Author's response to reviews

Title: Antioxidant activities of ethanol extracts and fractions of Crescentia cujete leaves and bark and the involvement of phenolic compounds

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Author's response to reviews: see over
Response to Reviewer-1

Reviewer's report

Title: Antioxidant activities of ethanol extracts and fractions of *Crescentia cujete* leaves and bark and the involvement of phenolic compounds

Version: 1 Date: 30 September 2013

Reviewer: Maria do Carmo Vieira

Reviewer's report:
Major Compulsory Revision

1. Change key words. Don't repeat the title, as “Antioxidant activity”, “leaves and bark” and “polyphenol”. Key words, title and abstract serve as guides to search for information.

Response: The above key words have been replaced by “Calabash tree” “Oxidative stress” “Crude extracts” “Free radicals”

2- The discussion part of the manuscript was poorly written. The authors should endeavour to discuss the activities described in conjunction with the determined phytochemical constituents. Improve survey of chemical constituents of the species.

Response: Discussion part have improved on the basis of chemical constituents reported by many authors. Last paragraph of Discussion part have been re-written, “DPPH radical scavenging activity section” has been discussed on the light of the class of phytoconstituents and previously reported pure compounds. “The total antioxidant capacity” in the discussion part also improved.

3- This work would have been of higher standard if modern analytical tools like HPLC and LC-ESI-MS are used to identify the constituents.

Response: Yes, we are agree to use the above analytical tools so that the work would be of higher standard. But we have reported here only class of phyto-constituents not the single compound. So the procedure (standard phytochemical methods: TLC spary reagent and chemical analysis) used for preliminary screening may be sufficient in this research.

4- Improve the review of chemical, pharmacological and biological studies of introduction to reinforce data from the discussion.
Response: Some chemical, pharmacological and biological reports on antioxidant, phytoconstituens have been discussed to make the background more informative. Please see in 3rd paragraph of “Background”section.
Minor Essential revision

ABSTRACT
“Keywords: Antioxidant activity, leaves and bark, plant polyphenol, flavonoid”: Check font.
Response: Yes, the font was different from the original text and changed.

.Methods: Remove (.)
Response: Has been removed

“phytochemical screening test for various constituents” - Which method?
Response: Now corrected as “Standard phytochemical methods (Thin layer chromatography and spray reagents).”

BACKGROUND

Line 4 – Line 10: “Many plants .......... ageing, and ischemia [2].” Not copying in “integrals” from other articles. But yes, create a different text based on the ideas of the same.
Response: Re-written

Line 8: “(H2O2) [1]”. Check source of citation 1.
Response: Corrected. Name of the journal was “Food Chemistry”. Unfortunately it was written as “J Food Chem”

Line 30: Only accessible to poor population? Poor?
Response: Corrected as “affordable by all population”

Line 30 – 31: “It then becomes necessary to search for new antioxidant drugs, especially those that would be safe and cheap and thus easily affordable by poor population” does not conform to the chance of work as presented in Abstract (background) “to find possible sources for future novel antioxidants in food and pharmaceutical formulations”. Rewrite. Please provide adequate support that justifies the work.
Response: In abstract background it is re-written as –“The aim of this study was to investigate the antioxidant activity in vitro, total phenolic and flavonoid contents in ethanol extracts and fractions of Crescentia cujete leaves and stem bark.”

Line 31: “TPC and TFC” - Cited for the first time in the text, report?
Response: corrected as total phenolic content (TPC), total flavonoid content (TFC)

Line 33: “of C. cujete” - Replace for Crescentia cujete. Cited for the first time in the text.
Response: Replaced

Line 34: “Binoniacea” - Replace for Binioniaceae.
Response: Replaced

Line 51: “to confirm the ethnomedical uses of this medicinal plant” - I did not understand. In antioxidant activity evaluation (leaves and bark) which popular use will prove? Please provide support that justifies its use in folkloric medicine.
Response: we have rearranged as “this may justify important ethnomedical uses of this medicinal plant as antioxidants have diverse biological actions”.

Line 51: “(leaves and bark)” – The fruit bark or stem bark?
Response: stem bark; and was put throughout the manuscript.

METHODS
Line 57: “voucher specimen has been deposited in the departmental herbarium” – Please indicate the nº deposited?
Response: Corrected, voucher specimen no was put.

Line 62: “380 gm” – mg or g?
Response: According to journal format it would be “g” instead of “gm”

Line 68: “8.5gm” – 8.5 g?
Response: “gm” was replaced for “g”

Line 68: “The crude ethanol extract was further extracted” - What kind of extraction – liquid-liquid or fractionated extract?
Response: Partitioned. Now replaced as.. “The crude ethanol extract was suspended with distilled water (150 ml) and partitioned with petroleum ether, chloroform, ethyl acetate.”

Line 70: “water” - or hydroethanolic?
Response: Water, because ethanol was evaporated and dried extract was suspended in water.

Line 76: “AlCl3” - by extensive
Response: Corrected as aluminium chloride (AlCl₃) in “Chemical” part in Methods section

Line 76: “Trichloro acetic acid” - Replace for trichloro acetic acid.
Response: Corrected

Line 77: “FeCl3” and “EDTA” - by extensive
Response: Corrected in “Chemicals” part in Methods section ferric chloride (FeCl₃)

Line 83: “etc” – Please, report all classes of chemical constituents.
RESULTS

Phytochemical screening
“of CEE” - Cited for the first time in the text, report in extract preparation, as PEF, CHF, EAF and AQF.

Response: Now it has been cited in the section of Extract preparation “The crude ethanol extract (CEE) was suspended with distilled water (150 ml) and partitioned…….”

DPPH free radical scavenging assay
“CET” and AQFL - What does it mean? Confirm in all text.

Response: Unfortunately the adding of CET and AQFL was typographical error and was removed with CEE and AQF respectively, in all the text.

DISCUSSIONS
Discuss the results found with the literature reported for “DPPH radical scavenging, antioxidant activity by β-carotene bleaching test and cytotoxic activity of the methanol extract of aerial parts of this plant were evaluated by David et al. [18]”.

Response: It has been discussed under the heading of “DPPH radical scavenging activity” in Discussion part.

In the literature consulted there is no chemical study of the leaves or bark of the specie? If yes provide support with the isolated metabolites to also explain the activity.

Response: All the chemical studies that are available now have been cited in Background section.

CONCLUSION
“However, further detailed investigation, especially in vivo antioxidant studies” – And toxicity is not important?

Response: Corrected as “in vivo antioxidant and toxicity studies are needed…..”

Level of interest: An article of limited interest

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

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