Reviewer's report

Title: Isolation of methyl gamma linolenate from Spirulina platensis using flash chromatography and its cytotoxic activity

Version: 2 Date: 24 February 2015

Reviewer: Angela Malheiros

Reviewer's report:

The manuscript needs major revisions as presented below:

The title and keywords are used to identify the article. All listed keywords are in the title of this manuscript. It is necessary to change the keywords to have more visibility.

1. Background

Line 67 and 72 - The references 1 and 2 need to be changed because in the literature there are more recent references with this subject.

Lines 74-77 - It is necessary to put other references about the technical to producing gamma linolenic acid and ester.

Line 77-80 put other reference to this subject.

Line 88 Introduce references more recent about % cancer deaths etc. These references are 2008.

Line 93 put other reference to this subject.

Line 95 put other reference to this subject.

2. Methods

Line 132 figure 1 is not necessary. It is only a photography of the equipment remove it.

Is necessary put the structure of methyl gamma linolenate. Please put number at the carbons to facilitate the information of NMR data.

Item 2.4 Lines 187-194 Data FAB-MS There are mistakes, 1H NMR and 13C NMR – Put the number of carbons correspondents

3 Biological screening

Clarified the doses of compounds tested GLA-ME and rutin

Results and discussion

This item contend only results but is necessary the discussion of data comparing the literature, for example confront the spectroscopy data with the literature.
Explain better how the quantified by HPTLC was realized. Compare the rendimento obtained with other methods.

Explore the use of rutin as standard drug to cytotoxicity. Table 1 is not necessary, put the information in the text.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.