
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 September 30, 2015

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

METABOLIX, INC.

Delaware

(State or other jurisdiction of
incorporation or organization)

04-3158289

(I.R.S. Employer
Identification No.)

**21 Erie Street
Cambridge, MA**

(Address of principal executive offices)

02139

(Zip Code)

(617) 583-1700

(Registrant's telephone number, including area code)

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

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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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 November 9, 2015 was 27,331,435.

Metabolix, Inc.
Form 10-Q
For the Quarter Ended September 30, 2015

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PART I. FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

**METABOLIX, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
UNAUDITED**

(in thousands, except share and per share data)

	September 30, 2015	December 31, 2014
Assets		
Current Assets:		
Cash and cash equivalents	\$ 17,894	\$ 20,046
Accounts receivable	276	45
Due from related parties	147	112
Unbilled receivables	288	420
Inventory	375	586
Prepaid expenses and other current assets	1,443	756
Total current assets	20,423	21,965
Restricted cash	619	619
Property and equipment, net	908	456
Other assets	170	95
Total assets	\$ 22,120	\$ 23,135
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	\$ 448	\$ 333
Accrued expenses	3,590	3,709
Deferred revenue	154	147
Total current liabilities	4,192	4,189
Other long-term liabilities	150	150
Total liabilities	4,342	4,339
Commitments and contingencies (Note 9)		
Stockholders' Equity:		
Preferred stock (\$0.01 par value per share); 5,000,000 shares authorized; no shares issued or outstanding	—	—
Common stock (\$0.01 par value per share); 250,000,000 shares authorized at September 30, 2015 and December 31, 2014; 26,981,214 and 22,530,322 shares issued and outstanding at September 30, 2015 and December 31, 2014, respectively	270	225
Additional paid-in capital	337,416	320,707
Accumulated other comprehensive loss	(72)	(64)
Accumulated deficit	(319,836)	(302,072)
Total stockholders' equity	17,778	18,796
Total liabilities and stockholders' equity	\$ 22,120	\$ 23,135

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

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

	Three Months Ended 30,	September	Nine Months Ended 30,	September
	2015	2014	2015	2014
Revenue:				
Product revenue	\$ 209	\$ 115	\$ 394	\$ 428
Grant revenue	327	390	1,249	1,301
License fee and royalty revenue	173	127	455	215
Total revenue	<u>709</u>	<u>632</u>	<u>2,098</u>	<u>1,944</u>
Costs and expenses:				
Cost of product revenue	347	786	521	1,372
Research and development	4,088	4,088	12,332	13,280
Selling, general, and administrative	2,156	2,472	7,086	8,269
Total costs and expenses	<u>6,591</u>	<u>7,346</u>	<u>19,939</u>	<u>22,921</u>
Loss from continuing operations	<u>(5,882)</u>	<u>(6,714)</u>	<u>(17,841)</u>	<u>(20,977)</u>
Other income (expense):				
Interest income, net	1	4	3	6
Other income (expense), net	33	2	74	10
Total other income (expense), net	<u>34</u>	<u>6</u>	<u>77</u>	<u>16</u>
Net loss from continuing operations	<u>(5,848)</u>	<u>(6,708)</u>	<u>(17,764)</u>	<u>(20,961)</u>
Discontinued operations:				
Loss from discontinued operations	—	(294)	—	(1,430)
Loss from write down of assets held for sale	—	(891)	—	(891)
Total loss from discontinued operations	<u>—</u>	<u>(1,185)</u>	<u>—</u>	<u>(2,321)</u>
Net loss	<u>\$ (5,848)</u>	<u>\$ (7,893)</u>	<u>\$ (17,764)</u>	<u>\$ (23,282)</u>
Basic and diluted net loss per share:				
Net loss from continuing operations	\$ (0.22)	\$ (0.71)	\$ (0.73)	\$ (2.99)
Net loss from discontinued operations	—	(0.13)	—	(0.33)
Net loss per share	<u>\$ (0.22)</u>	<u>\$ (0.84)</u>	<u>\$ (0.73)</u>	<u>\$ (3.32)</u>
Number of shares used in per share calculations:				
Basic & Diluted	26,979,598	9,381,316	24,234,043	7,017,749

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

METABOLIX, INC.
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
UNAUDITED
(in thousands)

	Three Months Ended		September		Nine Months Ended	
	30,		September		September 30,	
	2015	2014	2015	2014	2015	2014
Net loss:	\$ (5,848)	\$ (7,893)	\$ (17,764)	\$ (23,282)		
Other comprehensive loss						
Change in unrealized loss on investments	—	—	—	(1)		
Change in foreign currency translation adjustment	(3)	(109)	(7)	(140)		
Total other comprehensive loss	(3)	(109)	(7)	(141)		
Comprehensive loss	<u>\$ (5,851)</u>	<u>\$ (8,002)</u>	<u>\$ (17,771)</u>	<u>\$ (23,423)</u>		

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

METABOLIX, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
UNAUDITED
(in thousands)

	Nine Months Ended September 30,	
	2015	2014
Cash flows from operating activities		
Net loss	\$ (17,764)	\$ (23,282)
Less:		
Loss from discontinued operation	—	(2,321)
Loss from continuing operations	(17,764)	(20,961)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation	167	430
Charge for 401(k) company common stock match	291	332
Stock-based compensation	1,483	1,912
Inventory impairment	202	886
Gain on sale of property and equipment	(33)	—
Changes in operating assets and liabilities:		
Accounts receivables	(231)	769
Due from related party	(35)	(49)
Unbilled receivables	132	34
Inventory	9	191
Prepaid expenses and other assets	(687)	254
Accounts payable	48	(211)
Accrued expenses	18	(1,355)
Deferred rent and other long-term liabilities	—	(50)
Deferred revenue	7	(364)
Net cash used by continuing operations for operating activities	(16,393)	(18,182)
Net cash used by discontinued operations for operating activities	—	(460)
Net cash used in operating activities	(16,393)	(18,642)
Cash flows from investing activities		
Purchase of property and equipment	(498)	(153)
Proceeds from sale of equipment	40	—
Purchase of short-term investments	—	(1,508)
Proceeds from the sale and maturity of short-term investments	—	13,019
Net cash (used by) provided by investing activities	(458)	11,358
Cash flows from financing activities		
Proceeds from options exercised	—	300
Proceeds from private placement offerings, net of issuance costs	14,703	24,913
Net cash provided by financing activities	14,703	25,213
Effect of exchange rate changes on cash and cash equivalents	(4)	(141)
Net (decrease) increase in cash and cash equivalents	(2,152)	17,788
Cash and cash equivalents at beginning of period	20,046	7,698
Cash and cash equivalents at end of period	\$ 17,894	\$ 25,486
Supplemental disclosure of non-cash information:		
Purchase of property and equipment included in accounts payable and accrued expenses	\$ 128	\$ —
Offering costs included in accrued expenses	\$ 75	\$ —
Restricted stock units issued to settle incentive compensation obligation	\$ 305	\$ —

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

METABOLIX, INC.
NOTES TO THE CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
UNAUDITED

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

1. BASIS OF PRESENTATION

The accompanying condensed consolidated financial statements are unaudited and have been prepared by Metabolix, Inc. (the "Company") 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 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 September 30, 2015 and 2014.

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, 2014, which are contained in the Company's Annual Report on Form 10-K filed with the SEC on March 25, 2015.

The condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany transactions have been eliminated. During 2014, the Company completed the sale of substantially all of the assets of its German subsidiary, Metabolix GmbH. The consolidated condensed financial statements for the three and nine month periods ended September 30, 2014, have been presented to reflect the operations of Metabolix GmbH as a discontinued operation. See Note 13 for additional information.

On May 26, 2015, the Company effected a 1-for-6 reverse stock split of its common stock. Unless otherwise indicated, all share amounts, per share data, share prices, exercise prices, and conversion rates set forth in these notes and the accompanying condensed consolidated financial statements have, where applicable, been adjusted retroactively to reflect this reverse stock split.

The accompanying condensed consolidated financial statements have been prepared on a basis which assumes that the Company will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the normal course of business. However, with the exception of 2012, when the Company recognized \$38,885 of deferred revenue from a terminated joint venture, it has recorded losses since its inception, including for the fiscal quarter ended September 30, 2015. As of September 30, 2015, the Company held unrestricted cash and cash equivalents of \$17,894 and it now has \$20,000 of availability under the equity financing arrangement with Aspire Capital Fund, LLC ("Aspire") described below. The Company's present capital resources may not be sufficient to fund its planned operations for a twelve month period and, therefore, raise substantial doubt about its ability to continue as a going concern.

The Company was successful during its fiscal quarters ending June 30, 2015 and September 30, 2014, in raising \$14,703 and \$24,913, net of offering costs, respectively, through private equity offerings. On October 7, 2015, the Company entered into a \$20,000 common stock purchase agreement with Aspire. Under terms of the agreement, Aspire has committed to purchase up to \$20,000 of Metabolix's common stock over a 30 month period beginning on November 9, 2015, the date on which the conditions to the commencement of common stock purchases under the agreement were satisfied. Common stock may be sold from time to time at the Company's option under pricing formulas based on prevailing market prices around the time of each sale. The Company expects to use the Aspire facility to complement, rather than replace, other financing that may be required during the next twelve months to continue its operations and support its 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. The Company intends to use the proceeds of its recent and any future financings for general corporate purposes and working capital requirements, including the continued development of its specialty biopolymers business as the foundation for its longer range commercial scale plans and the future growth of its business.

The Company continues to face significant challenges and uncertainties and, as a result, its available capital resources may be consumed more rapidly than currently expected due to (a) lower than expected sales of its biopolymer products as a result of slow market adoption; (b) increases in capital costs or operating expenses related to the Company's establishment, start-up, and operation of commercial scale biopolymer manufacturing either on its own or with third parties; (c) changes the

Company may make to the business that affect ongoing operating expenses; (d) changes the Company may make to its business strategy; (e) changes in the Company's research and development spending plans; and (f) other items affecting the Company's forecasted level of expenditures and use of cash resources.

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.

Failure to receive additional funding during the next twelve months may force the Company to delay, scale back or otherwise modify its business and manufacturing plans, sales and marketing efforts, research and development activities and other operations, and/or seek strategic alternatives. The condensed consolidated financial statements do not include any adjustments that may result from the outcome of these uncertainties.

2. ACCOUNTING POLICIES

There have been no material changes in accounting policies since the Company's fiscal year ended December 31, 2014, as described in Note 2 to the consolidated financial statements included in its Annual Report on Form 10-K for the year then ended.

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 German subsidiary, Metabolix GmbH, and its Canadian subsidiary, Metabolix Oilseeds, Inc. On October 20, 2014, the Company completed the sale of substantially all of the assets of Metabolix GmbH to AKRO-PLASTIC GmbH, a German manufacturer of engineering plastics compounds. The condensed consolidated financial statements for the three months and nine months ended September 30, 2014, have been presented to reflect the operations of Metabolix GmbH as a discontinued operation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("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 revenues 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.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk primarily consist of cash and cash equivalents. 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 September 30, 2015, the Company's cash equivalents are invested solely in money market funds.

The Company provides credit to customers in the normal course of business. The Company performs ongoing credit evaluations of its customers' financial condition and limits the amount of credit extended when deemed necessary. At September 30, 2015, the Company's accounts and unbilled receivables include \$486 or 68% from U.S. and Canadian government grants. At September 30, 2015, the Company's Renewable Enhanced Feedstocks for Advanced Biofuels and Bioproducts ("REFABB") grant from the Department of Energy represented 77% of total government grant receivables. At December 31, 2014, the Company's accounts and unbilled receivables include \$429 or 74% from government grants. At December 31, 2014, the Company's REFABB grant from the Department of Energy represented 63% of total government grant receivables.

3. RECENT ACCOUNTING PRONOUNCEMENTS

In April 2014, the Financial Accounting Standards Board ("FASB") issued ASU No. 2014-8, *Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity*, which changes the criteria for determining which disposals can be presented as discontinued operations and modifies the related disclosure requirements. Under the new guidance, a disposal of a component of an entity or a group of components of an entity is required to be reported in discontinued operations if the disposal represents a strategic shift that has (or will have) a major effect on an entity's operations and financial results and is disposed of or classified as held for sale. The standard also introduces several new disclosures. The guidance applies prospectively to new disposals and new classifications of disposal groups as held for sale after the effective date. ASU 2014-8 is effective for annual and interim periods beginning after December 15, 2014, with early adoption permitted. The Company elected early adoption of ASU 2014-8 and applied the new guidance in connection with the discontinuation of its wholly-owned subsidiary, Metabolix GmbH, in 2014. See Note 13, Discontinued Operation.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. In August 2015, the FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers* (Topic 606): Deferral of the Effective Date, which delayed the effective date of the new standard from January 1, 2017 to January 1, 2018. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date. We are currently evaluating the method of adoption and the potential impact that Topic 606 may have on our financial position and results of operations.

In August 2014, the FASB issued an amendment that requires management to assess an entity's ability to continue as a going concern by incorporating and expanding upon certain principles that are currently in U.S. auditing standards. The amendments in this update provide guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern for one year after the date that the financial statements are issued and to provide related footnote disclosures. In doing so, the amendments should reduce diversity in the timing and content of footnote disclosures. The amendments in this update apply to all entities and are effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. Early application is permitted. The Company is currently reviewing the potential impact of adopting the new guidance.

In July 2015, the FASB issued ASU No. 2015-11, *Simplifying the Measurement of Inventory*, which requires entities to measure most inventory "at the lower of cost and net realizable value," thereby simplifying the current guidance under which an entity must measure inventory at the lower of cost or market. ASU 2015-11 is effective for annual and interim periods beginning after December 15, 2016, with early adoption permitted. The Company is currently reviewing the potential impact of adopting the new guidance.

4. 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 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.

The Company follows the two-class method when computing net loss per share, when it has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated and participating rights in undistributed earnings. The two-class method requires income available to common stockholders for the period to be allocated between common and participating securities based on their respective rights to receive dividends, as if all income for the period has been distributed or losses to be allocated if they are contractually required to fund losses. There were no amounts allocated to participating securities for the three and nine months ended September 30, 2015, as the Company had no outstanding shares that met the definition of participating securities. During the three and nine months ended September 30, 2014, the Company had outstanding 50,000 shares of Series B Convertible Preferred Stock that met the definition of participating securities. No amounts were allocated to these preferred shares as the Company was in a loss position. See Note 14.

On May 26, 2015, the Company effected a 1-for-6 reverse stock split of its common stock. The calculation of basic and diluted net loss per share, as presented in the accompanying Condensed Consolidated Statements of Operations, have been determined based on 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, convertible preferred stock, 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 and nine months ended September 30, 2015 and 2014, respectively, are shown below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2015	2014	2015	2014
Options	928,090	1,169,058	956,181	1,217,890
Convertible Series B Preferred Stock	—	8,333,333	—	8,333,333
Restricted stock units	1,198,743	100,000	830,530	99,634
Warrants	3,933,000	—	1,541,505	—
Total	6,059,833	9,602,391	3,328,216	9,650,857

On August 22, 2014, the Company completed a private placement of \$25,000 of Company securities. The securities issued included 50,000 shares of Series B Convertible Preferred Stock. Each share of Preferred Stock automatically converted to 166.67 shares of Common Stock on October 30, 2014, upon the Company's filing of a charter amendment to increase the number of authorized shares of Common Stock to 250,000,000. The potentially dilutive common stock equivalent of the Preferred Shares at September 30, 2014, on a post-conversion basis, was 8,333,333 shares. See Note 14, Capital Stock.

5. INVENTORY

The components of biopolymer inventories of the Company's continuing operations are as follows:

	September 30, 2015	December 31, 2014
Raw materials	\$ 38	\$ 2
Work in Process	6	—
Finished goods	331	584
Total inventory	\$ 375	\$ 586

On a quarterly basis, the Company uses consistent methodologies to evaluate inventory for net realizable value, reducing the value of inventory for excess and obsolete inventory based upon certain assumptions made about future customer demand, quality and possible alternative uses. The Company recorded an inventory impairment charge of \$202 to cost of product revenue during the three and nine months ended September 30, 2015, for inventory that it determined was unlikely to be sold.

During the three and nine months ended September 30, 2014, the Company recorded inventory impairment charges of \$657 and \$886, respectively.

6. FAIR VALUE MEASUREMENTS

The Company has certain financial assets recorded at fair value which have been classified as Level 1 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 September 30, 2015 and December 31, 2014, the Company did not own any Level 2 or Level 3 financial assets and there were no transfers between classification levels.

The tables below present information about the Company's assets that are measured at fair value on a recurring basis as of September 30, 2015 and December 31, 2014 and indicate the fair value hierarchy of the valuation techniques utilized to determine such fair value.

Description	Fair value measurements at reporting date using			Balance as of September 30, 2015
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Cash equivalents:				
Money market funds	\$ 15,511	\$ —	\$ —	\$ 15,511
Total	\$ 15,511	\$ —	\$ —	\$ 15,511

Description	Fair value measurements at reporting date using			Balance as of December 31, 2014
	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	
Cash equivalents:				
Money market funds	\$ 19,011	\$ —	\$ —	\$ 19,011
Total	\$ 19,011	\$ —	\$ —	\$ 19,011

7. ACCRUED EXPENSES

Accrued expenses consisted of the following at:

	September 30, 2015	December 31, 2014
Employee compensation and benefits	\$ 2,026	\$ 2,621
Professional services	724	564
Pilot manufacturing	303	77
Other	537	447
Total accrued expenses	\$ 3,590	\$ 3,709

8. STOCK-BASED COMPENSATION

At September 30, 2015, there was approximately \$4,190 of pre-tax stock-based compensation expense, net of estimated forfeitures, related to unvested awards not yet recognized.

Employee and Director Stock Options

The Company recognized stock-based compensation expense related to employee stock option awards of \$588 and \$1,483 for the three and nine months ended September 30, 2015, respectively. Stock-based compensation expense related to

employee stock option awards was \$533 and \$1,912 for the three and nine months ended September 30, 2014, respectively. The compensation expense related to unvested stock options is expected to be recognized over a remaining weighted average period of 2.18 years.

A summary of option activity for the nine months ended September 30, 2015 is as follows:

	Number of Shares	Weighted Average Exercise Price
Outstanding at December 31, 2014	1,110,721	\$ 28.22
Granted	31,208	3.72
Exercised	—	—
Forfeited	(1,677)	7.88
Expired	(232,936)	31.41
Outstanding at September 30, 2015	<u>907,316</u>	<u>\$ 26.59</u>
Options exercisable at September 30, 2015	594,188	\$ 36.29
Weighted average grant date fair value of options granted during the nine months ended September 30, 2015		\$ 2.68

Restricted Stock Units

On January 2, 2014, the Company awarded 100,000 restricted stock units ("RSUs") to its Chief Executive Officer. These RSUs contain both market and performance conditions which are based on the achievement of certain stock price and revenue targets, respectively. The RSUs vest in various percentages over three years (subject to certain accelerated and continued vesting events) once the agreed-upon stock price and/or revenue based targets are achieved. To the extent that the market or performance conditions are not met by January 2, 2016, the RSUs will be forfeited. The Company estimated the fair value and derived service period of the awards using a Monte Carlo valuation model. The Company is recognizing compensation expense for this award over its requisite service period, which is equal to the cumulative time expected to achieve one of the triggering conditions followed by a three-year post-triggering event vesting period.

The Company's 2014 Stock Option and Incentive Plan (the "2014 Plan") authorizes the granting of incentive and nonqualified stock options, stock appreciation rights, restricted stock units, restricted stock awards, unrestricted stock awards, performance share awards and dividend equivalent rights to the Company's officers, directors and consultants. During 2015, the Company initiated use of RSUs as a broad-based form of compensation incentive for its officers, directors and employees.

On April 1, 2015, the Company awarded 203,967 RSUs under the 2014 Plan to members of senior management pursuant to elections previously made by the senior managers to convert a portion of their 2014 performance bonuses from cash to equity. These RSUs vest one year from the date of grant, subject to service conditions. During the nine months ended September 30, 2015, the Company also awarded a total of 906,806 additional long-term incentive RSUs to senior managers and employees. These RSUs vest in four equal annual installments beginning one year after the date of grant, subject to service conditions. On September 10, 2015, the Company awarded 81,250 RSUs to its non-employee directors. These RSUs will vest on May 28, 2016.

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 will pay required minimum income tax withholding associated with RSUs for its employees as they vest and will withhold from the common stock issuable on vesting of the RSUs 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.

A summary of RSU activity for the nine months ended September 30, 2015 is as follows:

	Number of RSUs	Weighted Average Remaining Contractual Life (years)
Outstanding at December 31, 2014	100,000	
Awarded	1,192,023	
Released	—	
Forfeited	(1,000)	
Outstanding at September 30, 2015	<u>1,291,023</u>	1.54
Vested and expected to vest as of September 30, 2015	1,122,027	1.42
Weighted average remaining recognition period	2.60	
Weighted average grant date fair value of RSUs granted during the nine months ended September 30, 2015 \$	3.61	

9. COMMITMENTS AND CONTINGENCIES

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 the business, financial condition or the results of operations.

Contractual Commitments

In connection with the Company's plan to increase pilot production of its PHA biopolymers, during May 2015 the Company entered into a two-year agreement with a U.S. supplier of toll fermentation services and another two-year agreement with the owner/operator of the Company's U.S. pilot resin recovery facility. Under these manufacturing agreements, which became effective July 1, 2015, the Company estimates that it will be obligated to pay quarterly fixed service fees of approximately \$1,100 after the commencement of full scale production and continuing through at least December 31, 2016. The Company anticipates commencement of full scale production will occur in early 2016. The Company made a \$1,000 prepayment against future fixed service fees in May 2015 that remains available for offset against these service fees at September 30, 2015. In addition to these fixed charges, the Company is obligated to pay certain variable production costs as incurred.

10. GEOGRAPHIC INFORMATION

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

	U.S.	Canada	Eliminations	Total
Three Months Ended September 30, 2015:				
Net revenues from unaffiliated customers	\$ 709	\$ —	\$ —	\$ 709
Inter-geographic revenues	—	192	(192)	—
Net revenues	\$ 709	\$ 192	\$ (192)	\$ 709
Three Months Ended September 30, 2014:				
Net revenues from unaffiliated customers	\$ 600	\$ 32	\$ —	\$ 632
Inter-geographic revenues	—	185	(185)	—
Net revenues	\$ 600	\$ 217	\$ (185)	\$ 632
Nine Months Ended September 30, 2015:				
Net revenues from unaffiliated customers	\$ 2,097	\$ 1	\$ —	\$ 2,098
Inter-geographic revenues	—	594	(594)	—
Net revenues	\$ 2,097	\$ 595	\$ (594)	\$ 2,098
Nine Months Ended September 30, 2014:				
Net revenues from unaffiliated customers	\$ 1,830	\$ 114	\$ —	\$ 1,944
Inter-geographic revenues	—	545	(545)	—
Net revenues	\$ 1,830	\$ 659	\$ (545)	\$ 1,944

Foreign revenue is based on the country in which the Company's subsidiary that earned the revenue is domiciled. During the three and nine months ended September 30, 2015, revenue earned from the Company's REFABB grant with the U.S. Department of Energy totaled \$312 and \$990, respectively, and represented 44% and 47% of total revenue. During the three and nine months ended September 30, 2014, revenue earned from the Company's REFABB grant totaled \$290 and \$898, respectively, and represented 46% of total revenue for both periods. During the nine months ended September 30, 2015, no biopolymer customer represented 10% or more of the Company's total revenues. During the nine months ended September 30, 2014, one biopolymer customer represented 10% of the Company's total revenues.

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

	U.S.	Canada	Eliminations	Total
September 30, 2015	\$ 903	\$ 5	\$ —	\$ 908
December 31, 2014	\$ 441	\$ 15	\$ —	\$ 456

11. INCOME TAXES

Deferred tax assets and deferred tax liabilities are recognized based on temporary differences between the financial reporting and tax basis of assets and liabilities using future enacted tax rates. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized.

For the three and nine months ended September 30, 2015 and 2014, the Company did not recognize any tax expense or benefit due to its continued net operating loss position. Due to the uncertainty surrounding the realization of favorable tax attributes in future tax returns, the Company has recorded a full valuation allowance against its otherwise recognizable net deferred tax assets.

The Company follows the accounting guidance related to income taxes including guidance which addresses accounting for uncertainty in income taxes. This guidance prescribes a threshold for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. It also provides guidance on derecognition, classification, interest

and penalties, accounting in interim periods, disclosures and transitions. The Company had no amounts recorded for any unrecognized tax benefits as of September 30, 2015 or December 31, 2014.

12. RELATED PARTIES

The Company engaged in various transactions with Tephra, Inc., a related party, and recorded \$172 and \$407 of license and royalty revenue during the three months and nine months ended September 30, 2015, respectively. During the three and nine months ended September 30, 2014, the Company recorded license and royalty revenue from Tephra of \$127 and \$194, respectively. As of September 30, 2015 and December 31, 2014, the Company had \$147 and \$112, respectively, of outstanding receivables due from Tephra for royalties.

13. DISCONTINUED OPERATION

The Company decided in September 2014 to discontinue its operations in Germany and sold substantially all of the assets of its wholly-owned subsidiary, Metabolix GmbH. The Company does not have significant ongoing involvement in the operations formerly conducted by Metabolix GmbH. The consolidated financial statements for the three and nine months ending September 30, 2014, have been presented to reflect the operations of Metabolix GmbH as a discontinued operation. The following represent the major items comprising loss from discontinued operations for the three and nine months ended September 30, 2014.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2014		2014	
Total revenue	\$	434	\$	1,361
Costs and expenses:				
Cost of product revenue		413		405
Research and development		15		242
Selling, general and administrative		300		2,144
Loss from write-down of assets held for sale		891		891
Total costs and expenses		1,619		3,682
Net loss	\$	(1,185)	\$	(2,321)

14. CAPITAL STOCK

Common and Preferred Stock Issuances

On October 7, 2015, the Company entered into a common stock purchase agreement with Aspire. Under terms of the agreement, Aspire committed to purchase up to an aggregate of \$20,000 of the Company's common stock over a 30 month period beginning on November 9, 2015, the date on which the conditions to the commencement of common stock purchases under the agreement were satisfied. Common stock may be sold from time to time at the Company's option under pricing formulas based on prevailing market prices around the time of each sale. The purchase agreement contains limitations on the number of shares that we may sell to Aspire. Additionally, we and Aspire may not effect any sales of shares of our common stock under the purchase agreement during the continuance of an event of default or on any trading day that the closing sale price of our common stock is less than \$0.50 per share. The Company issued 300,000 shares of its common stock to Aspire as a commitment fee concurrently with the execution of the purchase agreement.

On June 19, 2015, the Company completed a private placement of its securities. Proceeds received from the transaction were \$14,703, net of issuance costs of \$297. Investors participating in the transaction purchased a total of 4,370,000 shares of common stock at a price of \$3.32 per share and warrants with a purchase price of \$0.125 per warrant to purchase up to an aggregate of 3,933,000 additional shares of common stock. The warrants have a four-year term and are immediately exercisable at a price of \$3.98 per share. The Company reviewed the accounting guidance for warrants and has determined that the warrants should be recorded as equity within additional paid-in capital.

On May 26, 2015, the Company effected a 1-for-6 reverse split of its common stock, as determined by the Company's board of directors under authorization approved at a special meeting of stockholders held on October 30, 2014. The reverse stock split reduced the number of shares of the Company's common stock currently outstanding at the time the reverse split was

made effective from approximately 135.5 million shares to approximately 22.6 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. The number of authorized shares of the Company's common stock remained at 250.0 million shares.

On August 22, 2014, the Company completed a private placement of its securities. Proceeds received from the transaction were \$24,913, net of issuance costs of \$87. Investors participating in the transaction purchased a total of 50,000,000 units of the Company's securities at a price of \$0.50 per unit. Each unit consisted of 0.1667 share of the Company's common stock and one thousandth of a share of the Company's Series B Convertible Preferred Stock, for a total of 8,333,333 shares of common stock and 50,000 shares of Series B Convertible Preferred Stock. Each share of the preferred stock issued in the transaction was non-voting, was not redeemable, had no liquidation preference and the only conversion rights were that each share was automatically convertible into 166.67 shares of common stock upon the effectiveness of the filing by the Company of a charter amendment to increase the number of shares of authorized common stock to not less than 150,000,000. On October 30, 2014, following stockholder approval of a charter amendment to increase the number of authorized shares of the Company's common stock to 250,000,000 and the effectiveness of such charter amendment, each share of preferred stock issued in the private placement automatically converted into 166.67 shares of common stock, for a total of 8,333,333 additional shares of common stock.

15. RESTRUCTURING

In October 2014, the Company initiated a restructuring of its U.S. organization to reflect its more narrow strategic focus on PHA performance biopolymers and to modify staffing to the level the Company believed necessary to support successful implementation of its current business strategy. The scope of the restructuring also reflected the Company's decision, consistent with its business strategy, to suspend work in its chemicals program. The Company has recognized a total of \$659 in restructuring charges related to post-employment benefits. At September 30, 2015, \$79 of the restructuring charges remain to be paid during 2015.

	Original Charges and Amounts Accrued	Adjustments to Charges	Amounts Paid through September 30, 2015	Amounts Accrued at September 30, 2015
Employee severance, benefits and related costs	\$ 624	\$ 35	\$ (580)	\$ 79
	\$ 624	\$ 35	\$ (580)	\$ 79

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 the Company's business plans and strategies; expectations for PHA biopolymer manufacturing; expected market demand and commercialization plans for the Company's PHA biopolymer products; expected future financial results and cash requirements; plans for obtaining additional funding; plans and expectations that depend on the Company's ability to continue as a going concern; potential future collaborations and the planned spin out of our crops program, and expectations for future research, product development and collaborations. 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, dependence on establishing a commercial manufacturing source for our PHA performance biopolymers, 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 this Quarterly Report on Form 10-Q.

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 "Metabolix," "we," "our," "us," "our company" or "the company" refer to Metabolix, Inc., a Delaware corporation, and its subsidiaries.

Overview

Metabolix is an advanced biomaterials company focused on delivering sustainable solutions to the plastics industry. We have core capabilities in microbial genetics, fermentation process engineering, chemical engineering, polymer science, plant genetics and botanical science, and we have assembled these capabilities in a way that has allowed us to integrate our biotechnology research with real world chemical engineering and industrial practice. In addition, we have created an extensive intellectual property portfolio to protect our innovations which, together with our technology, serves as a valuable foundation for our business.

Metabolix was formed to leverage the ability of natural systems to produce complex biopolymers from renewable resources. We have focused on a family of biopolymers found in nature called polyhydroxyalkanoates ("PHAs"), which occur naturally in living organisms and are chemically similar to polyesters. We have demonstrated the production of our PHAs from pilot to industrial scale and we have sold our PHA products commercially since 2012.

Our targeted markets offer substantial opportunity for innovation and value creation. Our strategy is based on the performance and differentiation of our materials. We aim to address unmet needs of our customers and leverage the distinctive properties of our proprietary PHA biopolymers to improve critical product qualities of material systems and enable our customers to enhance the value of their products and/or achieve cost savings through their value chains. As such, we are positioning our biopolymers as advanced specialty materials that offer a broad and attractive range of product and processing properties compared to other bioplastics or performance additives. We believe that a substantial global market opportunity exists to develop and commercialize our advanced biopolymer product technology.

In 2014, we conducted a comprehensive strategic review of our business and decided to focus the Company's resources on commercializing PHA performance biopolymers. This has resulted in specifically targeting our research, development and commercial resources on the use of our Mirel® PHA biopolymers as performance additives in a range of applications where they can improve performance and/or reduce cost in other material systems such as polyvinyl chloride ("PVC") and polylactic acid ("PLA"). In PVC additives, we are focusing on opportunities where our PHA biopolymers are used as property modifiers or process aids. We are also targeting applications where the performance, biodegradability, biobased content and other attributes of our PHA biopolymers provide unique functional advantages, such as biodegradation, required by such applications, including PHA resins for molded articles and films, PHA micropowders and PHA latex and other PHA barrier coatings for paper and cardboard.

In connection with this more focused business strategy, we decided in 2014 to discontinue our operations in Germany and to suspend work in a program that was developing processes for producing biobased chemicals from PHAs, and we are planning to spin out our crop science program—a research program focused on crop yield improvement and the production of PHAs in crops using agricultural biotechnology.

As part of this strategic shift, in October 2014 we sold substantially all of the assets of our wholly-owned German subsidiary, Metabolix GmbH, to AKRO-PLASTIC GmbH ("Akro"), a German manufacturer of engineering plastics compounds. Akro acquired our Mvera™, B5010 and B5011 products for compostable film, as well as certain inventory, certain contracts, and the Mvera™ trademark. Akro also took over the Metabolix GmbH employees and office space. The purpose of this sale was to simplify our business structure and focus resources on the success of our core PHA performance biopolymers business.

In late 2014, we initiated a plan to significantly increase the nameplate capacity at our contracted pilot manufacturing facilities to 50,000 pounds per month of our Mirel® PHA biopolymers. In connection with this plan, we have entered into multi-year agreements with the owner/operator of our pilot recovery facility and with a toll contractor for fermentation services. The initial focus of this manufacturing plan is production of the Company's a-PHA (amorphous, low Tg rubber) biopolymer for use in ongoing development and commercialization activities based on this unique PHA product. We are ramping up pilot

production to run at nameplate capacity for 2016 and expect to sell a significant portion of the a-PHA material we produce to customers for use in commercial applications. We also plan to use a stream of pilot a-PHA material to continue commercial development work with both existing and prospective customers for our specialty biopolymers. With increasing clarity on customer conversions and confidence in the market development, we are accelerating our efforts to secure our first tranche of commercial scale capacity.

We are focused on building our customer base to support the development of our business. To that end, we have intensified our efforts in product and application development and are continuing to enhance our capabilities in this area. We are also working closely with customers across a range of applications to understand the processing and performance profiles for their products, and are pursuing commercial opportunities with customers at different levels of maturity from initial data demonstration and product and process validation, through to larger scale trials, product testing and product launch.

This approach is integral to our specialty materials strategy, where the market opportunities are driven by the important value-adding role our biopolymers can play as components of other material systems or by bringing unique functional advantages such as biodegradability to customer applications. This is a critical area of focus for us and our success depends on working effectively with customers to identify uses and applications for our PHA biopolymers that substantiate the commercial potential for our products.

Our crop science program has been a technically challenging long-term effort, initially directed toward the production of PHA in plant crops. Based on our observations in this research, we began developing new genetic and informatics tools and capturing intellectual property around enhancing the photosynthetic capacity of plants. We are seeking to spin out our crop science program, recently launched under the name "Yield10 Bioscience," into a separately funded venture focused entirely on the further development and commercialization of this technology.

Yield10 Bioscience is developing proprietary, breakthrough technologies to improve yield in major crops based on our "T3" transcriptome targeted metabolic engineering platform. We are focused on technologies that allow us to increase the efficiency of CO₂ fixation through photosynthesis and its conversion into plant matter. We have shown early, encouraging yield improvements in camelina seed and switchgrass biomass production, and we are working to advance the technology in agriculturally significant crops to provide innovative new solutions to enhance global food security.

Yield10 is leveraging the microbial diversity found in nature to increase carbon fixation and eliminate bottlenecks in plant carbon metabolism, and has developed an engineering systems approach under the T3 platform targeted at step change improvements in crop yield. With this approach, Yield10 is working to deploy a series of proprietary gene systems to increase carbon capture and fixation in C3 plants. Early greenhouse and field trial data show a significant increase in seed yield in camelina, an industrial oil seed crop. Additional field trials are planned to confirm the initial results in camelina, and these gene systems are now being inserted into soybean, canola and rice for evaluation.

Yield10 is also targeting yield improvement in crops utilizing the C4 photosynthetic system such as switchgrass, sugarcane, corn and sorghum. Yield10 has leveraged the transcriptome targeting module of its T3 platform to identify three novel global transcription factor (GTF) genes in the bioenergy crop switchgrass that result in increased photosynthesis, increased central metabolism and an overall increase in biomass yield. We have identified corresponding genes in both C3 and C4 food and feed crops, and are currently testing these genes in sugarcane and exploring partnerships to advance the technology in corn.

We expect that Yield10 will need to form collaborations with established agricultural companies in connection with the development and commercialization of these crop science innovations.

Government Grants

In September 2015, we were awarded a new grant from the Department of Energy ("DOE") for \$1,997, with the objective of developing a camelina feedstock with significantly increased oil content and/or seed yield to maximize oil yields per acre. The term of the grant begins on October 1, 2015 and expires on September 30, 2017.

As of September 30, 2015, expected gross proceeds of \$2,498 remain to be received under our U.S. government grants, including the new DOE grant. This includes amounts for reimbursement to our subcontractors, as well as reimbursement for our employees' time, benefits and other expenses related to future performance.

The status of our United States and foreign government grants is as follows:

Program Title	Funding Agency	Total Government Funds	Total received through	Remaining amount available as of	Contract/Grant Expiration
			September 30, 2015	September 30, 2015	
Production of High Oil, Transgene Free Camelina Sativa Plants through Genome Editing	Department of Energy	\$ 1,997	\$ —	\$ 1,997	September 2017
Renewable Enhanced Feedstocks For Advanced Biofuels And Bioproducts ("REFABB")	Department of Energy	6,000	5,623	377	February 2016
Subcontract from University of California (Los Angeles) project funded by ARPA-E entitled "Plants Engineered to Replace Oil: Energy Plant Design"	Department of Energy	819	715	104	September 2015
Capacity Building for Commercial-Scale PHB Camelina Development	National Research Council Canada	269	269	—	September 2014
Subcontract from University of Massachusetts (Amherst) project funded by ARPA-E entitled "Development of a Dedicated High Value Biofuels Crop"	Department of Energy	663	643	20	December 2015
Development of a Sustainable Value Added Fish Feed Using PHB Producing Camelina	National Research Council Canada	96	83	—	January 2015
Total		\$ 9,844	\$ 7,333	\$ 2,498	

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, inventory valuation and stock-based compensation. 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 consolidated financial statements for the nine months ended September 30, 2015, are consistent with those discussed in our Annual Report on Form 10-K for the year ended December 31, 2014, 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 September 30, 2015 and 2014

Revenue

	Three Months Ended September 30,		Change
	2015	2014	
Product revenue	\$ 209	\$ 115	\$ 94
Grant revenue	327	390	(63)
License fee and royalty revenue	173	127	46
Total revenue	\$ 709	\$ 632	\$ 77

Total revenue from continuing operations was \$709 and \$632 for the three months ended September 30, 2015 and 2014, respectively. During the three months ended September 30, 2015 and 2014, we recognized \$209 and \$115, respectively, of revenue related to the sale of biopolymer products. The increase of \$94 was primarily related to recognition of sales of Mirel PHA biopolymers as specialty materials. We expect to continue to see fluctuations in quarterly sales as we work with customers to build our specialty biopolymers business. Product revenue recognized during the three months ended September 30, 2015 and 2014 includes \$113 and \$86, respectively, of previously deferred revenue from shipments to customers made during prior periods. Our product revenue recognition policy is to defer product revenue recognition until the later of sixty days following shipment or cash receipt. At September 30, 2015, short-term deferred revenue of \$154 on our condensed consolidated balance sheet includes \$79 of deferred product revenue, nearly all of which is expected to be recognized during the quarter ending December 31, 2015. During the three months ended September 30, 2015, we recognized \$327 of government grant revenue compared to \$390 for the same period in 2014. Grant revenue for the three months ended September 30, 2015 and 2014 primarily consisted of \$312 and \$290, respectively, in revenue earned from the REFABB grant. During the three months ended September 30, 2015 and 2014, we also recognized \$173 and \$127, respectively, of license and royalty revenue related to licensing of our technology. The \$46 increase is primarily related to increased revenues from Tepha, a related party that licenses our technology for use in certain medical applications.

We anticipate that product revenue will increase over the next twelve months as we increase pilot production of our PHA biopolymers and gain market acceptance for our products.

Costs and Expenses

	Three Months Ended September 30,		Change
	2015	2014	
Cost of product revenue	\$ 347	\$ 786	\$ (439)
Research and development expenses	4,088	4,088	—
Selling, general, and administrative expenses	2,156	2,472	(316)
Total costs and expenses	<u>\$ 6,591</u>	<u>\$ 7,346</u>	<u>\$ (755)</u>

Cost of Product Revenue

Cost of product revenue from continuing operations was \$347 and \$786 for the three months ended September 30, 2015 and 2014, respectively. These costs include the cost of inventory associated with product revenue recognized during the respective periods and inventory impairment charges recorded during each of the periods. The decrease of \$439 is primarily attributable to a decrease in inventory impairment charges. During the three months ended September 30, 2015 and September 30, 2014, inventory impairment charges of \$202 and \$657 were recorded, respectively. Cost of product revenue for each period also includes the cost of sample inventory shipped to prospective customers, warehousing and certain freight charges.

Although there may be fluctuations from period to period, we expect our overall cost of product revenue from continuing operations will increase substantially over the next twelve months, as we transition the cost of biopolymer pilot production from research and development expense to cost of product revenue.

Research and Development Expenses

Research and development expenses from continuing operations were \$4,088 for the three months ended September 30, 2015 and 2014. Although there were minor fluctuations in expense categories between the two periods, total research and development expenses were consistent for the three months ending September 30, 2015 and 2014.

We expect research and development expenses to increase during the remainder of 2015 as we incur higher fermentation and recovery costs associated with the scale-up of our biopolymer pilot production capacity. Our research and development expenses are expected to decrease during 2016 as a result of the anticipated transition of the cost of pilot biopolymer production from research and development expense to cost of product revenue.

Selling, General and Administrative Expenses

Selling, general and administrative expenses from continuing operations were \$2,156 and \$2,472 for the three months ended September 30, 2015 and 2014, respectively. The decrease of \$316 was primarily due to decreased employee compensation and related benefit expenses as a result of restructuring our U.S. organization in October 2014. Employee compensation and related benefit expenses were \$1,170 and \$1,360 for the three months ended September 30, 2015 and 2014, respectively.

We expect our selling, general and administrative expenses for the next twelve months to be comparable to current levels.

Other Income (Expense), Net

	Three Months Ended September 30,		Change
	2015	2014	
Interest income, net	\$ 1	\$ 4	\$ (3)
Other income (expense), net	33	2	31
Total other income (expense), net	\$ 34	\$ 6	\$ 28

Other income (expense), net reflects income of \$34 and \$6 for the three months ended September 30, 2015 and 2014, respectively. Other income (expense), net, during both periods consisted primarily of income earned from our short-term investments in money market funds, net of custodial fees, and realized foreign currency transaction gains or losses.

Comparison of the Nine Months Ended September 30, 2015 and 2014

Revenue

	Nine Months Ended September 30,		Change
	2015	2014	
Product revenue	\$ 394	\$ 428	\$ (34)
Grant revenue	1,249	1,301	(52)
License fee and royalty revenue	455	215	240
Total revenue	\$ 2,098	\$ 1,944	\$ 154

Total revenue from continuing operations was \$2,098 and \$1,944 for the nine months ended September 30, 2015 and 2014, respectively. During the nine months ended September 30, 2015 and 2014, we recognized \$394 and \$428, respectively, of revenue from sales of biopolymer products. The decrease of \$34 was primarily related to a decision in 2014 to shift our business strategy to one focused on commercializing our Mirel PHA biopolymers as specialty materials and we expect to continue to see variations in quarterly sales as we work with customers to build our specialty biopolymers business. Product revenue recognized during the nine months ended September 30, 2015 and 2014 includes \$57 and \$91, respectively, of previously deferred revenue from shipments to customers made during the prior years. Our product revenue recognition policy is to defer product revenue recognition until the later of sixty days following shipment or cash receipt. At September 30, 2015, short-term deferred revenue of \$154 shown on our condensed consolidated balance sheet includes \$79 of deferred product revenue, nearly all of which is expected to be recognized during the quarter ending December 31, 2015. During the nine months ended September 30, 2015, we recognized \$1,249 of government grant revenue compared to \$1,301 for the same period in 2014. Grant revenue for the nine months ended September 30, 2015 and 2014, primarily consisted of \$990 and \$898, respectively, in revenue earned from the REFABB grant. During the nine months ended September 30, 2015 and 2014, we recognized \$455 and \$215, respectively, of license and royalty revenue related to licensing of our technology. The \$240 increase is primarily related to increased revenues from Tephra, a related party that licenses our technology for use in certain medical applications.

Costs and Expenses

	Nine Months Ended September 30,		
	2015	2014	Change
Cost of product revenue	\$ 521	\$ 1,372	\$ (851)
Research and development expenses	12,332	13,280	(948)
Selling, general, and administrative expenses	7,086	8,269	(1,183)
Total costs and expenses	\$ 19,939	\$ 22,921	\$ (2,982)

Cost of Product Revenue

Cost of product revenue from continuing operations was \$521 and \$1,372 for the nine months ended September 30, 2015 and 2014, respectively. These costs primarily include the cost of inventory associated with product revenue recognized during the respective periods and inventory impairment charges recorded during each of the periods. The decrease of \$851 is primarily attributable to a decrease in inventory impairment charges. The Company recognized an inventory impairment charge of \$202 during the nine months ended September 30, 2015 as compared to \$886 for the nine months ended September 30, 2014. The decrease in cost of product revenue was also attributable to a decrease in product sales recognized during the nine months ended September 30, 2015 in comparison to the same period of the prior year as a result of the Company's change in strategy. Cost of product revenue for each period also includes the cost of sample inventory shipped to prospective customers, warehousing and certain freight charges.

Research and Development Expenses

Research and development expenses from continuing operations were \$12,332 and \$13,280 for the nine months ended September 30, 2015 and 2014, respectively. The decrease of \$948 was primarily due to a decrease in employee compensation and related benefit expenses. Employee compensation and related benefit expenses were \$6,645 and \$7,503 for the nine months ended September 30, 2015 and 2014, respectively. The decrease of \$858 is primarily attributable to decreases in headcount and employee stock compensation expense related to the October 2014 restructuring of our U.S. organization. Depreciation expense was \$148 and \$388 for the nine months ended September 30, 2015 and 2014, respectively. The decrease of \$240 was due to existing equipment reaching full depreciation. The decreases in employee compensation and depreciation were partially offset by increases in pilot manufacturing and facility expenses of \$146 and \$105, respectively. Pilot biopolymer production expenses increased modestly during the nine months ended September 30, 2015, as we expanded pilot production capacity for our biopolymers. In addition, facility expenses have increased at our Cambridge, Massachusetts location primarily as a result of increased rent under the terms of a lease extension that became effective May 2014.

Selling, General and Administrative Expenses

Selling, general and administrative expenses from continuing operations were \$7,086 and \$8,269 for the nine months ended September 30, 2015 and 2014, respectively. The decrease of \$1,183 was primarily due to a decrease in employee compensation and related benefits expenses. Employee compensation and related benefit expenses were \$3,504 and \$4,714 for the nine months ended September 30, 2015 and 2014, respectively. The decrease of \$1,210 was primarily attributable to decreases in headcount and employee stock compensation expense as a result of restructuring our U.S. organization. In addition, the Company has experienced overall reductions in expenses across many categories, including travel, consulting and investor relations, as a result of the reduced headcount and cost containment measures. The expense reductions were partially offset by a one-time license payment of \$300 made and recognized during the first quarter of 2015.

Other Income (Expense), Net

	Nine Months Ended September 30,		
	2015	2014	Change
Interest income, net	\$ 3	\$ 6	\$ (3)
Other income (expense), net	74	10	64
Total other income (expense), net	\$ 77	\$ 16	\$ 61

Other income (expense), net, reflects income of \$77 and \$16 for the nine months ended September 30, 2015 and 2014, respectively. Other income (expense), net, during both periods consisted primarily of income earned from our short-term investments in money market funds, net of custodial fees, and realized foreign currency transaction gains or losses.

Liquidity and Capital Resources

Currently, we require cash to fund our working capital needs, to purchase capital assets and to pay our operating lease obligations.

The primary sources of our liquidity have been:

- equity financing;
- our former strategic alliance with Archer Daniels Midland Company ("ADM");
- government grants;
- other funded research and development arrangements;
- licensing revenues;
- product revenues; and
- interest earned on cash and short-term investments.

We have incurred significant expenses relating to our research and development efforts. As a result, we have incurred net losses since our inception. As of September 30, 2015, we had an accumulated deficit of \$319,836. Our total unrestricted cash and cash equivalents as of September 30, 2015, were \$17,894 as compared to \$20,046 at December 31, 2014. As of September 30, 2015, we had no outstanding debt.

Our cash and cash equivalents at September 30, 2015 were held for working capital purposes. As of September 30, 2015, we had restricted cash of \$619. Restricted cash consists of \$494 held in connection with the lease agreement for our Cambridge, Massachusetts facility and \$125 held in connection with our corporate credit card program. 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 September 30, 2015, we were in compliance with this policy.

With the exception of 2012, when the Company recognized \$38,885 of deferred revenue from the terminated joint venture with ADM, it has recorded losses since its inception, including its fiscal quarter ended September 30, 2015. As of September 30, 2015, the Company held unrestricted cash and cash equivalents of \$17,894 and we now have \$20,000 of availability under our equity facility with Aspire. Our present capital resources may not be sufficient to fund our planned operations for a twelve month period, and therefore, raise substantial doubt about our ability to continue as a going concern. Our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of and for the year ended December 31, 2014 with respect to this uncertainty. We anticipate approximately \$23,000 of total cash usage for the full year 2015, consistent with our prior estimates.

We were successful during our fiscal quarters ending June 30, 2015 and September 30, 2014, in raising \$14,703 and \$24,913, net of offering costs, through private placements of equity securities. On October 7, 2015, we entered into a common stock purchase agreement with Aspire under which Aspire is committed to purchase, at our direction, up to an aggregate of \$20,000 of shares of our common stock over a 30 month period beginning November 9, 2015. We expect to use the Aspire facility to complement, rather than replace, other financing that may be required during the next twelve months to continue our operations and 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. The current economic environment and recent uncertainty and volatility in financial markets may make it difficult to obtain additional financing.

We continue to face significant challenges and uncertainties and, as a result, our available capital resources may be consumed more rapidly than currently expected due to (i) lower than expected sales of our biopolymer products as a result of slow market adoption; (ii) increases in capital costs and operating expenses related to the establishment and start-up of biopolymer manufacturing on our own or with third parties; (iii) changes we may make to the business that affect ongoing operating expenses; (iv) changes we may make to our business strategy; (v) changes in our research and development spending plans; and (vi) other items affecting our forecasted level of expenditures and use of cash resources.

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 our 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.

The extent to which we utilize the facility with Aspire as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, the volume of trading in our common stock and the extent to which we are able to secure funds from other sources. The purchase agreement contains limitations on the number of shares that we may sell to Aspire. Additionally, we and Aspire may not effect any sales of shares of our common stock under the purchase agreement during the continuance of an event of default or on any trading day that the closing sale price of our common stock is less than \$0.50 per share. Even if we are able to access the full \$20,000 under the purchase agreement, we will still need additional capital to fully implement our business, operating and development plans.

Net cash used by continuing operations for operating activities was \$16,393 for the nine months ended September 30, 2015, compared to net cash used of \$18,182 during the nine months ended September 30, 2014. The cash used during the nine months ended September 30, 2015 primarily reflects the net loss of \$17,764, partially offset by non-cash expenses, including depreciation expense of \$167, our 401(k) stock matching contribution expense of \$291, stock-based compensation expense of \$1,483, and inventory impairment charges of \$202. During the nine months ended September 30, 2014, net cash used in operating activities of \$18,642 included \$460 of net cash used by our discontinued German operations.

Net cash of \$458 was used by continuing operations for investing activities during the nine months ended September 30, 2015, compared to net cash provided by investing activities during the nine months ended September 30, 2014 of \$11,358. Net cash used by investing activities during the nine months ended September 30, 2015 is primarily the result of expending funds for the purchase of property and equipment to expand our pilot manufacturing capacity. Net cash provided by investing activities during the nine months ended September 30, 2014 included \$13,019 provided by the sale and maturity of investments, partially offset by \$1,508 used to purchase investments.

Net cash of \$14,703 was provided by financing activities during the nine months ended September 30, 2015, as a result of our completion of a \$15,000 private placement of equity securities during the second quarter. Issuance costs for this private placement totaled \$297. During the nine months ended September 30, 2014, net cash of \$25,213 was provided by financing activities and was attributable to a private placement of equity securities of \$24,913, net of issuance costs of \$87, and \$300 in cash received from the purchase of shares by our Chief Executive Officer pursuant to his employment agreement.

Contractual Obligations

The following table summarizes our contractual obligations at September 30, 2015:

	Payments Due by Period				
	Total	Less than 1 year	2-3 years	4-5 years	More than 5 years
Operating lease obligations	\$ 6,798	\$ 1,410	\$ 2,925	\$ 2,463	\$ —

In connection the expansion of our biopolymer pilot production capacity, during May 2015 we entered into a two-year agreement with a U.S. supplier of toll fermentation services and another two-year agreement with the owner/operator of our pilot recovery facility. Under these agreements, which became effective July 1, 2015, we estimate that the Company will be obligated to pay quarterly fixed service fees of approximately \$1,100 after the commencement of full scale production and continuing through at least December 31, 2016. The Company anticipates that commencement of full scale production will occur in early 2016. In May 2015, the Company made a \$1,000 prepayment against future fixed service fees. In addition to these fixed charges, the Company is obligated to pay certain variable production costs as incurred.

Off-Balance Sheet Arrangements

As of September 30, 2015, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of the Securities and Exchange Commission's Regulation S-K.

Related Party Transactions

See Note 12 to our consolidated financial statements for a full description of our related party transactions.

Recent Accounting Pronouncements

In April 2014, the FASB issued ASU No. 2014-8, *Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity*, which changes the criteria for determining which disposals can be presented as discontinued operations and modifies the related disclosure requirements. Under the new guidance, a disposal of a component of an entity or a group of components of an entity is required to be reported in discontinued operations if the disposal represents a strategic shift that has (or will have) a major effect on an entity's operations and financial results and is disposed of or classified as held for sale. The standard also introduces several new disclosures. The guidance applies prospectively to new disposals and new classifications of disposal groups as held for sale after the effective date. ASU 2014-8 is effective for annual and interim periods beginning after December 15, 2014, with early adoption permitted. We elected early adoption of ASU 2014-8 and applied the new guidance in connection with the discontinuation of its wholly-owned subsidiary, Metabolix GmbH, in 2014.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* (Topic 606), which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. In August 2015, the FASB issued ASU No. 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, which delayed the effective date of the new standard from January 1, 2017 to January 1, 2018. The FASB also agreed to allow entities to choose to adopt the standard as of the original effective date. We are currently evaluating the method of adoption and the potential impact that Topic 606 may have on our financial position and results of operations.

In August 2014, the FASB issued an amendment that requires management to assess an entity's ability to continue as a going concern by incorporating and expanding upon certain principles that are currently in U.S. auditing standards. The amendments in this update provide guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern for one year after the date that the financial statements are issued and to provide related footnote disclosures. In doing so, the amendments should reduce diversity in the timing and content of footnote disclosures. The amendments in this update apply to all entities and are effective for the annual period ending after December 15, 2016, and for annual periods and interim periods thereafter. Early application is permitted. We are currently reviewing the potential impact of adopting the new guidance.

In July 2015, the FASB issued ASU No. 2015-11, *Simplifying the Measurement of Inventory*, which requires entities to measure most inventory "at the lower of cost and net realizable value," thereby simplifying the current guidance under which an entity must measure inventory at the lower of cost or market. ASU 2015-11 is effective for annual and interim periods beginning after December 15, 2016, with early adoption permitted. The Company is currently reviewing the potential impact of adopting the new guidance.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

There have been no material changes in information regarding our exposure to market risk, as described in Item 7A of our Annual Report on Form 10-K for the year ended December 31, 2014.

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 September 30, 2015. 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 Principal Accounting Officer, as appropriate, to allow timely decisions regarding required 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 was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the quarter ended September 30, 2015 that has materially affected, or is 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.

You should carefully consider the following information about risks, together with the other information contained in this report. If any of the circumstances or events described below actually arises or occurs, our business, results of operations, cash flows and financial condition could be harmed. In any such case, the market price of our common stock could decline, and you may lose all or part of your investment.

Risks Relating to our Financial Position

We will need to secure additional funding and may be unable to raise additional capital on favorable terms, if at all.

The company held unrestricted cash and cash equivalents of approximately \$18 million at September 30, 2015. Our present capital resources may not be sufficient to fund our planned operations for a twelve month period, and therefore, raise substantial doubt about our ability to continue as a going concern. Our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of and for the year ended December 31, 2014 with respect to this uncertainty.

We were successful during our fiscal quarters ending June 30, 2015 and September 30, 2014, in raising \$14.7 million and \$24.9 million, respectively, net of offering costs, through private placements of equity securities and on October 7, 2015, we entered into a common stock purchase agreement with Aspire Capital Fund, LLC, (“Aspire”) under which Aspire is committed to purchase, at our direction, up to an aggregate of \$20.0 million of shares of our common stock over a 30 month period beginning on November 9, 2015. We may, however, require additional funding during the next twelve months, in addition to the proceeds of sales of common stock to Aspire, if any, to continue our operations and 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. The current economic environment and recent uncertainty and volatility in financial markets may make it difficult to obtain additional financing.

We continue to face significant challenges and uncertainties and, as a result, our available capital resources may be consumed more rapidly than currently expected due to (i) lower than expected sales of our biopolymer products as a result of slow market adoption; (ii) increases in capital costs and operating expenses related to the establishment and start-up of biopolymer manufacturing on our own or with third parties; (iii) changes we may make to the business that affect ongoing operating expenses; (iv) changes we may make to our business strategy; (v) changes in our research and development spending plans; and (vi) other items affecting our forecasted level of expenditures and use of cash resources.

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 our 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.

The extent to which we utilize the facility with Aspire as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, the volume of trading in our common stock and the extent to which we are able to secure funds from other sources. The purchase agreement contains limitations on the number of shares that we may sell to Aspire. Additionally, we and Aspire may not effect any sales of shares of our common stock under the purchase agreement during the continuance of an event of default or on any trading day that the closing sale price of our common stock is less than \$0.50 per share. Even if we are able to access the full \$20.0 million under the purchase agreement, we will still need additional capital to fully implement our business, operating and development plans.

We have a history of net losses and our future profitability is uncertain.

With the exception of 2012, when the Company recognized \$38.9 million of deferred revenue from the terminated joint venture with Archer Daniels Midland, we have recorded losses since our inception, including our fiscal quarter ended September 30, 2015. At September 30, 2015, our accumulated deficit was approximately \$320 million. Our operating losses since inception and the insufficiency of our existing capital resources to fund our planned operations for a twelve month period raise substantial doubt about our ability to continue as a going concern. Our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of and for the year ended December 31, 2014 with respect to this uncertainty. Since 1992, we have been engaged primarily in research and development and early-stage commercial activities. Because we have a limited history of commercial operations and we operate in a rapidly evolving industry, we cannot be certain that we will generate sufficient revenue to operate our business and become profitable.

Our ability to generate revenues in the near-term is highly dependent on the successful commercialization of our biopolymer products, which is subject to many risks and uncertainties as described below. This is our first and only product family in the market. We expect that it will take time for our production to ramp up to an economical scale while the market for our products expands. As a result, we expect to have significant losses and negative cash flow for at least the next several years, as we incur additional costs and expenses for the continued development and expansion of our business, including the costs of establishing manufacturing capacity and ongoing expenses of research and product development. The amount we spend will impact our ability to become profitable and this will depend, in part, on the number of new products that we attempt to develop. We may not achieve any or all of these goals and, thus, we cannot provide assurances that we will ever be profitable or achieve significant revenues.

Even if we can successfully manufacture and sell our products, whether we will be able to generate a profit on any of these products is highly uncertain and depends on a number of factors including the cost of production, the price we are able to charge for these products, and the emergence of competing products.

Risks Relating to our Biopolymers Business

Our biopolymer products may not achieve market success.

We currently have limited customer commitments for commercial quantities of our biopolymer products. Some prospective customers are currently evaluating and testing our products prior to making larger-scale purchase decisions, but the time required for conversion of customers to commercial purchases is often long. The successful commercialization of our biopolymers is also dependent on our customers' ability to commercialize the end-products that they make with our biopolymers, which may never gain market acceptance.

Market acceptance of our products will depend on numerous factors, many of which are outside of our control, including among others:

- public acceptance of such products;
- our ability to produce products of consistent quality that offer functionality comparable or superior to existing or new polymer products;
- our ability to produce products fit for their intended purpose;
- our ability to obtain necessary regulatory approvals for our products;
- the speed at which potential customers qualify our biopolymers for use in their products;
- the pricing of our products compared to competitive products, including petroleum-based plastics;
- the strategic reaction of companies that market competitive products;
- our reliance on third parties who support or control production or distribution channels; and
- general market conditions.

We cannot assure you that we will be able to successfully produce biopolymers in a timely or economical manner, or at all.

We do not currently have a facility for commercial scale production of biopolymers. We have expanded our pilot scale production facility for biopolymers while we continue to evaluate various larger scale manufacturing options. However, our biopolymer manufacturing technology is highly complex. Construction of a new manufacturing facility or modification of an existing facility to make it suitable for our manufacturing process is likely to be time-consuming and expensive. We cannot assure you that we will have the necessary funds to finance the construction or modification of a commercial manufacturing

facility, or that we will be able to develop a manufacturing infrastructure in a timely or economical manner, or at all. We may depend on obtaining commercial partners, production partners or government funding to finance and/or construct commercial manufacturing facilities for biopolymer production.

Our future biopolymer production costs are uncertain and may ultimately be higher than we expect. Further, because of the lead-time required for construction of a manufacturing facility, we may have to make capital investments before we have proven the market demand for our products. If the commercial manufacturing capacity that we build or otherwise obtain is not appropriate to the level of market demand, manufacturing costs may not be economical. If we fail to develop adequate manufacturing capacity and expertise or fail to manufacture biopolymers economically at large scale or in commercial volumes, the commercialization of our biopolymers and our business, financial condition and results of operations will be materially adversely affected.

We may not be able to obtain raw materials in sufficient quantities or in a timely manner.

We expect that the production of our PHA biopolymer products will require large volumes of feedstock. We cannot predict the future availability of any particular feedstock or be sure that we will be able to purchase it in sufficient quantities, at acceptable prices, or in a timely manner. If these materials cannot be obtained in sufficient quantities or at acceptable prices, our ability to produce our products may be impaired, the cost of our products may increase, and our business will be adversely affected.

We may rely heavily on future collaborative partners.

We may enter into strategic partnerships to develop and commercialize our current and future products or research and development programs with other companies to accomplish one or more of the following:

- obtain capital, equipment and facilities,
- obtain funding for research and development programs, product development programs and commercialization activities,
- obtain expertise in relevant markets,
- obtain access to raw materials, and/or
- obtain sales and marketing services or support.

We may not be successful in establishing or maintaining suitable partnerships, and we may not be able to negotiate collaboration agreements having terms satisfactory to us or at all. Failure to make or maintain these arrangements or a delay or failure in a collaborative partner's performance under any such arrangements could have a material adverse effect on our business and financial condition.

We face and will face substantial competition.

We face and will face substantial competition from a variety of companies in the biodegradable, renewable resource-based plastic segment, as well as from companies in the conventional, non-biodegradable petroleum-based industry segment. Some of their products are suitable for use in a range of products at a price which may be lower than our premium priced product offerings. Many of these companies have longer operating histories, greater name recognition, larger customer bases and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources than us. Our competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements. In addition, current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers or other third parties. Accordingly, new competitors or alliances among competitors could emerge and rapidly acquire significant market share. We cannot assure you that we will be able to compete successfully against current or new competitors.

Changes in government regulations may have an adverse effect on demand for our products.

One of the key markets for our biopolymer products is as biobased, compostable or biodegradable substitutes for non-biodegradable petroleum-based plastics. This market is driven in part by laws, regulations and policies designed to encourage or mandate the increased use of biobased and/or biodegradable alternatives to petroleum-based plastics. There are numerous companies and trade associations that aggressively oppose these policies. The phasing out or elimination of these or similar laws and regulations, or the adoption of laws and regulations that are so broadly written as to ban our products along with the targeted non-biodegradable or petroleum-based plastic materials, could adversely affect our business.

Our products are made using genetically-engineered systems and may be, or may be perceived as being, harmful to human health or the environment.

Our PHA biopolymers have been produced by genetically engineered microbes using sugar derived from genetically engineered corn as a feedstock. Our future products may be produced from genetically engineered feedstocks through fermentation using genetically engineered microbes. Some countries have adopted regulations prohibiting or limiting the production of genetically-engineered crops and the sale of products made using genetically engineered organisms or genetically

engineered feedstocks. Such regulations could harm our business and impair our ability to produce biobased polymers in that manner. The subject of genetic engineering of crops and other species has received negative publicity and has aroused public debate. Government authorities could, for social or other purposes, prohibit or regulate the development and use of genetically-engineered organisms or products made from such organisms. Social concerns could adversely affect acceptance of our products.

Our success will be influenced by the price of petroleum relative to the price of biobased feedstocks.

Our success will be influenced by the cost of our products relative to petroleum-based polymers. The cost of petroleum-based polymers is in part based on the price of petroleum. To date, our PHA biopolymers have been primarily manufactured using corn sugar, an agricultural feedstock. If the price of plant sugar feedstocks were to increase and/or if the price of petroleum decreases, our biobased products may be less competitive or may not be competitive relative to petroleum-based polymers. A material decrease in the cost of conventional petroleum-based polymers may require a reduction in the prices of our products for them to remain attractive in the marketplace and/or reduce the size of our addressable market.

We are subject to significant foreign and domestic government regulations, and compliance or failure to comply with these regulations could harm our business.

The manufacture, use, sale and marketing of PHA biopolymers is subject to government regulations in the U.S. and other countries, including requirements for government approval of food contact applications, hazardous materials regulations, and environmental, health and safety laws. The failure to comply with governmental regulations or to obtain government approval for our products could have a material adverse effect on our results of operations and financial condition. Governmental regulation or negative publicity could delay, reduce or eliminate market demand for our products which could have a material adverse effect on our results of operations and financial condition.

We may not have adequate insurance and may have substantial exposure to payment of product liability claims.

The testing, manufacture, marketing, and sale of our products may involve product liability risks. Although we currently have insurance covering product liability claims up to \$5 million per occurrence and in the aggregate, we may not be able to maintain this insurance at an acceptable cost, if at all. In addition, this insurance may not provide adequate coverage against potential losses. If claims or losses exceed our liability insurance coverage, it could have a material adverse effect on our business and our financial condition.

Upon termination or expiration of our leases we may not be able to renew or find suitable alternate space on acceptable terms.

We do not own any real property. We currently lease office and research and development space in Cambridge, Massachusetts, additional office and laboratory space in Lowell, Massachusetts, and a small office with laboratory and greenhouse space in Canada. We and our landlords have certain termination rights under these leases. In particular, the landlord for our Cambridge headquarters has a one-time option to terminate that lease effective May 2017, with appropriate advance notice. Upon termination or expiration of our leases we may experience disruption to our business and/or increased costs if we are not able to renew or find suitable alternate space on acceptable terms.

Risks Relating to our Crop Science Program

We may not be successful in spinning out our crop science program.

In order to focus our efforts on our biopolymers business, we are planning to spin out our crop science program, which we call "Yield10 Bioscience," into a separately funded venture focused on the development and commercialization of our crop science technologies. However, there can be no assurance that we will be successful in identifying third parties interested in funding or otherwise participating in Yield10 Bioscience on acceptable terms, if at all. If we are not successful in spinning out the crop science program, we may incur substantial costs to either continue or wind down the program.

Our crop science product development cycle is lengthy and uncertain and will depend heavily on future collaborative partners.

The technology and processes used in our crop science program and the application of our technology to enhance photosynthetic efficiency of crops are at an early stage of development. Research and development in the seed, agricultural biotechnology, and larger agriculture industries is expensive and prolonged and entails considerable uncertainty. Completion of our development work will require a significant investment of both time and money, if it can be completed at all. To successfully develop and commercialize our innovations, we expect that we will need to form collaborations with established agricultural industry companies. The industry is highly concentrated and dominated by a small number of large players, which could impact our efforts to form such collaborations. We may not be successful in establishing or maintaining suitable partnerships, and we may not be able to negotiate collaboration agreements having terms satisfactory to us or at all. In addition, industry collaborators have significant resources and development capabilities and may develop products and technologies that compete with or negatively impact the development and commercialization of our technologies.

Our crop science program may not be successful in developing commercial products.

We and our potential future collaborators may spend many years and dedicate significant financial and other resources developing traits that will never be commercialized. Seeds containing the traits that we develop may never become commercialized for any of the following reasons:

- our traits may not be successfully validated in the target crops;
- our traits may not have the desired effect sought by future collaborators for the relevant crops;
- development and validation of traits, particularly during field trials, may be adversely affected by environmental or other circumstances beyond our control;
- we or our future collaborators may be unable to obtain the requisite regulatory approvals for the seeds containing our traits;
- competitors may launch competing or more effective seed traits or seeds;
- a market may not exist for seeds containing our traits or such seeds may not be commercially successful;
- future collaborators may be unable to fully develop and commercialize products containing our seed traits or may decide, for whatever reason, not to commercialize such products; and
- we may be unable to patent our traits in the necessary jurisdictions.

Consumer and government resistance to genetically modified organisms may negatively affect the ability to commercialize crops containing our traits.

Food and feed made from genetically modified seeds are not accepted by many consumers and in certain countries production of certain genetically modified crops is effectively prohibited, including throughout the European Union, due to concerns over such products' effects on food safety and the environment. The high public profile of biotechnology in food and feed production and lack of consumer acceptance of products to which we have devoted substantial resources could have a negative impact on the commercial success of products that incorporate our traits and could materially and adversely affect our ability to obtain collaborations and to finance our crop science program. We may incur liability and/or legal expenses if there are claims that our genetically-engineered crops damage the environment or contaminate other farm crops.

Risks Relating to Intellectual Property

Patent protection for our products is important and uncertain.

Our commercial success may depend in part on our obtaining and maintaining patent protection for our technologies in the United States and other jurisdictions, as well as successfully enforcing and defending this intellectual property against third-party challenges. If we are not able to obtain or defend patent protection for our technologies, then we will not be able to exclude competitors from developing or marketing such technologies, and this could negatively impact our ability to generate sufficient revenues or profits from product sales to justify the cost of development of our technologies and to achieve or maintain profitability. Our issued patents have expiration dates ranging from 2015 through 2032.

Our patent position involves complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. Patents may not be issued for any pending or future pending patent applications owned by or licensed to us, and claims allowed under any issued patent or future issued patent owned or licensed by us may not be valid or sufficiently broad to protect our technologies. Moreover, we may be unable to protect certain of our intellectual property in the United States or in foreign countries. Foreign jurisdictions may not afford the same protections as U.S. law, and we cannot ensure that foreign patent applications will have the same scope as the U.S. patents. There will be many countries in which we will choose not to file or maintain patents because of the costs involved. Competitors may also design around our patents or develop competing technologies.

Additionally, any issued patents owned by or licensed to us now or in the future may be challenged, invalidated, or circumvented. We could incur substantial costs to bring suits or other proceedings in which we may assert or defend our patent rights or challenge the patent rights of third parties. An unfavorable outcome of any such litigation could have a material adverse effect on our business and results of operations.

Third parties may claim that we infringe their intellectual property, and we could suffer significant litigation or licensing expense as a result.

Various U.S. and foreign issued patents and pending patent applications owned by third parties exist in areas relevant to our products and processes. We could incur substantial costs to challenge third party patents. If third parties assert claims against us or our customers alleging infringement of their patents or other intellectual property rights, we could incur substantial costs and diversion of management resources in defending these claims, and the defense of these claims could have a material adverse effect on our business. In addition, if we are unsuccessful in defending against these claims, these third parties may be awarded substantial damages, as well as injunctive or other equitable relief against us, which could effectively block our ability to make, use, sell, distribute, or market our products and services in the United States or abroad. Alternatively, we may seek licenses to such third party intellectual property. However, we may be unable to obtain these licenses on

acceptable terms, if at all. Our failure to obtain the necessary licenses or other rights could prevent the sale, manufacture, or distribution of some of our products and, therefore, could have a material adverse effect on our business.

We rely in part on trade secrets to protect our technology, and our failure to obtain or maintain trade secret protection could limit our ability to compete.

We rely on trade secrets to protect some of our technology and proprietary information, especially where we believe patent protection is not appropriate or obtainable. However, trade secrets are difficult to protect. Litigating a claim that a third party had illegally obtained and was using our trade secrets would be expensive and time consuming, and the outcome would be unpredictable. Moreover, if our competitors independently develop similar knowledge, methods and know-how, it will be difficult for us to enforce our rights and our business could be harmed.

Risks Relating to Owning our Common Stock

Raising additional funds may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies.

If we raise additional funds through equity offerings or offerings of equity-linked securities, including warrants or convertible debt securities, we expect that our existing stockholders will experience significant dilution, and the terms of such securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing, if available, may subject us to restrictive covenants that could limit our flexibility in conducting future business activities, including covenants limiting or restricting our ability to incur additional debt, dispose of assets or make capital expenditures. The Company may also incur ongoing interest expense and be required to grant a security interest in Company assets in connection with any debt issuance. If we raise additional funds through strategic partnerships or licensing agreements with third parties, we may have to relinquish valuable rights to our technologies or grant licenses on terms that are not favorable to us. In addition, the interests of our existing stockholders in our crop science program and related technologies may be significantly diluted in connection with our efforts to spin out Yield10 Bioscience.

Trading volume in our stock is low and an active trading market for our common stock may not be available on a consistent basis to provide stockholders with adequate liquidity. Our stock price may be extremely volatile, and our stockholders could lose a significant part of their investment.

Trading volume in our stock is low and an active trading market for shares of our common stock may not be sustained on a consistent basis. The public trading price for our common stock will be affected by a number of factors, including:

- reported progress in our biopolymers business or with respect to our efforts to spin out Yield10 Bioscience or develop crop related technologies, relative to investor expectations;
- changes in earnings estimates, investors' perceptions, recommendations by securities analysts or our failure to achieve analysts' earnings estimates;
- quarterly variations in our or our competitors' results of operations;
- general market conditions and other factors unrelated to our operating performance or the operating performance of our competitors;
- future issuances and/or sales of our common stock or preferred stock;
- announcements or the absence of announcements by us, or our competitors, regarding acquisitions, new products, significant contracts, commercial relationships or capital commitments;
- commencement of, or involvement in, litigation;
- any major change in our board of directors or management;
- changes in governmental regulations or in the status of our regulatory approvals;
- announcements related to patents issued to us or our competitors and to litigation involving our intellectual property;
- a lack of, or limited, or negative industry or security analyst coverage;
- developments in our industry and general economic conditions;
- short-selling or similar activities by third parties; and
- other factors described elsewhere in these "Risk Factors."

As a result of these factors, our stockholders may not be able to resell their shares at, or above, their purchase price. In addition, the stock prices of many technology companies have experienced wide fluctuations that have often been unrelated to the operating performance of those companies. Any negative change in the public's perception of the prospects of industrial or agricultural biotechnology or "clean technology" companies could depress our stock price regardless of our results of operations. These factors may have a material adverse effect on the market price of our common stock.

Our financial results may vary significantly from period to period, which may reduce our stock price.

Our financial results may fluctuate as a result of a number of factors, including those listed in this "Risk Factors" section, many of which are outside of our control. These fluctuations may cause the market price of our common stock to fall.

Comparing our operating results on a period-to-period basis may not be meaningful, and you should not rely on our past results as an indication of our future performance.

Provisions in our certificate of incorporation and by-laws and Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our certificate of incorporation and by-laws and Delaware law may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which our stockholders might otherwise receive a premium for their shares of our common stock. These provisions may also prevent or frustrate attempts by our stockholders to replace or remove our management.

In addition, Section 203 of the Delaware General Corporation Law prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years has owned, 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the foregoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our Company, thereby reducing the likelihood that our stockholders could receive a premium for their common stock in an acquisition.

Concentration of ownership among our existing officers, directors and principal stockholders may prevent other stockholders from influencing significant corporate decisions and depress our stock price.

Based on the number of shares outstanding as of October 12, 2015, our officers, directors and stockholders who hold at least 5% of our stock beneficially own a combined total of approximately 69.7% of our outstanding common stock. If these officers, directors, and principal stockholders or a group of our principal stockholders act together, they will be able to exert a significant degree of influence over our management and affairs and control matters requiring stockholder approval, including the election of directors and approval of mergers, business combination or other significant transactions. The interests of one or more of these stockholders may not always coincide with our interests or the interests of other stockholders. For instance, officers, directors, and principal stockholders, acting together, could cause us to enter into transactions or agreements that we would not otherwise consider. Similarly, this concentration of ownership may have the effect of delaying or preventing a change in control of our company otherwise favored by our other stockholders. As of October 12, 2015, Jack W. Schuler and William P. Scully beneficially owned approximately 49.4% and approximately 11.6% of our common stock, respectively.

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

Recent Sales of Unregistered Securities

On July 7, 2015, the Company issued 21,234 shares of common stock to participants in its Metabolix, 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 exempted securities.

On October 7, 2015, in consideration for entering into the common stock purchase agreement with Aspire Capital Fund, LLC, concurrently with the execution of the purchase agreement, the Company issued to Aspire 300,000 shares of the Company's common stock. The issuance of these securities was not registered under the Securities Act as such issuance was exempt from registration under Section 4(a)(2) of the Securities Act. On October 19, 2015, we filed a registration statement on Form S-1 to register these shares and up to 5,093,545 additional shares that we may sell to Aspire from time to time under the common stock purchase agreement. The registration statement was declared effective on October 30, 2015.

Issuer Purchases of Equity Securities

During the three months ended September 30, 2015, 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.

- 3.1 Amended and Restated Certificate of Incorporation (filed herewith).

- 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 Metabolix Inc. Quarterly Report on Form 10-Q for the quarter ended September 30, 2015 formatted in XBRL: (i) Consolidated Balance Sheets, September 30, 2015 and December 31, 2014; (ii) Consolidated Statements of Operations, Three and Nine Months Ended September 30, 2015 and 2014; (iii) Consolidated Statements of Comprehensive Loss, Three and Nine Months Ended September 30, 2015 and 2014; (iv) Consolidated Statements of Cash Flows, Nine Months Ended September 30, 2015 and 2014; 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.

METABOLIX, INC.

November 12, 2015

By: /s/ JOSEPH SHAULSON
Joseph Shaulson
President and Chief Executive Officer
(Principal Executive Officer)

November 12, 2015

By: /s/ CHARLES B. HAASER
Charles B. Haaser
Chief Accounting Officer
(Principal Financial and Accounting Officer)

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION

OF
METABOLIX, INC.

Metabolix, Inc., a corporation organized and existing under the laws of the State of Delaware (the “Corporation”), hereby certifies as follows:

1. The name of the Corporation is Metabolix, Inc. The original certificate of incorporation of Metabolix, Inc. was filed with the Secretary of State of the State of Delaware on September 1, 1998.
2. This Amended and Restated Certificate of Incorporation was duly adopted in accordance with the provisions of Sections 242 and 245 of the Delaware General Corporation Law (the “DGCL”).
3. The text of the Certificate of Incorporation of this corporation be hereby amended and restated in its entirety to provide as herein set forth in full.

ARTICLE I

The name of the Corporation is Metabolix, Inc.

ARTICLE II

The address of the Corporation’s registered office in the State of Delaware is c/o The Corporation Trust Company, 1209 Orange Street in the City of Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the DGCL.

ARTICLE IV

CAPITAL STOCK

The total number of shares of capital stock which the Corporation shall have authority to issue is One Hundred Five Million (105,000,000) shares, of which (i) One Hundred Million (100,000,000) shares shall be a class designated as common stock, par value \$.01 per share (the “Common Stock”), and (ii) Five Million (5,000,000) shares shall be a class designated as undesignated preferred stock, par value \$.01 per share (the “Undesignated Preferred Stock”).

The number of authorized shares of the class of Undesignated Preferred Stock may from time to time be increased or decreased (but not below the number of shares outstanding) by the affirmative vote of the holders of a majority of the outstanding shares of Common Stock entitled to vote, without a vote of the holders of the Undesignated Preferred Stock (except as otherwise provided in any certificate of designations of any series of Undesignated Preferred Stock).

The powers, preferences and rights of, and the qualifications, limitations and restrictions upon, each class or series of stock shall be determined in accordance with, or as set forth below in, this Article IV.

A. COMMON STOCK

Subject to all the rights, powers and preferences of the Undesignated Preferred Stock and except as provided by law or in this Article IV (or in any certificate of designations of any series of Undesignated Preferred Stock):

(a) the holders of the Common Stock shall have the exclusive right to vote for the election of directors of the Corporation (the “Directors”) and on all other matters requiring stockholder action, each outstanding share entitling the holder thereof to one vote on each matter properly submitted to the stockholders of the Corporation for their vote; provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Certificate (or on any amendment to a certificate of designations of any series of Undesignated Preferred Stock) that alters or changes the powers, preferences, rights or other terms of one or more outstanding series of Undesignated Preferred Stock if the

holders of such affected series are entitled to vote, either separately or together with the holders of one or more other such series, on such amendment pursuant to this Certificate (or pursuant to a certificate of designations of any series of Undesignated Preferred Stock) or pursuant to the DGCL;

(b) dividends may be declared and paid or set apart for payment upon the Common Stock out of any assets or funds of the Corporation legally available for the payment of dividends, but only when and as declared by the Board or any authorized committee thereof; and

(c) upon the voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the net assets of the Corporation shall be distributed pro rata to the holders of the Common Stock.

B. UNDESIGNATED PREFERRED STOCK

The Board of Directors or any authorized committee thereof is expressly authorized, to the fullest extent permitted by law, to provide for the issuance of the shares of Undesignated Preferred Stock in one or more series of such stock, and by filing a certificate pursuant to applicable law of the State of Delaware, to establish or change from time to time the number of shares of each such series, and to fix the designations, powers, including voting powers, full or limited, or no voting powers, preferences and the relative, participating, optional or other special rights of the shares of each series and any qualifications, limitations and restrictions thereof.

ARTICLE V

STOCKHOLDER ACTION

1. Action without Meeting. Except as otherwise provided herein, any action required or permitted to be taken by the stockholders of the Corporation at any annual or special meeting of stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders and may not be taken or effected by a written consent of stockholders in lieu thereof.

2. Special Meetings. Except as otherwise required by statute and subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock, special meetings of the stockholders of the Corporation may be called only by the Board of Directors acting pursuant to a resolution approved by the affirmative vote of a majority of the Directors then in office. Only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders of the Corporation.

ARTICLE VI

DIRECTORS

1. General. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors except as otherwise provided herein or required by law.

2. Election of Directors. Election of Directors need not be by written ballot unless the By-laws of the Corporation (the "By-laws") shall so provide.

3. Number of Directors; Term of Office. The number of Directors of the Corporation shall be fixed solely and exclusively by resolution duly adopted from time to time by the Board of Directors. The Directors, other than those who may be elected by the holders of any series of Undesignated Preferred Stock, shall be classified, with respect to the term for which they severally hold office, into three classes, as nearly equal in number as reasonably possible. The initial Class I Directors of the Corporation shall be Edward M. Muller, Matthew Strobeck, Ph.D., and Robert L. Van Nostrand; the initial Class II Directors of the Corporation shall be Jack W. Lasersohn, Jay Kouba, Ph.D., and Oliver P. Peoples, Ph.D.; and the initial Class III Directors of the Corporation shall be Edward M. Giles, Anthony J. Sinskey, Sc.D., and James J. Barber, Ph.D. The initial Class I Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2007, the initial Class II Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2008, and the initial Class III Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2009. At each annual meeting of stockholders, Directors elected to succeed those Directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election. Notwithstanding the foregoing, the Directors elected to each class shall hold office until their successors are duly elected and qualified or until their earlier resignation or removal.

Notwithstanding the foregoing, whenever, pursuant to the provisions of Article IV of this Certificate, the holders of any one or more series of Undesignated Preferred Stock shall have the right, voting separately as a series or together with holders of other such series, to elect Directors at an annual or special meeting of stockholders, the election, term of office, filling of vacancies and

other features of such directorships shall be governed by the terms of this Certificate and any certificate of designations applicable thereto.

4. Vacancies. Subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock to elect Directors and to fill vacancies in the Board of Directors relating thereto, any and all vacancies in the Board of Directors, however occurring, including, without limitation, by reason of an increase in size of the Board of Directors, or the death, resignation, disqualification or removal of a Director, shall be filled solely and exclusively by the affirmative vote of a majority of the remaining Directors then in office, even if less than a quorum of the Board of Directors, and not by the stockholders. Any Director appointed in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of Directors in which the new directorship was created or the vacancy occurred and until such Director's successor shall have been duly elected and qualified or until his or her earlier resignation or removal. Subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock to elect Directors, when the number of Directors is increased or decreased, the Board of Directors shall, subject to Article VI.3 hereof, determine the class or classes to which the increased or decreased number of Directors shall be apportioned; provided, however, that no decrease in the number of Directors shall shorten the term of any incumbent Director. In the event of a vacancy in the Board of Directors, the remaining Directors, except as otherwise provided by law, shall exercise the powers of the full Board of Directors until the vacancy is filled.

5. Removal. Subject to the rights, if any, of any series of Undesignated Preferred Stock to elect Directors and to remove any Director whom the holders of any such stock have the right to elect, any Director (including persons elected by Directors to fill vacancies in the Board of Directors) may be removed from office (i) only with cause and (ii) only by the affirmative vote of the holders of 75% or more of the shares then entitled to vote at an election of Directors. At least forty-five (45) days prior to any meeting of stockholders at which it is proposed that any Director be removed from office, written notice of such proposed removal and the alleged grounds thereof shall be sent to the Director whose removal will be considered at the meeting.

ARTICLE VII

LIMITATION OF LIABILITY

A Director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a Director, except for liability (a) for any breach of the Director's duty of loyalty to the Corporation or its stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) under Section 174 of the DGCL or (d) for any transaction from which the Director derived an improper personal benefit. If the DGCL is amended after the effective date of this Certificate to authorize corporate action further eliminating or limiting the personal liability of Directors, then the liability of a Director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Any repeal or modification of this Article VII by either of (i) the stockholders of the Corporation or (ii) an amendment to the DGCL, shall not adversely affect any right or protection existing at the time of such repeal or modification with respect to any acts or omissions occurring before such repeal or modification of a person serving as a Director at the time of such repeal or modification.

ARTICLE VIII

AMENDMENT OF BY-LAWS

1. Amendment by Directors. Except as otherwise provided by law, the By-laws of the Corporation may be amended or repealed by the Board of Directors by the affirmative vote of a majority of the Directors then in office.

2. Amendment by Stockholders. The By-laws of the Corporation may be amended or repealed at any annual meeting of stockholders, or special meeting of stockholders called for such purpose as provided in the By-laws, by the affirmative vote of at least 75% of the outstanding shares entitled to vote on such amendment or repeal, voting together as a single class; provided, however, that if the Board of Directors recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of the majority of the outstanding shares entitled to vote on such amendment or repeal, voting together as a single class.

ARTICLE IX

AMENDMENT OF CERTIFICATE OF INCORPORATION

The Corporation reserves the right to amend or repeal this Certificate in the manner now or hereafter prescribed by statute and this Certificate, and all rights conferred upon stockholders herein are granted subject to this reservation. Whenever any vote of the holders of voting stock is required to amend or repeal any provision of this Certificate, and in addition to any other vote of holders of voting stock that is required by this Certificate or by law, such amendment or repeal shall require the affirmative vote of the majority of the outstanding shares entitled to vote on such amendment or repeal, and the affirmative vote of the majority of the

outstanding shares of each class entitled to vote thereon as a class, at a duly constituted meeting of stockholders called expressly for such purpose; provided, however, that the affirmative vote of not less than 75% of the outstanding shares entitled to vote on such amendment or repeal, and the affirmative vote of not less than 75% of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of Article V, Article VI, Article VII, Article VIII or Article IX of this Certificate.

[End of Text]

THIS AMENDED AND RESTATED CERTIFICATE OF INCORPORATION is executed as of this 15th day of November, 2006.

METABOLIX, INC.

/s/ James Barber
By: James Barber
Its: Chief Executive Officer and President

METABOLIX, INC.

**CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B CONVERTIBLE PREFERRED STOCK**

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

The undersigned, Joseph Shaulson and Sarah P. Cecil, do hereby certify that:

1. They are the President and Secretary, respectively, of Metabolix, Inc., a Delaware corporation (the "Corporation").
2. The Corporation is authorized to issue Five Million shares of preferred stock, \$0.01 par value, none of which have been issued.
3. The following resolutions were duly adopted by the board of directors of the Corporation (the "Board of Directors"):

WHEREAS, the certificate of incorporation of the Corporation provides for a class of its authorized stock known as preferred stock, consisting of Five Million shares, \$0.01 par value per share, issuable from time to time in one or more series;

WHEREAS, the Board of Directors is authorized to fix the dividend rights, dividend rate, voting rights, conversion rights, rights and terms of redemption and liquidation preferences of any wholly unissued series of preferred stock and the number of shares constituting any series and the designation thereof, of any of them; and

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a series of the preferred stock, which shall consist of up to 50,000 shares of the preferred stock which the Corporation has the authority to issue, as follows:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors does hereby provide for the issuance of a series of preferred stock for cash or exchange of other securities, rights or property and does hereby fix and determine the rights, preferences, restrictions and other matters relating to such series of preferred stock as follows:

TERMS OF PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 of the Securities Act.

“Alternate Consideration” shall have the meaning set forth in Section 7(d).

“Business Day” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

“Charter Amendment” means the amendment of the Corporation’s Amended and Restated Certificate of Incorporation, as amended, to increase the authorized number of shares of Common Stock to not less than 150,000,000.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the Corporation’s common stock, par value \$0.01 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Corporation which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Conversion Price” shall have the meaning set forth in Section 6(b).

“Conversion Shares” means, collectively, the shares of Common Stock issuable upon conversion of the shares of Series B Preferred Stock in accordance with the terms hereof.

“Conversion Shares Registration Statement” means a registration statement that registers the resale of all Conversion Shares of the Holders, who shall be named as “selling stockholders” therein and meets the requirements of Section 9 of the Purchase Agreement.

“Delaware Courts” shall have the meaning set forth in Section 8(c).

“Fundamental Transaction” shall have the meaning set forth in Section 7(d).

“Holder” shall have the meaning given such term in Section 2.

“Issue Date Price” shall have the meaning set forth in Section 7(f).

“Liquidation” shall have the meaning set forth in Section 5.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Purchase Agreement” means the Securities Purchase Agreement, dated as of August 4, 2014, among the Corporation and the original Holders, as amended, modified or supplemented from time to time in accordance with its terms.

“Purchase Rights” shall have the meaning set forth in Section 7(b).

“Securities” means the Series B Preferred Stock and the Underlying Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Series B Preferred Stock” shall have the meaning set forth in Section 2.

“Stated Value” shall have the meaning set forth in Section 2, as the same may be increased pursuant to Section 3.

“Stockholder Approval” means the approval of the Charter Amendment by the requisite stockholders of the Corporation.

“Successor Entity” shall have the meaning set forth in Section 7(d).

“Trading Day” means a day on which the principal Trading Market is open for business.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transaction Documents” means this Certificate of Designation, the Purchase Agreement, and all exhibits and schedules hereto and thereto.

“Transfer Agent” means American Stock Transfer and Trust Company, the current transfer agent of the Corporation, and any successor transfer agent of the Corporation.

“Underlying Shares” means the shares of Common Stock issued and issuable upon conversion of the Series B Preferred Stock.

Section 2. Designation, Amount and Par Value. The series of preferred stock shall be designated as its Series B Convertible Preferred Stock (the “Series B Preferred Stock”) and the number of shares so designated shall be up to 50,000 (which shall not be subject to increase without the written consent of all of the holders of the Series B Preferred Stock (each, a “Holder” and collectively, the “Holders”). Each share of Series B Preferred Stock shall have a par value of \$.01 per share and a stated value equal to \$1,000 (the “Stated Value”).

Section 3. Dividends. Except for stock dividends or distributions for which adjustments are to be made pursuant to Section 7, Holders shall be entitled to receive, and the Corporation shall pay, dividends or distributions on shares of Series B Preferred Stock equal (on an as-if-converted-to-Common Stock basis) to and in the same form as dividends or distributions actually paid on shares of the Common Stock when, as and if such dividends or distributions are paid on shares of the Common Stock. No other dividends or distributions shall be paid on shares of Series B Preferred Stock.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by law, the Series B Preferred Stock shall have no voting rights. However, as long as any shares of Series B Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of the Series B Preferred Stock, alter or change adversely the powers, preferences or rights given to the Series B Preferred Stock or alter or amend this Certificate of Designation in a manner that adversely affects the powers, preferences or rights given to the Series B Preferred Stock.

Section 5. Liquidation. Upon any liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary (a “Liquidation”), the Holders shall be entitled to receive out of the assets, whether capital or surplus, of the Corporation an amount equal (on an as-if-converted-to-Common Stock basis) to and in the same form as amounts actually paid on shares of the Common Stock. The Corporation shall mail written notice of any such Liquidation, not less than 45 days prior to the payment date stated therein, to each Holder.

Section 6. Conversion.

a) Mandatory, Automatic Conversion. Upon the filing and acceptance of the Charter Amendment with the Secretary of State of the State of Delaware, each share of Series B Preferred Stock shall automatically convert into that number of shares of Common Stock determined by dividing the Stated Value of such share of Series B Preferred Stock by the Conversion Price. Any conversion pursuant to this Section 6(a) shall occur automatically and without any further action by the Holders and whether or not the certificates representing such shares of Series B Preferred Stock are surrendered to the Corporation or its Transfer Agent. Upon the occurrence of such automatic conversion, the Corporation shall provide written notice to the Holders, and the Holders shall, a reasonable time thereafter, surrender the certificates representing such shares at the office of the Corporation or any Transfer Agent for the Series B Preferred Stock. Thereupon, there shall be issued and delivered to such Holder promptly at such office and in its name as shown on the Corporation’s stock records, a certificate or certificates for the number of shares of Common Stock into which the shares of Series B Preferred Stock surrendered were convertible on the date on which such automatic conversion occurred. All Shares of Series B Preferred Stock converted into Common Stock in accordance with the terms hereof shall be deemed to have been retired and canceled and shall not be reissued.

b) Conversion Price. The conversion price for the Series B Preferred Stock (the “Conversion Price”) shall equal \$1.00, subject to adjustment as provided in Section 7.

c) Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of the Series B Preferred Stock. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Corporation shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

d) Transfer Taxes and Expenses. The issuance of certificates for shares of the Common Stock on conversion of Series B Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates; provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the Holders of such shares of Series B Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

e) Issuance Limitations. Notwithstanding anything herein to the contrary, the Series B Preferred Stock may not be converted into any shares of Common Stock unless the Corporation has obtained Stockholder Approval.

Section 7. Certain Adjustments.

a) Stock Dividends and Stock Splits. If the Corporation, at any time while the Series B Preferred Stock is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of a dividend on, Series B Preferred Stock), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Corporation, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a), if, at any time while the Series B Preferred Stock is outstanding, the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then each Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which such Holder could have acquired if such Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Series B Preferred Stock immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights.

c) Pro Rata Distributions. During such time as Series B Preferred Stock is outstanding, if the Corporation declares or makes any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of the Series B Preferred Stock, then, in each such case, Holders shall be entitled to participate in such Distribution to the same extent that such Holders would have participated therein if such Holders had held the number of shares of Common Stock acquirable upon complete conversion of Series B Preferred Stock immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution.

d) Fundamental Transaction. If, at any time while Series B Preferred Stock is outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or Affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any

subsequent conversion of Series B Preferred Stock, Holders shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 6(e) on the conversion of Series B Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which Series B Preferred Stock is convertible immediately prior to such Fundamental Transaction (without regard to any limitation in Section 6(e) on the conversion of Series B Preferred Stock). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, the Holders shall be given the same choice as to the Alternate Consideration as to the securities, cash or property to be received upon any conversion of Series B Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders’ right to convert such preferred stock into Alternate Consideration. The Corporation shall cause any successor entity in a Fundamental Transaction in which the Corporation is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Corporation under this Certificate of Designation and the Purchase Agreement in accordance with the provisions of this Section 7(d) pursuant to written agreements and shall, at the option of a Holders, deliver to the Holders in exchange for Series B Preferred Stock a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to Series B Preferred Stock which is convertible into a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of Series B Preferred Stock (without regard to any limitations on the conversion of Series B Preferred Stock) prior to such Fundamental Transaction, and with a conversion price which applies the Conversion Price to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of Series B Preferred Stock immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holders. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Certificate of Designation and the other Transaction Documents referring to the “Corporation” shall refer instead to the Successor Entity), and may exercise every right and power of the Corporation and shall assume all of the obligations of the Corporation under this Certificate of Designation and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Corporation herein.

e) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

f) Notice to the Holders of Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

Section 8. Miscellaneous.

a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at the address set forth above Attention: Secretary, or such other address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section 8(a). Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number or address of such Holder appearing on the books of the Corporation, or if no such facsimile number or address appears on the books of the Corporation, at the facsimile number or address of such Holder, as set forth in Schedule I to the Purchase Agreement. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section 8(a) prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number set forth in this Section 8(a) on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

b) Lost or Mutilated Series B Preferred Stock Certificate. If a Holder's Series B Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Series B Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation and, if requested by the Corporation, in its reasonable discretion, the receipt of a bond in a customary amount

c) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Certificate of Designation shall be governed by and construed and enforced in accordance with the internal laws of the State of Delaware, without regard to the principles of conflict of laws thereof. Each party agrees that all legal proceedings concerning the interpretation, enforcement and defense of the transactions contemplated by any of the Transaction Documents (whether brought against a party hereto or its respective Affiliates, directors, officers, shareholders, employees or agents) shall be commenced in the state and federal courts of the State of Delaware (the "Delaware Courts"). Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the Delaware Courts for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of such Delaware Courts, or such Delaware Courts are improper or inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Certificate of Designation and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by applicable law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Certificate of Designation or the transactions contemplated hereby. If any party shall commence an action or proceeding to enforce any provisions of this Certificate of Designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding.

d) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation on any other occasion. Any waiver by the Corporation or a Holder must be in writing.

e) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances.

f) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

g) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

h) Status of Converted or Redeemed Series B Preferred Stock. Shares of Series B Preferred Stock may only be issued pursuant to the Purchase Agreement. If any shares of Series B Preferred Stock shall be converted, redeemed or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B Convertible Preferred Stock.

RESOLVED, FURTHER, that the Chairman, the president or any vice-president, and the secretary or any assistant secretary, of the Corporation be, and they hereby are, authorized and directed to prepare and file this Certificate of Designation of Preferences, Rights and Limitations in accordance with the foregoing resolution and the provisions of Delaware law.

IN WITNESS WHEREOF, the undersigned have executed this Certificate this 22nd day of August 2014.

/s/ Joseph Shaulson
Joseph Shaulson
President

/s/ Sarah P. Cecil
Sarah P. Cecil
Secretary

**CERTIFICATE OF AMENDMENT TO
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
METABOLIX, INC.**

Metabolix, Inc. (the “**Corporation**”), a corporation organized under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the “**General Corporation Law**”),

DOES HEREBY CERTIFY:

1. Pursuant to Section 242 of the General Corporation Law, this Certificate of Amendment to Amended and Restated Certificate of Incorporation (this “**Amendment**”) amends the provisions of the Amended and Restated Certificate of Incorporation of the Corporation (the “**Certificate**”).
2. This Amendment has been approved and duly adopted by the Corporation’s Board of Directors and its stockholders in accordance with the provisions of Section 242 of the General Corporation Law, and the provisions of the Certificate.
3. The first paragraph of ARTICLE IV of the Certificate is hereby amended and restated in its entirety to read as set forth below:

“The total number of shares of capital stock which the Corporation shall have authority to issue is Two Hundred Fifty Five Million (255,000,000) shares, of which (i) Two Hundred Fifty Million (250,000,000) shares shall be a class designated as common stock, par value \$.01 per share (the “**Common Stock**”), (ii) Four Million Nine Hundred Fifty Thousand (4,950,000) shares shall be a class designated as undesignated preferred stock, par value \$.01 per share (the “**Undesignated Preferred Stock**”) and (iii) Fifty Thousand (50,000) shares shall be a class designated as Series B Convertible Preferred Stock, par value \$.01 per share (the “**Series B Preferred Stock**”).”

[End of Text]

IN WITNESS WHEREOF, the undersigned authorized officer of the Corporation, has executed this Certificate of Amendment to Amended and Restated Certificate of Incorporation as of October 30, 2014.

METABOLIX, INC.

/s/ Joseph Shaulson _____
Name: Joseph Shaulson
Title: President & CEO

**CERTIFICATE OF AMENDMENT TO
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
METABOLIX, INC.**

Metabolix, Inc. (the “**Corporation**”), a corporation organized under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the “**General Corporation Law**”),

DOES HEREBY CERTIFY:

1. Pursuant to Section 242 of the General Corporation Law, this Certificate of Amendment to Amended and Restated Certificate of Incorporation (this “**Amendment**”) amends the provisions of the Amended and Restated Certificate of Incorporation of the Corporation (the “**Certificate**”).
2. This Amendment has been approved and duly adopted by the Corporation’s Board of Directors and its stockholders in accordance with the provisions of Section 242 of the General Corporation Law, and the provisions of the Certificate.
3. The following language is hereby added to the end of the first paragraph of ARTICLE IV of the Certificate:

“Effective at 5:00 p.m. EDT, on May 26, 2015, every six outstanding shares of Common Stock will be combined into and automatically become one share of outstanding Common Stock of the Corporation. The Corporation will not issue fractional

shares on account of the foregoing reverse stock split; all shares that are held by a stockholder as of the effective date hereof shall be aggregated and each fractional share resulting from the reverse stock split after giving effect to such aggregation shall be cancelled.

In lieu of any interest in a fractional share to which a stockholder would otherwise be entitled as a result of such reverse stock split, such stockholder will be paid a cash amount for such fractional shares equal to the product obtained by multiplying (a) the closing price of the shares of Common Stock on the first trading day immediately preceding the effective date of the reverse split, as reported on The NASDAQ Capital Market by (b) the number of shares of Common Stock held by such stockholder that would otherwise have been exchanged for such fractional share interest. The par value of the Common Stock and the total number of authorized shares of Common Stock will not change as a result of such reverse stock split.”

[End of Text]

IN WITNESS WHEREOF, the undersigned authorized officer of the Corporation, has executed this Certificate of Amendment to Amended and Restated Certificate of Incorporation as of May 26, 2015.

METABOLIX, INC.

/s/ Joseph Shaulson
Name: Joseph Shaulson
Title: President & CEO

CERTIFICATE OF ELIMINATION OF THE
SERIES B PREFERRED STOCK OF
METABOLIX, INC.

Pursuant to Section 151(g)
of the General Corporation Law
of the State of Delaware

Metabolix, Inc., a Delaware corporation (the “**Corporation**”), in accordance with the provisions of Section 151(g) of the General Corporation Law of the State of Delaware, hereby certifies as follows:

1. That, pursuant to Section 151 of the General Corporation Law of the State of Delaware and authority granted in the Amended and Restated Certificate of Incorporation of the Corporation, as theretofore amended (the “**Certificate of Incorporation**”), the Board of Directors of the Corporation, by resolution duly adopted, authorized the issuance of a series of 50,000 shares of Series B Preferred Stock, par value \$.01 per share, of the Corporation (the “**Series B Preferred Stock**”), and established the voting powers, designations, preferences and relative, participating, optional or other rights, if any, or the qualifications, limitations or restrictions thereof, and, on August 22, 2014, filed a Certificate of Designation (the “**Certificate of Designation**”) with respect to such Series B Preferred Stock in the office of the Secretary of State of the State of Delaware (the “**Secretary of State**”).

2. That no shares of said Series B Preferred Stock are outstanding and no shares thereof will be issued subject to said Certificate of Designation.

3. That the Board of Directors of the Corporation has adopted the following resolutions:

RESOLVED:

That no shares of the Corporation’s authorized Series B Preferred Stock, par value \$0.01 per share (the “**Series B Preferred Stock**”) are outstanding and that no shares of the Series B Preferred Stock will be issued subject to the certificate of designation previously filed on August 22, 2014 with respect to the Series B Preferred Stock.

RESOLVED:

That the proper officers of the Corporation (the “**Authorized Officers**”) be and hereby are authorized and directed to file a certificate setting forth this resolution with the Secretary of State of the State of Delaware pursuant to the provisions of Section 151(g) of the General Corporation Law of the State of Delaware for the purpose of eliminating from the Corporation’s certificate of incorporation all matters set forth in the Certificate of Designation with respect to the Series B Preferred Stock; and further that upon such filing all authorized shares of Series B Preferred Stock shall be eliminated and restored to the status of authorized but unissued shares of undesignated preferred stock under the Corporation’s certificate of incorporation.

4. That, accordingly, all matters set forth in the Certificate of Designation with respect to the Series B Preferred Stock be, and hereby are, eliminated from the Certificate of Incorporation, as heretofore amended, of the Corporation.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the undersigned authorized officer of the Corporation, has executed this Certificate of Elimination as of September 11, 2015.

METABOLIX, INC.

By: /s/ Joseph Shaulson

Name: Joseph Shaulson

Title: President & CEO

CERTIFICATION

I, Joseph Shaulson, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Metabolix, 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: November 12, 2015

/s/ JOSEPH SHAULSON

Name: Joseph Shaulson
 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 Metabolix, 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: November 12, 2015

/s/ CHARLES B. HAASER

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 Metabolix, Inc. (the "Company") for the quarter ended September 30, 2015 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Joseph Shaulson, 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: November 12, 2015

/s/ JOSEPH SHAULSON

President and Chief Executive Officer
(Principal Executive Officer)

Dated: November 12, 2015

/s/ CHARLES B. HAASER

Chief Accounting Officer
(Principal Financial and Accounting Officer)