

September 25, 2012

VIA EDGAR AND OVERNIGHT DELIVERY

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549-4631

Attention: Rufus Decker

**Re: Metabolix, Inc.
Form 10-K for the fiscal year ended December 31, 2011
Filed March 12, 2012
Form 10-Q for the period ended June 30, 2012
Filed July 27, 2012
File No. 1-33133**

Dear Mr. Decker:

This letter is being furnished on behalf of Metabolix, Inc. (the “Company” or “Metabolix”) in response to comments of the staff of the Division of Corporation Finance (the “Staff”) of the Securities and Exchange Commission (the “Commission”) as set forth in your letter dated August 27, 2012 addressed to Joseph D. Hill, Chief Financial Officer of the Company, with respect to the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2011 that was filed with the Commission on March 12, 2012 and the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2012 that was filed with the Commission on July 27, 2012.

The responses and supplementary information set forth below have been organized in the same manner in which the Commission’s comments were organized.

Form 10-K for the Year Ended December 31, 2011

General

Comment No. 1

Where a comment below requests additional disclosures or other revisions to be made, please show us in your supplemental response what the revisions will look like. These revisions should be included in your future filings, including your interim filings, if applicable.

Response to Comment No. 1

The Company advises the Staff that additional disclosures or other revisions to be made based on the Staff’s comments are reflected below in the Company’s responses. We will revise our future filings, where applicable, to reflect such revisions.

Notes to the Financial Statements

Note 2. — Summary of Significant Accounting Policies

Revenue Recognition, page F-10

Comment No. 2

You disclose your revenue recognition policy for milestone payments. Please provide the disclosures called for by ASC 605-28-50 for each arrangement that includes milestone consideration.

Response to Comment No. 2

The Company advises the Staff that the Company has no agreements containing milestone payments at December 31, 2011. Under the Technology Alliance Agreement with ADM Polymer Corporation (“ADM”), which ended in July 2006, the Company did have technical milestone payments from ADM totaling \$2.0 million that were received and recorded to deferred revenue in May 2006. There were no other technological or other milestone payments that were due to the Company under this arrangement. The Company has disclosed its accounting for the May 2006 milestone payments, including a description of the overall arrangement with ADM, the specific details of the milestone payments received and the Company’s revenue recognition policy with respect to this agreement in its Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q since its initial public offering in 2006.

In future annual filings, assuming the Company still has no active agreements containing milestone payments, the Company will discontinue disclosing its revenue recognition policy for milestone payments until such time that it enters into a new arrangement containing milestone payments.

Comment No. 3

Government grant revenue is earned as research expenses related to grants are incurred. Please clarify whether any of these grant amounts are reflected as a reduction of expenses as well as how you determined whether these amounts should be reflected in revenues or as a reduction of expenses.

Response Comment No. 3

The Company does not reflect government grant amounts as a reduction of research and development expenses. The Company's historic policy has been to recognize monies received from government research grants as a component of revenue in its consolidated statement of operations. The Company believes that one of its important business strategies is to build governmental awareness of the Company's solutions for reducing dependence on fossil fuel, decreasing carbon dioxide emissions and addressing landfill and pollution issues. Performance of research and development activities under government grants represents a core strategy to the growth of the Company's operations. Throughout its history Metabolix has been able to supplement its research with significant U.S. and Canadian government research grants, including approximately \$5.6 million in grant funds that remain available at June 30, 2012.

US GAAP provides limited guidance on the accounting for government grants by for-profit companies. IAS 20 recognizes that there are two broad approaches for accounting for government grants: the income approach or the capital approach. The Company has assessed the nature of the grants and has determined to recognize grant receipts under the income approach, classifying the proceeds as revenue, as that best represents the economics of the arrangements. In following this policy, the Company adheres to the guidance of Statement of Financial Concepts No. 6, *Elements of Financial Statements*, paragraphs 78 — 79 ("CON 6"). Performing research and development activities under government grants has historically represented a major and central aspect of the Company's ongoing operations as defined by CON 6 and therefore grant funds have been consistently recorded as revenue.

In future filings, the Company will amend the disclosure in the Summary of Significant Accounting Policies to read:

"The Company recognizes government grants received as revenue as the grants are central to the Company's ongoing operations. Revenue is earned as research expenses related to the grants are incurred."

Note 3. — Significant Collaborations, page F-13

Comment No. 4

Your disclosures indicate that you reflect payments from collaborative partners as a reduction of research and development expenses, as an increase in revenues, or as a reduction of revenues. Please expand your disclosures to clarify which actual agreements you are reflecting

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in each of these three different ways. Please address your consideration of ASC 730-20-25 as well as ASC 808-10-45 in determining the appropriate accounting. For any significant agreements, please discuss the specific terms of the agreements and how you determined the appropriate accounting treatment for these agreements based on their terms. Please also provide the additional disclosures called for by ASC 730-20-50 as well as ASC 808-10-50, which should include the income statement classification and corresponding amounts attributable to transactions arising from collaborative arrangements for each period presented.

Response to Comment No. 4

The Company's Note 3 disclosures represent its policies related to its accounting for different potential types of collaboration agreements under ASC 808-10-45 and were not intended to indicate that the Company was currently accounting for collaborations that incorporated all three different types of transaction outlined in the Staff's comment.

During the three years ended December 31, 2011, the ADM alliance was the Company's only collaboration arrangement in which it has received payments from other parties. The Company included the payments from ADM as part of the total arrangement consideration and recorded such payments as deferred revenue. The Company received approximately \$38.9 million in funds from ADM for upfront, technical milestone, quarterly support and pilot manufacturing cost-sharing. None of these payments were contractually refundable to ADM. Therefore, no liability was recorded by the Company under ASC 730-20-25.

Situation 1 - Payments Recorded as a Reduction of Research and Development Expense

With the exception of the now terminated ADM alliance which was recorded by the Company as a revenue arrangement, the Company did not participate in other collaborations during the three years ended December 31, 2011 that provided payments in exchange for development services. More specifically, Metabolix did not enter into arrangements in which it netted the proceeds it received with research and development expense. The Company may enter into future collaboration arrangements that may provide for the reimbursement of research and development expenses. As future collaboration arrangements will be part of the Company's ongoing operations, the Company would expect that future payments for research and development expenses would be recognized as revenue, consistent with the Company's policy of recognizing receipts from important and significant collaborations and grants as revenue.

Situation 2 — Payments Recorded as an Increase in Revenue

With the exception of the now terminated ADM alliance, the Company did not enter into collaborations during the three years ended December 31, 2011 in which it served as a principal participant and received payments from third parties.

With respect to the ADM alliance, the Company has accounted for this agreement as a revenue arrangement subject to revenue recognition multiple element arrangement guidance

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EITF 00-21, *Revenue Arrangements with Multiple Deliverables* (“EITF 00-21”). This arrangement was entered into before ASC 808-10 provisions went into effect and at the time of entering into the arrangement, the Company concluded it was subject to the revenue recognition guidance. The adoption of ASC 808-10 did not change the Company’s conclusion on the guidance applicable to this arrangement. Following the guidance in EITF 00-21, the Company was unable to separate the arrangement into multiple revenue elements and therefore all payments received from ADM, including the upfront payment of \$3.0 million received in November 2004, \$2.0 million of technical milestone payments received in May 2006, and \$33.9 million in cost sharing and quarterly support payments, were all considered part of the total arrangement consideration that would be recorded as revenue. The Company’s policy was to expense, as period costs, the direct and incremental costs incurred associated with this collaboration. In February 2012, the ADM alliance was terminated and all remaining deferred revenue from the arrangement was recognized as revenue in the quarter ended March 31, 2012. No contractual performance obligations remained post-termination.

Situation 3 — Payments Recorded as a Reduction in Revenue

As already noted, with the exception of the ADM alliance, the Company did not enter into other collaborations during the three years ended December 31, 2011, in which it received payments from another participant or a third-party. There were no arrangements in which it would have recorded payments from third parties as a reduction of revenue.

In its future filings with the Commission, the Company will revise this disclosure to delete the references to the first and third types of situations, since proceeds received from third parties under future research and development collaborations are expected to be recorded as revenue by the Company and not as a reduction in research and development expense or as a reduction in revenue. See the proposed revised disclosure below:

“The Company follows the accounting guidance for collaborative arrangements which require that certain transactions between collaborators be recorded in the income statement on either a gross or net basis, depending on the characteristics of the collaboration relationship, and provides for enhanced disclosure of collaborative relationships. The Company evaluated its collaborative agreements for proper income statement classification based on the nature of the underlying activity. If payments to and from collaborative partners are not within the scope of other authoritative accounting literature, the income statement classification for the payments is based on a reasonable, rational analogy to authoritative accounting literature that is applied in a consistent manner. ~~Amounts due from collaborative partners related to development activities are generally reflected as a reduction of research and development expense because the performance of contract development services is not central to the Company’s operations. For collaborations with commercialized products, if the Company is the principal, as defined in the amended guidance, it records revenue and the corresponding operating costs in the respective line items within the statement of operations. If the Company is not the principal, it records operating costs as a reduction of revenue. The amended~~

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~~guidance describes the principal as the party who is responsible for delivering the product or service to the customer, has latitude with establishing price, and has the risks and rewards of providing product or service to the customer, including inventory and credit risk. During the three years ended December 31, 2011, the Company had one significant collaboration arrangement with Archer Daniels Midland Company whereby the Company received payments and applied revenue recognition accounting guidance to the payments received and recorded corresponding costs as operating expenses. The adoption of amended guidance did not affect the financial position or results of operations of the Company.”~~

Comment No. 5

Amounts due from collaborative partners related to development activities are reflected as a reduction of research and development expense which is different than collaborations with commercialized products. Please help us to better understand the differences between these two activities and correspondingly how the differences resulted in different accounting treatment.

Response to Comment No. 5

The ADM agreement was the only arrangement during the three years ended December 31, 2011, in which Metabolix received payments from a collaborative partner. There were no arrangements in which the Company netted proceeds with research and development expense. The Company will revise the disclosure in its future filings with the Commission, as provided in its response to Comment No. 4, since future proceeds received from third parties for research and development activities will likely be recorded as revenue by the Company and not recorded as a reduction in research and development expense.

Form 10-Q for the Period Ended June 30, 2012

General

Comment No. 6

Please address the above comments in your interim filings as well, as applicable.

Response to Comment No. 6

The Company advises the Staff that additional disclosures or other revisions to be made based on the Staff’s above comments will be included in our future interim filings, where applicable, to reflect such revisions.

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Management’s Discussion and Analysis

Overview, page 15

Comment No. 7

Instruction 3 to Item 303(a) of Regulation S-K states that your discussion and analysis should focus specifically on material events and uncertainties that could cause reported financial information not to be necessarily indicative of future operating results or of future financial condition. In this regard, please disclose the specific expected impact of terminating the commercial alliance with Archer Daniels Midland Company on your future results of operations, liquidity, and capital resources.

Response to Comment No. 7

In January 2012, ADM notified the Company that it was terminating the alliance effective February 8, 2012.

Prior its termination, the key activities under the Commercial Alliance Agreement were as follows: (i) ADM agreed to arrange for, finance the construction of, and own, a facility in which it would manufacture biopolymer resins, (ii) the Company agreed to either arrange for and finance the acquisition or construction of a facility in which it would compound biopolymer or it would arrange with third parties to compound biopolymer, and (iii) the Company agreed to establish the initial markets for biopolymers. Metabolix also agreed to continue its research and development efforts to further advance and expand and enhance the commercial potential of PHA biopolymers. Subject to certain limitations, ADM agreed to finance the working capital requirements of the Telles joint venture company.

As a consequence of this sudden and material event, the Company had to rapidly adjust to maintain customer relationships, acquire and centralize inventory, realign its staff, and locate and qualify new sources of product manufacturing and supply. Activities that were once the responsibility of ADM during the Commercial Alliance Agreement were immediately transferred to Metabolix. The Company will require a new source of polymer manufacturing to replace the limited inventory acquired in May 2012 that is being depleted as it is sold to customers. Various manufacturing options are being reviewed that are expected to result in increasing expenses and costs associated with acquiring and building sufficient levels of inventory to support worldwide product sales. The need to find new sources of biopolymer manufacturing to support the Company's future sales is important to its growth. Should there be delays in locating and qualifying additional manufacturing at a cost within correct expectations, the additional delays could have a negative impact on the Company's liquidity and require it to seek additional sources of funding. Additional working capital will be required to support both inventory and trade receivables. Manufacturing options under consideration may result in capital expenditures for the construction and modification of manufacturing facilities.

The Company is still assessing its options for the commercialization of its biopolymer products and a number of key strategic decisions are still being made that will be followed by implementation of more detailed planning. At the time of filing its 10-Q for the quarter ended June 30, 2012 the Company had not developed revised financial forecasts since the key operational decisions had not been fully evaluated and determined.

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In the Results of Operations section of its Quarterly Report on Form 10-Q for its quarter ended June 30, 2012, the Company provided disclosure of the expected impact of the ADM termination of the alliance to the extent that it could be reasonably determined. In both its three and six month comparisons to the prior year, the Company indicated that research and development as well as selling, general and administrative expenses are expected to remain lower through the remainder of 2012 as a result of the ADM termination and the Company's subsequent restructuring of its operations. In the Liquidity and Capital Resources section the Company stated that the ADM alliance will not be a source of future liquidity as it was in the past. The Company provided further disclosure in this section of the anticipated range of cash usage for 2012 and estimated that the balance of cash and investments as of the end of the year would be in the range of \$48 to \$50 million based on a total estimated usage of \$28 - \$30 million for 2012. Finally, the Company indicated that it is in the process of evaluating its liquidity requirements for capital expenditures.

The Company acknowledges the Commission's request for greater specificity in the Company's disclosures. As the Company assesses its strategic options and refines its expectations for future performance, updated disclosure will be provided in the Company's future filings with the Commission.

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The Company acknowledges that:

- the Company is responsible for the adequacy and accuracy of disclosures in its filings;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the Company's filings; and
- the Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you have any questions with regard to the Company's responses, need further supplemental information or would like to discuss any of the matters covered in this letter, please contact the undersigned at (617) 583-1700.

Sincerely,

/s/ Joseph D. Hill

Joseph D. Hill
Chief Financial Officer
