



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

March 27, 2012

Via E-mail

Jean Francois-Huc
President and Chief Executive Officer
BioAmber Inc.
1250 Rene Levesque West, Suite 4110
Montreal, Quebec, Canada H3B 4W8

**Re: BioAmber Inc.
Amendment No. 3 to Registration Statement on Form S-1
Filed March 15, 2012
File No. 333-177917**

Dear Mr. Huc:

We have reviewed your response letter and the above-referenced filing, and have the following comments.

Prospectus Summary, page 1

1. We note your disclosure throughout your prospectus stating that the costs at your facility in Pomacle, France are significantly higher than your anticipated costs at your Sarnia, Ontario facility. Further we note your prospectus disclosure regarding your ability to produce cost-competitive bio-succinic acid on page one of your prospectus summary. Please revise your disclosure in this section to clearly state that you are currently manufacturing bio-succinic acid at your facility in France, to disclose the costs at the facility in France versus the anticipated costs at your facility in Ontario, and to make clear that your ability to produce cost-competitive bio-succinic acid is dependent upon the successful completion and operation of your Ontario facility.
2. We note that in response to comment three of our letter dated January 5, 2012 you have revised your disclosure to state that you have supply agreements for the sale of over 139,000 metric tons of bio-succinic acid over the next five years, contingent on meeting the customers' price and other requirements. However, we note your disclosure on page 89 that Mitsubishi Chemical's volume requirements are expected to be only 13,000 metric tons over the length of the supply agreement. Further, we note that you intend to enter into additional exclusive supply agreements, but it does not appear that you have presently entered into such agreements. Accordingly, please revise your disclosure throughout your prospectus to clarify the amount of metric tons of bio-succinic acid that are the subject of *current* definitive supply agreements. Further, we note your disclosure on page 89 that Mitsubishi Chemical is not obligated to purchase the bio-succinic acid.

As requested in our prior comment three, please revise your disclosure to make clear that some or all of the bio-succinic acid that you will supply pursuant to your supply agreements may not actually be purchased.

3. We note that you have revised your disclosure on page two, and elsewhere throughout your prospectus, to state that the initial phase for your Sarnia facility is expected to be “mechanically complete” by 2013. Please revise your disclosure to define exactly what you mean by “mechanically complete.”

Risk Factors, page 11

We have generated only limited sales of bio-succinic acid to date . . . , page 13

4. We note that sales to Mitsubishi Chemical and International Flavors & Fragrances amounted to 81% of your sales in 2011. Please advise whether you have entered into any supply agreements or any other contracts or agreements with International Flavors & Fragrances. Please file any such agreement(s), as applicable, or tell us why you are not required to do so.

A significant decline in the price of petroleum and petroleum-based succinic acid . . . , page 19

5. We note that you revised this risk factor to disclose the higher production cost at your facility in Pomacle, France. However, we note that the heading for this risk factor speaks only to the effect of petroleum and petroleum based succinic acid. Please revise to provide a separate risk factor that presents the material risks to you if you do not begin production of bio-succinic acid at your facility in Sarnia, Ontario as scheduled. Please ensure that this risk factor addresses the increased production costs at your Pomacle, France facility.

Executive and Director Compensation, page 107

Compensation Discussion and Analysis, page 107

Cash Bonus, page 110

6. We note your disclosure on page 111 of the cash incentive bonuses paid for the six month period ended December 31, 2011. However, it is unclear how you calculated the amount of the cash bonuses based on the actual achievement of the corporate and individual goals. For example, based on Mr. Huc’s base salary as disclosed on page 109, with a target of 50% of the base salary, and achievement of 120% of individual and corporate goals, it is unclear how he was paid a bonus of \$144,656, especially considering that this was only for a six month period. Please clarify how the cash bonuses for this period were calculated.

Grants of Plan-Based Awards in Fiscal 2011

7. We note your disclosure of the threshold, target and maximum payouts under the non-equity incentive plan awards. It is unclear from your disclosure on page 110 how you determined the threshold and maximum payouts. Please revise your disclosure accordingly.

Financial Statements

Consolidated Statements of Operations, page F-3

8. We note your response to prior comment 15. Your disclosures on page 65 of the Form S-1/A#1 indicated that your research and development expenses for the six months ended December 31, 2010 were net of \$10,000 from the sale of products. Please tell us how you determined this amount should not also be reflected as revenue during the six months ended December 31, 2010. If after further consideration you determine that the \$10,000 should have been reflected as revenue, please address your consideration as to whether the revision should be treated as a correction of an error pursuant to ASC 250 and correspondingly, if applicable, your materiality considerations of the error pursuant to SAB Topics 1:M and 1:N.

Notes to the Financial Statements

General

2. Summary of Significant Accounting Policies

Research and development tax credits, page F-19

9. We note your response to prior comment 16. Bioamber S.A.S. receives government assistance in the form of research and development tax credits from the French taxing authorities, based on qualifying expenditures. You record research and development tax credits, as a reduction of research and development expenses, when you are able to reasonably estimate the amounts and it is more likely than not they will be received. Given that these appear to be tax credits accounted for pursuant to ASC 740, please help us understand how you determined that it was appropriate to record these tax credits as a reduction of research and development expenses rather than reflecting them in income taxes.

16. Income Taxes, page F-41

10. Your disclosures on page F-44 indicate that you accrued interest and penalties of \$289,573 during 2011 as income tax expense. Given that your income tax expense for

the year ended December 31, 2011 was only \$108,000, please further advise which line items include these amounts.

Exhibits

11. We note that you have requested confidential treatment for certain exhibits. To the extent that we have comments on your request, please note that we will issue them in a separate letter. Please further note that all comments on your request must be resolved before we will entertain a request to accelerate the effective date of your registration statement.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

You may contact Nudrat Salik, Staff Accountant, at 202-551-3692, or Rufus Decker, Accounting Branch Chief, at 202-551-3769 if you have questions regarding comments on the financial statements and related matters. Please contact Erin Jaskot, Staff Attorney, at 202-551-3442, or Craig Slivka, Special Counsel, at 202-551-3729 with any other questions.

Sincerely,

/s/ Craig E. Slivka, for

Pamela A. Long
Assistant Director

cc: Michael Minahan, Esq. (*via E-mail*)
Goodwin Procter LLP