Author's response to reviews

Title: Mutagenicity and antimutagenicity of six Brazilian Byrsonima species assessed by Ames test

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Version: 2
Date: 26 February 2014

Author's response to reviews: see over
BMC Complementary and Alternative Medicine

Mutagenicity and antimutagenicity of Brazilian *Byrsonima* species assessed by Ames test

Dear Editor,

Thank you for your useful comments on our manuscript.

We have modified the manuscript accordingly, and corrections are listed below:

Reviewer 1:

**Reviewer:** Adeyemi Oladapo Aremu

**Reviewer's report:** see attachment

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:** I declare that I have no competing interest

**Comments for authors**

Espanha et al. reported on the Mutagenicity and antimutagenicity of Brazilian *Byrsonima* species assessed by Ames test. The following corrections are required before acceptance. Overall, the manuscript suffers from language problem. Authors have to check the whole manuscript and possibly seek a language expert for improvement.

**Answer:** We have revised the WHOLE manuscript carefully and tried to avoid any grammar or syntax error. We believe that the language is now acceptable for the review process.

**Title:** It can be more informative by adding ‘six’ Brazilian *Byrsonima* species.
Answer: The title has been corrected.

**Keywords:** The currently used keywords can be replaced with other words not appearing in the title. This will improve the visibility of the article after acceptances.

**Answer:** The key words have been replaced.

**Background:** As with the whole manuscript, authors must improve on the language to allow for better flow to the readers. There are several aspects/sections (see for example, page 3, paragraph 2, page 5, paragraph 1, etc) whereby the paragraphs are difficult to comprehend. The language need to be polished and straight to point. For examples (page 5, first sentence), *In our daily life, we contacted several compounds with mutagenic potential.* Sentence is poorly constructed and need to be re-written. In my own opinion, the aims and objectives (page 5, last paragraph) of the study is presented in an cumbersome manner. The paragraph should be separated for better understanding and clarity.

**Answer:** The text of background was modified.

**Methods**

In page 7, paragraph 2 and 3 should be combined as paragraph 2 currently appear isolated.

**Answer:** Paragraph 2 and 3 were combined.

In page 7, paragraph 2, ............swollen for 2 hour........ What are the authors implying? Please clarity and use a better word.

**Answer:** The paragraph was modified for better understanding.

Also, the use of ‘h’ for hour must be checked throughout the manuscript

**Answer:** The abbreviation for hour was standardized (h).

**Plant material and extraction:** The sections look so disjointed and untidy. It can be improved drastically. The information can be easily presented in a Table in a compact manner.

**Answer:** The information was presented in a Table (Table 1).
Data analysis: Authors can combine the analysis for mutagenicity and antimutagenicity assay as a single subsection.

Answer: Data analysis was written as a single subsection.

Results
More effort is required from the authors. The section can be more focused and check for editorial error.
For example, write TA97a and not Ta97a.

Answer: The text was modified.

Another sentence........None of them doubled or more than doubled the number of revertant.................a poorly constructed sentence, please rephrase.

Answer: The text was modified.

Discussion
In the current state, I find this section too long and disjointed. It can be drastically improve for better flow and understanding.
For example, page 13, 2nd paragraph and page 17 1st paragraph appears isolated as it is. Please integrate to the following paragraph.

Answer: The text was modified.

Tables
Why have the authors separated the tables? In my own opinion, Table 1 and 2 as well as Table 3 and 4 can be easily combined. Then the title can read for example, ‘Mutagenic activity expressed as the number of revertants/plate ± SD and (mutagenic ration) of six Byrsonima species ethanolic extracts’

Answer: Table 1 and 2 and Table 3 and 4 were combined.

See all Tables and I recommend that all abbreviations must be defined as a footnote.
The use of C+ for positive control is rather confusing (bearing in mind that the mutagen are denoted with a, b, c, d, e, f, etc) since there is space, I suggest authors should write (C+) in full.

Answer: The tables were modified.
References
Authors need to double check all reference thoroughly. In the current state, it is full of a lot of mistakes. For instance, (page 22), ref no 30 (a particular reference having some of the co-authors of the current manuscript is full of mistakes):


Should read ‘Höhnes’ and not ‘Hohnes’. ‘recombinant’ and not ‘recombinan’. Why are the authors names capitalized?
Also, authors should include doi for manuscript ‘in press’ (see for example, ref no 5, 28 and 30)


Answer: All references were doubled checked and corrected as suggested.

Reviewer 2:

I was not able to send my comments through the website. Below are my comments about the manuscript:

The manuscript is well written, the scientific methods and analysis well described. However, there is no new information or novelty to these work since all the species studied have been already been tested for mutagenicity and antimutagenicity by various authors. For this manuscript to be accepted for publishers the authors need to show what new information they are bringing to the table.
At is present state I recommend the article should not be accepted for publication.

Thank you

Answer: The species that have been studied previously, and which are also present in this work were B. fagifolia and B. intermedia. However, for B. intermedia there are studies only for methanolic, hydromethanolic and chloroformic extracts. (Sannomiya et al., 2007. Journal of Ethnopharmacology, v. 112). For B. fagifolia, only the methanolic extract was assessed (Lima et al., 2008. Journal of
Ethnopharmacology, v. 120). And we have studied hydroalcoholic extracts, and hydroalcoholic extracts weren’t assessed yet.

Furthermore, in this study, four new species, that never have been studied for mutagenicity and antimutagenicity were evaluated. All of them with hydroalcoholic extracts too. The only spece of the genus Byrsonima which was assessed for antimutagenicity was B. basiloba. (Lira et al., 2008. Journal of Medicine Food, v. 11.)

Reviewer 3:
- The authors report on the mutagenicity and antimutagenicity of six Brazillian Byrsonima species. The study undoubtedly add to our knowledge however, the authors could have used another mutagenicity test, in addition to Ames test, to compliment and best support the results. However, The major concern is that the language of the manuscript is too poor and not good enough to make comments on different parts of the manuscript. It certainly needs serious revision. I recommend that the manuscript be send to an English native speaker for editing and proof reading.

Answer: Certainly, other mutagenicity tests would compliment and best support these results, such as micronucleus assay. However, due to the large number of samples, additional assays will be accomplish later.

The language of this article has already been corrected by an English native speaker.

- Another concern is that there is high fluctuations in the number of spontaneous reversions especially in Table 2 (Column 7 –TA100 and Column 10-TA97a). The number of reversions reported for the negative control for B. intermedia (249) is more than doublethose reported for the negative control for B. ligustrifolia (115). This is an indication that the tester strains may lost their characteristics, contamination or accumulation of back mutations by repeated sub-culturing (Maron and Ames 1983).
Answer: Before the Amest Test, all tester strains have their characteristics checked out and all results were ok.
- In the abstract, the authors reported that both *B. coccolobifolia* and *B. ligustrifolia* had potential mutagenic activity but failed to mention the risk arising from this effect to the conclusions section of the abstract.

**Answer: The text was modified.**

- The background section is too long. Include paragraph 4, 8, 9 and 10 only in the background section after concise re-writing. In my opinion, paragraph 1, 2, 3, 5, 6 and 7 of the background are superfluous.

**Answer: The text was modified.**

Minor essential revisions:
- Mention the authority of each species under investigation.

**Answer: The text was modified.**

- Present the information given in page 6 under the subtitle “plant material and extraction” in a table. The table should consist of the scientific name, authority, voucher specimen number, the collection site and so no.

**Answer: The information was presented in a table.**

Thank you for suggestions and for giving us a new opportunity.

Sincerely,

Dr. Flavia A. Resende