31, 2018	December 31, 2017
Employee compensation and benefits	\$ 276	\$ 646
Commercial manufacturing	246	489
Professional services	175	335
Other	655	829
Total accrued expenses	<u>\$ 1,352</u>	<u>\$ 2,299</u>

Accrued commercial manufacturing expense at March 31, 2018 and December 31, 2017, is related to the Company's terminated biopolymer manufacturing contract obligation. See Note 11.

## 7. STOCK-BASED COMPENSATION

### *Expense Information for Employee and Non-Employee Stock Awards*

The Company recognized stock-based compensation expense related to stock awards, including awards to non-employees and members of the Board of Directors of \$281 and \$264 for the three months ended March 31, 2018 and March 31, 2017, respectively. At March 31, 2018, there was approximately \$715 of pre-tax stock-based compensation expense related to unvested awards not yet recognized.

The compensation expense related to unvested stock options is expected to be recognized over a remaining weighted average period of 0.56 years.

### *Stock Options*

A summary of option activity for the three months ended March 31, 2018 is as follows:

	Number of Shares	Weighted Average Exercise Price
Outstanding at December 31, 2017	702,033	\$ 16.21
Granted	12,425	\$ 1.95
Exercised	—	—
Forfeited	(791)	\$ 12.64
Expired	(1,495)	\$ 453.96
Outstanding at March 31, 2018	<u>712,172</u>	\$ 15.05
Options vested and expected to vest at March 31, 2018	712,172	\$ 15.05
Options exercisable at March 31, 2018	455,878	\$ 20.57

### *Restricted Stock Units*

Restricted Stock Units ("RSUs") awarded to employees generally vest in four equal annual installments beginning one year after the date of grant, subject to service conditions. RSUs awarded to non-employee directors generally vest one year after the date of grant, with the exception of RSUs granted in lieu of cash compensation, which vest immediately. The Company records stock compensation expense for RSUs on a straight line basis over their vesting period based on each RSU's award date market value.

The Company pays minimum required income tax withholding associated with RSUs for its employees. As the RSUs vest, the Company withholds a number of shares with an aggregate fair market value equal to the minimum tax withholding amount (unless the employee makes other arrangements for payment of the tax withholding) from the common stock issuable at the vest date. During the three months ended March 31, 2018 and March 31, 2017, no outstanding RSUs vested and therefore the Company did not pay for income tax withholdings associated with RSUs during these periods.

A summary of RSU activity for the three months ended March 31, 2018 is as follows:

	Number of RSUs	Weighted Average Remaining Contractual Life (years)
Outstanding at December 31, 2017	14,367	
Awarded	—	
Common stock issued upon vesting	—	
Forfeited	(162)	
Outstanding at March 31, 2018	<u>14,205</u>	1.00
Weighted average remaining recognition period	1.00	

## 8. COMMITMENTS AND CONTINGENCIES

### Leases

The Company rents its facilities under operating leases, which expire at various dates through December 2026. Rent expense for the three months ended March 31, 2018 and March 31, 2017, was \$240 and \$180, respectively.

At March 31, 2018, the Company's future minimum payments required under operating leases are as follows:

<u>Year ended December 31,</u>	<u>Minimum lease payments</u>
2018 (April to December)	\$ 676
2019	855
2020	734
2021	654
2022	676
Thereafter	2,832
Total	<u>\$ 6,427</u>

### Lease Commitments

During 2016, the Company entered into a lease agreement, pursuant to which the Company leases approximately 29,622 square feet of office and research and development space located at 19 Presidential Way, Woburn, Massachusetts. The lease began on June 1, 2016 and will end on November 30, 2026. The Company provided the landlord with a security deposit in the form of a letter of credit in the amount of \$307 which is included within restricted cash in the Company's condensed consolidated balance sheet included herein. Pursuant to the lease, the Company will also pay certain taxes and operating costs associated with the premises during the term of the lease. During the buildout of the rented space, the landlord paid \$889 for tenant improvements to the facility and an additional \$444 for tenant improvements that result in increased rental payments by the Company. The current and non-current portions of the lease incentive obligations related to the landlord's contributions toward the cost of tenant improvements are recorded within accrued expenses and long-term lease incentive obligation, respectively, in the Company's condensed consolidated balance sheet contained herein.

In October 2016, the Company entered into a sublease agreement with a subsidiary of CJ CheilJedang Corporation ("CJ") with respect to CJ's sublease of approximately 9,874 square feet of its leased facility located in Woburn, Massachusetts. The sublease space was determined to be in excess of the Company's needs as a result of its strategic shift to Yield10 Bioscience and the related restructuring of its operations. The sublease term is coterminous with the Company's master lease. CJ pays rent and operating expenses equal to approximately one-third of the amounts payable to the landlord by the Company, as adjusted from time-to-time in accordance with the terms of the master lease. Total future minimum operating lease payments of \$6,427 shown above are net of the CJ sublease payments. CJ has provided the Company with a security deposit of \$103 in the form of an irrevocable letter of credit.

The Company also leases approximately 13,702 square feet of office and laboratory space at 650 Suffolk Street, Lowell, Massachusetts. The lease for this facility expires in May 2020, with an option to renew for one five-year period. The Company's wholly owned subsidiary, Metabolix Oilseeds, Inc. ("MOI"), located in Saskatoon, Saskatchewan, Canada, leases

approximately 4,100 square feet of office, laboratory and greenhouse space. MOI's leases for its various leased facilities expire between April 30, 2018 and September 30, 2018.

### Contractual Commitments

In connection with the discontinuation of biopolymer operations, the Company ceased pilot production of biopolymer material and reached agreements with the owner-operators of its biopolymer pilot production facilities regarding the termination of their services. The Company recorded contract termination costs related to these manufacturing agreements of \$2,641 during 2016. As of March 31, 2018, \$246 remains outstanding and was subsequently paid during May 2018. This remaining contractual liability is included in accrued expenses within the Company's condensed consolidated balance sheet at March 31, 2018.

### Litigation

From time-to-time, the Company may be subject to legal proceedings and claims in the ordinary course of business. The Company is not currently aware of any such proceedings or claims that it believes will have, individually or in the aggregate, a material adverse effect on its business, financial condition or results of operations.

### Guarantees

As of March 31, 2018 and December 31, 2017, the Company did not have significant liabilities recorded for guarantees.

The Company enters into indemnification provisions under various agreements with other companies in the ordinary course of business, typically with business partners, contractors, and customers. Under these provisions, the Company generally indemnifies and holds harmless the indemnified party for losses suffered or incurred by the indemnified party as a result of its activities. These indemnification provisions generally survive termination of the underlying agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification provisions is unlimited. However, to date Yield10 Bioscience has not incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. As a result, the estimated fair value of the indemnifications under these agreements is believed to be minimal. Accordingly, the Company has no liabilities recorded for these agreements as of March 31, 2018 and December 31, 2017.

## 9. GEOGRAPHIC INFORMATION

The geographic distribution of the Company's grant revenues and long-lived assets are summarized in the tables below:

	U.S.	Canada	Eliminations	Total
<b>Three Months Ended March 31, 2018:</b>				
Grant revenue from external customers	\$ 60	\$ —	\$ —	\$ 60
Inter-geographic revenues	—	268	(268)	—
Revenues	<u>\$ 60</u>	<u>\$ 268</u>	<u>\$ (268)</u>	<u>\$ 60</u>
<b>Three Months Ended March 31, 2017:</b>				
Grant revenue from external customers	\$ 324	\$ —	\$ —	\$ 324
Inter-geographic revenues	—	221	(221)	—
Revenues	<u>\$ 324</u>	<u>\$ 221</u>	<u>\$ (221)</u>	<u>\$ 324</u>

Foreign revenue is based on the country in which the Company's subsidiary that earned the revenue is domiciled. During the three months ended March 31, 2018 and March 31, 2017, revenue earned from the Company's Camelina grants with the U.S. Department of Energy totaled \$60 and \$293, respectively, and represented 100% and 91%, respectively, of total revenue.

The geographic distribution of the Company's long-lived assets is summarized as follows:

	U.S.	Canada	Eliminations	Total
March 31, 2018	\$ 1,517	\$ 9	\$ —	\$ 1,526
December 31, 2017	\$ 1,533	\$ 6	\$ —	\$ 1,539

## 10. CAPITAL STOCK

### Common Stock

On December 27, 2017, the Company held a special meeting of its stockholders, at which the stockholders approved an amendment to the Company's Amended and Restated Certificate of Incorporation, as amended ("Certificate of Incorporation") to decrease from 250,000,000 shares to 40,000,000 shares the aggregate number of shares of common stock that are authorized to be issued. As a result of this vote, the Company filed a Certificate of Amendment to its Certificate of Incorporation with the Secretary of State of the State of Delaware on December 27, 2017 to decrease the number of authorized shares.

During December 2017, the Company closed on a public offering of its securities, receiving cash proceeds of \$13,097, net of issuance costs of \$1,392 that were paid through January 31, 2018. The offering included 4,667,000 Class A Units, priced at a public offering price of \$2.25 per unit, with each unit consisting of one share of common stock, a Series A five-year warrant to purchase one share of common stock at an exercise price of \$2.25 per share, and a Series B nine-month warrant to purchase 0.5 share of common stock at an exercise price of \$2.25 per share, and 3,987 Class B Units, priced at a public offering price of \$1,000 per unit, with each unit consisting of one share of preferred stock, having a conversion price of \$2.25, Series A 5-year warrants to purchase 445 shares of common stock at an exercise price of \$2.25 per share, and Series B nine-month warrants to purchase 223 shares of common stock with an exercise price of \$2.25 per share. The Company determined that both the preferred stock and the warrants should be recorded within stockholders' equity.

Proceeds received from the offering were allocated to the various elements of the offering based on their relative fair values. The fair value of the common stock is its closing market price on December 21, 2017, the closing date of the offering. The Series A Convertible Preferred Stock was valued on an as-if-converted basis based on the underlying common stock and the Series A and Series B warrants were valued using the Black-Scholes model with the following weighted-average input at the time of issuance:

- an expected term of 5.0 years and 0.75 years for the Series A and Series B warrants, respectively,
- risk free rates of 2.2% and 1.7% for the Series A and Series B warrants, respectively, based on the published rates of U.S. treasury bills with similar terms, and
- volatility of 125% based on the Company's historical volatility.

After allocation of the proceeds, the effective conversion price of the Series A Convertible Preferred Stock was determined to be beneficial and, as a result, the Company recorded a one-time non-cash deemed dividend of \$1,427 equal to the intrinsic value of the beneficial conversion feature during its three months ended December 31, 2017. The Series A Convertible Preferred Stock did not have a stated redemption date, and as a consequence, accounting guidance required immediate recognition of the beneficial conversion feature rather than amortization of the benefit over time. As of March 31, 2018, preferred shareholders have converted all 3,987 of the preferred shares into an aggregate of 1,772,000 shares of common stock.

On September 12, 2017, the Company issued warrants to purchase up to 30,000 shares of common stock to the Company's investor relations consultant, in consideration for services rendered and to be rendered by the consultant. These warrants have an exercise price of \$2.90 per share and are exercisable in whole or part at any time during the period commencing on September 12, 2017 and ending on September 11, 2024. The Company reviewed the accounting guidance for warrants and determined that these warrants should be recorded as equity within additional paid-in capital.

On July 7, 2017, the Company completed an offering of its securities. Proceeds from the transaction were approximately \$1,966, net of issuance costs of \$317. Investors participating in the transaction purchased a total of 570,784 shares of common stock at a price of \$4.00 per share and an equal number of warrants with an exercise price of \$5.04 per share, exercisable beginning on January 7, 2018 and until their expiration on January 7, 2024. In accordance with accounting guidance, these warrants were also recorded as equity within additional paid-in capital.

On May 26, 2017, the Company effected a 1-for-10 reverse stock split of its common stock. The ratio for the reverse stock split was determined by the Company's board of directors following approval by stockholders at the Company's annual



meeting held on May 24, 2017. The reverse stock split reduced the number of shares of the Company's common stock outstanding at the time of the reverse stock split from approximately 28.7 million shares to approximately 2.9 million shares. Proportional adjustments were made to the Company's outstanding stock options and restricted stock units and to the number of shares issued and issuable under the Company's equity compensation plans.

### Preferred Stock

The Company's Certificate of Incorporation authorizes it to issue up to 5,000,000 shares of \$0.01 par value preferred stock.

As discussed above, during December 2017 the Company closed on a public offering of its securities that included issuance of 3,987 shares of Series A Convertible Preferred Stock. Each preferred share was convertible, at the holder's option, into 445 shares of common stock at a conversion price of \$2.25 per share, subject to adjustments as a result of stock dividends and stock splits. The Company determined the Series A Convertible Preferred Stock should be classified as equity since it was not mandatorily redeemable, there were no unconditional obligations requiring the Company to settle in a variable number of common shares or settle through the transfer of assets and the monetary value of the preferred shares was fixed. As of March 31, 2018, all of the 3,987 preferred shares had been converted to an aggregate of 1,772,000 shares of common stock. When converted, the shares of converted Series A Convertible Preferred Stock were restored to the status of authorized but unissued shares of preferred stock, subject to reissuance by the Board of Directors.

### Warrants

The following table summarizes information with regard to outstanding warrants to purchase common stock as of March 31, 2018:

Issuance	Number of Shares Issuable Upon Exercise of Outstanding Warrants	Exercise Price	Expiration Date
June 2015 Private Placement	393,300	\$ 39.80	June 15, 2019
July 2017 Registered Direct Offering	570,784	\$ 5.04	January 7, 2024
December 2017 Public Offering - Series A	6,439,000	\$ 2.25	December 21, 2022
December 2017 Public Offering - Series B	3,164,402	\$ 2.25	September 21, 2018
Consultant	30,000	\$ 2.90	September 11, 2024
Total	<u>10,597,486</u>		

During the three months ended March 31, 2018, a total of 55,100 Series B warrants from the December 2017 public offering were exercised resulting in the issuance of 55,100 shares of common stock and the Company's receipt of \$124 in cash proceeds.

### Reserved Shares

The following shares of common stock were reserved for future issuance upon exercise of stock options, release of RSUs, conversion of Series A Convertible Preferred Stock and conversion of warrants:

	March 31, 2018	December 31, 2017
Stock Options	712,172	702,033
RSUs	14,205	14,367
Series A Convertible Preferred Stock	—	811,555
Warrants	10,597,486	10,652,586
Total number of common shares reserved for future issuance	<u>11,323,863</u>	<u>12,180,541</u>

## 11. RESTRUCTURING

During 2016, the Company initiated a strategic restructuring under which Yield10 Bioscience became its core business and its biopolymer operations were discontinued. As part of its strategic restructuring, the Company significantly reduced staffing levels and in January 2017, the Company formally changed its name to Yield10 Bioscience, Inc.

In connection with the wind down of its biopolymer operations, the Company ceased pilot production of biopolymer materials and reached agreements with the owner-operators of its biopolymer production facilities regarding the termination of these services. Through March 31, 2018, the Company made cash payments of \$3,071, issued 27,500 shares of common stock with a fair value of \$85 and transferred certain biopolymer-related production equipment with a net book value of \$111 to settle a portion of these agreements and other restructuring activities. At March 31, 2018, remaining cash restructuring costs of \$246 remained outstanding and were subsequently paid in May 2018.

	<b>Biopolymer Production Agreements</b>	<b>Employee Severance and Related Costs</b>	<b>Total</b>
Aggregate Charges and Amounts Accrued	\$ 2,641	\$ 872	\$ 3,513
Paid in Cash	(2,199)	(872)	(3,071)
Paid through Stock and Equipment	(196)	—	(196)
Ending Balance Accrued at March 31, 2018	<u>\$ 246</u>	<u>\$ —</u>	<u>\$ 246</u>

## 12. SUBSEQUENT EVENTS

On April 16, 2018, the Company filed a definitive proxy statement with the SEC in connection with its upcoming Annual Meeting of Shareholders ("Annual Meeting"). Included within the proxy statement is a proposal seeking an affirmative vote of a majority of the Company's outstanding common stock for the approval to an amendment to the amended and restated Certificate of Incorporation, as amended, for the increase in the Company's authorized shares of common stock from 40,000,000 shares to 60,000,000 shares.

On April 17, 2018 the Company entered into a sub-award with Michigan State University to support a Department of Energy funded grant entitled "A Systems Approach to Increasing Carbon Flux to Seed Oil." The Company's participation under this grant will be awarded on an annual basis with the first year commencing September 15, 2017 and ending September 14, 2018 for an initial funded amount of \$546. The Company anticipates that additional option years will be awarded annually through September 14, 2022 for total sub-award funding of \$2,957, provided Congress continues to appropriate funds for the program, the Company is able to make progress towards meeting grant objectives and it remains in compliance with other terms and conditions of the sub-award. Work on this grant began in September 2017. During the fiscal quarter ended June 30, 2018, the Company estimates that it will recognize \$114 in grant revenue under this sub-award for work previously performed during the period September 15, 2017 through March 31, 2018.

## ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

*(All dollar amounts are stated in thousands)*

### Forward Looking Statements

This Quarterly Report on Form 10-Q contains "forward-looking statements" within the meaning of 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements relate to our future plans, objectives, expectations and intentions and may be identified by words such as "may," "will," "should," "expects," "plans," "anticipate," "intends," "target," "projects," "contemplates," "believe," "estimates," "predicts," "potential," and "continue," or similar words.

Although we believe that our expectations are based on reasonable assumptions within the limits of our knowledge of our business and operations, the forward-looking statements contained in this document are neither promises nor guarantees. Our business is subject to significant risk and uncertainties and there can be no assurance that our actual results will not differ materially from our expectations. These forward looking statements include, but are not limited to, statements concerning our business plans and strategies; the expected results of our strategic restructuring to focus on Yield10 Bioscience as our core business; expected future financial results and cash requirements; plans for obtaining additional funding; plans and expectations that depend on our ability to continue as a going concern; and plans for development and commercialization of our Yield10 technologies. 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, without limitation, risks related to our limited cash resources, uncertainty about our ability to secure additional funding, risks related to the execution of our business plans and strategies, risks associated with the protection and enforcement of our intellectual property rights, as well as other risks and uncertainties set forth under the caption "Risk Factors" in Part II, Item 1A, of the Company's Annual Report on Form 10-K for its year ended December 31, 2017 and in our other filings with the Securities and Exchange Commission.

The forward-looking statements and risk factors presented in this document are made only as of the date hereof and we do not intend to update any of these risk factors or to publicly announce the results of any revisions to any of our forward-looking statements other than as required under the federal securities laws.

Unless the context otherwise requires, all references in this Form 10-Q to "Yield10 Bioscience," "Yield10," "we," "our," "us," "our company" or "the company" refer to Yield10 Bioscience, Inc., a Delaware corporation, and its subsidiaries.

### Overview

Yield10 Bioscience, Inc. ("Yield10 Bioscience," "Yield10," or the "Company") is an agricultural bioscience company focusing on the development of new technologies to enable step-change increases in crop yield to enhance global food security. We consider 10-20 percent increases in crop yield to be step-change increases. According to a United Nations report, food production must be increased by over 70 percent in the next 35 years to feed the growing global population, which is expected to increase from 7 billion to more than 9.6 billion by 2050. During that time period, there will be a reduction in available arable land as a result of infrastructure growth and increased pressure on scarce water resources. Harvestable food production per acre and per growing season must be increased to meet this demand. At the same time, in light of the increasing focus on health and wellness, food safety and sustainability in developed countries, we anticipate a rise in demand for new varieties of food and food ingredients with improved nutritional properties. Further, concerns about food safety have led to the concept of "seed to plate," or "farm to fork," with a focus on stringent quality control along the entire value chain. If this concept takes hold with consumers, it is likely to require identity preservation from seed to harvest and involve contract farming. This concept has been initially implemented in agricultural biotechnology, in products such as high oleic canola and soybean. Consumer demand for identity preserved specialty ingredients is also expected to rise, and we believe that Yield10's crop yield technologies and crop genome-editing platform could be useful in this emerging field.

The foundation technology of Yield10 was based on using two proprietary advanced biotechnology trait gene discovery platforms to improve fundamental crop yield through enhanced photosynthetic carbon capture and increased carbon utilization efficiency to increase seed yield. These platforms are based on the principle that plants which capture and utilize carbon more efficiently will enable more robust crops capable of increased seed yield. We are working to develop, translate and demonstrate the commercial value of a number of novel yield trait genes from these discovery platforms in major crops. Our "Smart Carbon Grid for Crops" metabolic engineering platform has already proven useful in identifying a number of our C3000 series of traits, including the novel yield trait gene C3003 which will be field tested in Camelina and canola in the 2018 growing season. Our "T3 Platform," is based on mining transcription factor network data sets and led to the identification of our C4001, C4002 and C4003 global transcription factor gene traits. These gene traits enabled us to engineer switchgrass plants

with high rates of photosynthesis and increased biomass yield. We are currently repeating our work with C4001 and C4003 in rice and wheat and plan to do so in corn.

We are currently combining the two trait gene discovery platforms to create an integrated system for identifying key plant gene combinations for modification using genome editing to improve crop performance. Advanced metabolic flux analysis forms the foundation of the GRAIN platform we are developing based on Yield10 scientists' unique 20-plus years of experience successfully deploying advanced metabolic flux analysis to address critical bottlenecks in carbon metabolism. Based on elements of the GRAIN platform that we are already working on, we have identified the C4004 through C4027 series of transcription factor genes that are down-regulated in our high-photosynthesis engineered switchgrass plants as well as a number of new gene targets related to our lead C3003 yield trait. New tools for genome-editing continue to develop at a fast pace and be deployed against known targets which for the most part are focused on changing seed or seed oil composition. However, identifying gene combinations remain an unmet need.

We are currently progressing the development of our lead yield trait genes in canola, soybean, rice and wheat to provide step-change yield solutions for enhancing global food security. Yield10 Bioscience is headquartered in Woburn, Massachusetts and has an additional agricultural science facility with greenhouses in Saskatoon, Saskatchewan, Canada.

As of March 31, 2018, the Company held unrestricted cash, cash equivalents and short-term investments of \$11,574. The Company follows the guidance of ASU 2014-15, *Presentation of Financial Statements-Going Concern (Subtopic 205-40)* in order to determine whether there is substantial doubt about its ability to continue as a going concern for one year after the date its financial statements are issued. Based on our current cash forecast, we expect that the Company's present capital resources will be sufficient to fund its planned operations for at least the next twelve month period from the date these unaudited financial statements are issued.

If we issue equity or debt securities to raise additional funds, (i) we may incur fees associated with such issuance, (ii) our existing stockholders may experience dilution from the issuance of new equity securities, (iii) we may incur ongoing interest expense and be required to grant a security interest in Company assets in connection with any debt issuance, and (iv) the new equity or debt securities may have rights, preferences and privileges senior to those of our existing stockholders. In addition, utilization of the Company's net operating loss and research and development credit carryforwards may be subject to significant annual limitations under Section 382 of the Internal Revenue Code of 1986 due to ownership changes resulting from equity financing transactions. If we raise additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to the Company's potential products or proprietary technologies, or grant licenses on terms that are not favorable to the Company.

#### **Government Grants**

Our principal source of revenue is government research grants. As of April 17, 2018, the date we entered into a sub-award agreement with Michigan State University ("MSU") as described below, \$683 remains available under our U.S. government grants. This includes amounts for reimbursement to our subcontractors, as well as reimbursement for our employees' time, benefits and other expenses related to future performance.

On April 17, 2018 we entered into a sub-award with MSU to support a Department of Energy funded grant entitled "A Systems Approach to Increasing Carbon Flux to Seed Oil." Our participation under this grant will be awarded on an annual basis with the first year commencing September 15, 2017 and ending September 14, 2018 for an initial funded amount of \$546. We anticipate that additional option years will be awarded annually to Yield10 through September 14, 2022 for total sub-award funding of \$2,957, provided the U.S. Congress continues to appropriate funds for the program, we are able to make progress towards meeting grant objectives and we remain in compliance with other terms and conditions of the sub-award. We commenced work on this grant in September 2017. During our fiscal quarter ended June 30, 2018, we estimate that we will recognize \$114 in grant revenue under this sub-award for work previously performed during the period September 15, 2017 through March 31, 2018.

The status of our government grants is as follows:

<b>Program Title</b>	<b>Funding Agency</b>	<b>Total Government Funds awarded as of April 17, 2018</b>	<b>Total received through March 31, 2018</b>	<b>Remaining amount available as of March 31, 2018</b>	<b>Grant Expiration</b>
Subcontract from Michigan State University project funded by DOE entitled "A Systems Approach to Increasing Carbon Flux to Seed Oil"	Department of Energy	\$ 546	\$ —	\$ 546	September 2018
Production of High Oil, Transgene Free Camelina Sativa Plants through Genome Editing ("Camelina")	Department of Energy	\$ 1,997	\$ 1,860	\$ 137	September 2018
<b>Total</b>		<b>\$ 2,543</b>	<b>\$ 1,860</b>	<b>\$ 683</b>	

#### Critical Accounting Estimates and Judgments

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America GAAP for interim financial information. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, stock-based compensation and strategic restructuring charges. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The critical accounting policies and the significant judgments and estimates used in the preparation of our condensed consolidated financial statements for the three months ended March 31, 2018, are consistent with those discussed in our Annual Report on Form 10-K for the year ended December 31, 2017, in the section captioned "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Estimates and Judgments."

#### Results of Operations

##### Comparison of the Three Months Ended March 31, 2018 and 2017

##### Revenue

	<b>Three Months Ended March 31,</b>		<b>Change</b>
	<b>2018</b>	<b>2017</b>	
Grant revenue	\$ 60	\$ 324	\$ (264)

Grant revenue was \$60 and \$324 for the three months ended March 31, 2018 and 2017, respectively. Grant revenue for the three months ended March 31, 2018 was derived from the Company's Camelina grant with the Department of Energy ("DOE"). During the three months ended March 31, 2017, grant revenue consisted of \$294 earned from the Camelina grant and \$30 earned from the Company's completed subcontract with North Carolina State University ("NCSU").

We anticipate grant revenue will be lower during 2018 than in 2017 as we near completion of the the Company's Camelina grant with the DOE. Our new DOE sub-award through Michigan State University is not expected to generate quarterly revenue at the same rate as the expiring Camelina grant.

## Expenses

	Three Months Ended March 31,		Change
	2018	2017	
Research and development expenses	\$ 1,094	\$ 1,109	\$ (15)
General and administrative expenses	1,273	1,276	(3)
Total expenses	<u>\$ 2,367</u>	<u>\$ 2,385</u>	<u>\$ (18)</u>

### Research and Development Expenses

Research and development expenses remained consistent at \$1,094 and \$1,109 for the three months ended March 31, 2018 and March 31, 2017, respectively. Although the overall expense numbers were consistent in total, sponsored research decreased by \$105 during the three months ended March 31, 2018 in comparison to the three months ended March 31, 2017, primarily as a result of research services performed by NCSU for us as a sub-awardee under the Camelina grant during the first quarter of 2017. NCSU did not perform similar services for us during the first quarter of 2018. The reduction in sponsored research was offset during the three months ended March 31, 2018 by an increase in employee salaries and benefits of \$110 in comparison to the three months ended March 31, 2017.

We expect research and development expenses will increase during 2018 in comparison to 2017 as a result of plans to expand our field testing for crops across multiple locations. We also plan to hire a small number of additional research staff to support our testing.

### General and Administrative Expenses

General and administrative expenses remained consistent at \$1,273 and \$1,276 for the three months ended March 31, 2018 and March 31, 2017, respectively. During the three months ended March 31, 2018, professional service fees, primarily related to legal and accounting services, decreased by \$126 in comparison to the three months ended March 31, 2017. Legal expenses were higher during the first three months of 2017 due to the Company's final transition steps undertaken in becoming Yield10 Bioscience. Accounting service fees declined during the three months ended March 31, 2018 as a result of our change in independent accounting firms. Employee salaries and benefits offset the decrease in professional fees by increasing \$100 from \$505 during the three months ended March 31, 2017 to \$605 during the three months ended March 31, 2018.

We expect our general and administrative expenses will decrease during 2018 in comparison to 2017 as we continue to carefully manage our use of cash resources.

### Other Income (Expense), Net

	Three Months Ended March 31,		Change
	2018	2017	
Other income, net	\$ 35	\$ 1	\$ 34
Other expense, net	(18)	(32)	14
Total other income (expense), net	<u>\$ 17</u>	<u>\$ (31)</u>	<u>\$ 48</u>

Other income (expense), net, reflects net income of \$17 and net expense of \$31 for the three months ended March 31, 2018 and March 31, 2017, respectively. Net income during the first quarter of 2018 is primarily the result of \$35 of investment income earned from the Company's short-term investments and higher average cash balances held during the quarter, offset primarily by imputed interest expense recorded in connection with installment payments being made by the Company through May 2018 related to the early termination of a third party manufacturing agreement during 2016. Net expense of \$31 during the three months ended March 31, 2017 is primarily the result of the imputed interest charges.

### Liquidity and Capital Resources

Currently, we require cash to fund our working capital needs, to purchase capital assets, to pay our operating lease obligations and other operating costs. The primary sources of our liquidity have historically included equity financings, government research grants and income earned on cash and short-term investments.

Since our inception, we have incurred significant expenses related to our research, development and commercialization efforts. With the exception of 2012, when we recognized \$38,885 of deferred revenue from a terminated joint venture, we have recorded losses since our initial founding, including the three months ended March 31, 2018. As of March 31, 2018, we had an accumulated deficit of \$345,043. Our total unrestricted cash, cash equivalents and short-term investments as of March 31, 2018, were \$11,574 as compared to \$14,487 at December 31, 2017. As of March 31, 2018, we had no outstanding debt.

Our cash and cash equivalents are held primarily for working capital purposes. As of March 31, 2018, we had restricted cash of \$317. Restricted cash consists of \$307 held in connection with the lease agreement for our Woburn, Massachusetts facility and \$10 held in connection with our corporate credit card used for incidental purchases.

Investments are made in accordance with our corporate investment policy, as approved by our Board of Directors. The primary objective of this policy is to preserve principal and investments are limited to high quality corporate debt, U.S. Treasury bills and notes, money market funds, bank debt obligations, municipal debt obligations and asset-backed securities. The policy establishes maturity limits, concentration limits, and liquidity requirements. As of March 31, 2018, we were in compliance with this policy.

We believe that our existing funds, when combined with cash generated from government grants and our access to additional financing sources, if needed, will be sufficient to fund operations and meet our obligations, including our final restructuring obligations, when due, for at least the next twelve month period from the date these unaudited financial statements are issued. We follow the guidance of ASU 2014-15, *Presentation of Financial Statements-Going Concern (Subtopic 205-40)* in order to determine whether there is substantial doubt about the Company's ability to continue as a going concern for one year after the date its financial statements are issued.

We have filed a shelf registration statement on Form S-3 with the SEC, covering the sale from time to time of shares of our common stock and other securities, which may provide us the opportunity to raise funds when we consider it necessary or appropriate, at prices and terms to be determined at the time of any such offering. However, pursuant to the instructions on Form S-3, we only have the ability to sell shares under the shelf registration statement, during any 12-month period, in an amount less than or equal to one-third of the aggregate market value of our common stock held by non-affiliates.

During 2016, we completed a strategic restructuring of our operations to focus on the Yield10 Bioscience business. We significantly reduced staffing levels and incurred restructuring costs for contract termination and employee post-termination benefits of approximately \$3,513. As of March 31, 2018, \$246 of these restructuring charges remain outstanding and are included within accrued expenses in our condensed consolidated balance sheet included herein. These final charges were paid during May 2018. We currently anticipate that we will use approximately \$9,000 to \$9,500 of cash during 2018, including the final payments for restructuring costs.

We will need additional capital to fully implement our business, operating and development plans and to support our capital needs. The timing, structure and vehicles for obtaining future financing are under consideration, but there can be no assurance that such financing efforts will be successful. If we do not receive additional funding by mid-2019, we may be forced to wind down our business, or have to delay, scale back or otherwise modify our business plans, research and development activities and other operations, and/or seek strategic alternatives.

If we issue equity or debt securities to raise additional funds, (i) we may incur fees associated with such issuance, (ii) our existing stockholders will experience dilution from the issuance of new equity securities, (iii) we may incur ongoing interest expense and be required to grant a security interest in Company assets in connection with any debt issuance, and (iv) the new equity or debt securities may have rights, preferences and privileges senior to those of our existing stockholders. In addition, utilization of our net operating loss and research and development credit carryforwards may be subject to significant annual limitations under Section 382 of the Internal Revenue Code of 1986 due to ownership changes resulting from future equity financing transactions. If we raise additional funds through collaboration, licensing or other similar arrangements, it may be necessary to relinquish valuable rights to our potential products or proprietary technologies, or grant licenses on terms that are not favorable to us.

Net cash used for operating activities was \$3,030 during the three months ended March 31, 2018, compared to net cash used for operating activities during the three months ended March 31, 2017 of \$2,433. Net cash used for operations during the three months ended March 31, 2018 primarily reflects the net loss of \$2,290 and payment of 2017 employee bonuses of approximately \$529, partially offset by non-cash expenses, including stock-based compensation expense of \$281, depreciation expense of \$47 and 401(k) stock matching contribution expense of \$46.

Net cash of \$3,994 was used by investing activities during the three months ended March 31, 2018. During the three months ended March 31, 2018, we purchased \$4,002 in short-term investments, including U.S. Treasury notes and federal agency bonds.

Net cash of \$124 was provided by financing activities during the three months ended March 31, 2018 as a result of investor exercises of warrants during the period.

**Off-Balance Sheet Arrangements**

As of March 31, 2018, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of the Securities and Exchange Commission's Regulation S-K.

**Recent Accounting Pronouncements**

See Note 2, "Accounting Policies," to our condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for a full description of recent accounting pronouncements.



**ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.**

Not applicable.

**ITEM 4. CONTROLS AND PROCEDURES.**

**Evaluation of Disclosure Controls and Procedures**

Our management (with the participation of our Principal Executive Officer and Principal Accounting Officer) evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), as of March 31, 2018. Disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported on a timely basis and that such information is accumulated and communicated to management, including the Principal Executive Officer and the Principal Accounting Officer, as appropriate, to allow timely decisions regarding disclosure. Based on this evaluation, our Principal Executive Officer and Principal Accounting Officer concluded that these disclosure controls and procedures are effective.

**Changes in Internal Control over Financial Reporting**

There have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) under the Exchange Act) during the quarter ended March 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## PART II — OTHER INFORMATION

### ITEM 1. LEGAL PROCEEDINGS.

From time to time, the Company may be subject to legal proceedings and claims in the ordinary course of business. The Company is not currently aware of any such proceedings or claims that it believes will have, individually or in the aggregate, a material adverse effect on the business, financial condition or the results of operations.

### ITEM 1A. RISK FACTORS.

There have been no material changes in information regarding our risk factors as described in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2017. Our business is subject to numerous risks. We caution you that the important factors annotated within our risk factors, among others, could cause our actual results to differ materially from those expressed in forward-looking statements made by us or on our behalf in filings with the Securities and Exchange Commission, press releases, communications with investors and oral statements. Any or all of our forward-looking statements in this Quarterly Report on Form 10-Q and any other public statements we make may turn out to be wrong. They can be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties. Many factors discussed in our risk factors will be important in determining future results. Consequently, no forward-looking statement can be guaranteed. Actual future results may differ materially from those anticipated in forward-looking statements. We undertake no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, other than as required under the federal securities laws. You are advised, however, to consult any further disclosure we make in our reports filed with the Securities and Exchange Commission.

### ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

#### Recent Sales of Unregistered Securities

On January 18, 2018, we issued 12,639 shares of common stock to participants in the Yield10 Bioscience, Inc. 401(k) Plan as a matching contribution. The issuance of these securities is exempt from registration pursuant to Section 3(a)(2) of the Securities Act of 1933, as amended as exempted securities.

#### Issuer Purchases of Equity Securities

During the three months ended March 31, 2018, there were no repurchases made by us or on our behalf, or by any “affiliated purchasers,” of shares of our common stock.

### ITEM 3. DEFAULTS UPON SENIOR SECURITIES.

None.

### ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

### ITEM 5. OTHER INFORMATION.

None.

**ITEM 6. EXHIBITS.**

[31.1](#) Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934 of the Principal Executive Officer (filed herewith).

[31.2](#) Certification Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934 of the Principal Financial Officer (filed herewith).

[32.1](#) Section 1350 Certification (furnished herewith).

101.1 The following financial information from the Yield10 Bioscience, Inc. Quarterly Report on Form 10-Q for the quarter ended March 31, 2018 formatted in XBRL: (i) Condensed Consolidated Balance Sheets, March 31, 2018 and December 31, 2017; (ii) Condensed Consolidated Statements of Operations, Three Months Ended March 31, 2018 and 2017; (iii) Condensed Consolidated Statements of Comprehensive Loss, Three Months Ended March 31, 2018 and 2017; (iv) Condensed Consolidated Statements of Cash Flows, Three Months Ended March 31, 2018 and 2017; and (v) Notes to Consolidated Financial Statements.

**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 thereunto duly authorized.

YIELD10 BIOSCIENCE, INC.

May 10, 2018

By: /s/ OLIVER PEOPLES

Oliver Peoples

*President and Chief Executive Officer*

*(Principal Executive Officer)*

May 10, 2018

By: /s/ CHARLES B. HAASER

Charles B. Haaser

*Chief Accounting Officer*

*(Principal Financial and Accounting Officer)*

## CERTIFICATION

I, Oliver Peoples, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Yield10 Bioscience, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 10, 2018

/s/ OLIVER PEOPLES

Name: Oliver Peoples  
Title: *President and Chief Executive Officer*  
*(Principal Executive Officer)*

## CERTIFICATION

I, Charles B. Haaser, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Yield10 Bioscience, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 10, 2018

/s/ CHARLES B. HAASER

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Name: Charles B. Haaser  
 Title: Chief Accounting Officer  
 (Principal Financial and Accounting Officer)

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Yield10 Bioscience, Inc. (the “Company”) for the quarter ended March 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), we, Oliver Peoples, President, Chief Executive Officer and Principal Executive Officer of the Company and Charles B. Haaser, Chief Accounting Officer and Principal Financial and Accounting Officer of the Company, certify, pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to our knowledge that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and
2. The information in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is being provided pursuant to 18 U.S.C. 1350 and is not to be deemed a part of the Report, nor is it to be deemed to be “filed” for any purpose whatsoever.

Dated: May 10, 2018

/s/ OLIVER PEOPLES

*President and Chief Executive Officer  
(Principal Executive Officer)*

Dated: May 10, 2018

/s/ CHARLES B. HAASER

*Chief Accounting Officer  
(Principal Financial and Accounting Officer)*

