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.

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.

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.

4- Improve the review of chemical, pharmacological and biological studies of introduction to reinforce data from the discussion.

Minor Essential revision

ABSTRACT

“Keywords: Antioxidant activity, leaves and bark, plant polyphenol, flavonoid”: Check font.

.Methods: Remove (.)

“phytochemical screening test for various constituents” - Which method?

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.

Line 8: “(H2O2) [1]”. Check source of citation 1.

Line 30: Only accessible to poor population? Poor?

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.

Line 31: “TPC and TFC” - Cited for the first time in the text, report?
Line 33: “of C. cujete” - Replace for Crescentia cujete. Cited for the first time in the text.
Line 34: “Binoniacea” - Replace for Binoniaceae.
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.

Line 51: “(leaves and bark)” – The fruit bark or stem bark?

METHODS

Line 57: “voucher specimen has been deposited in the departmental herbarium” – Please indicate the nº deposited?
Line 62: “380 gm” – mg or g?
Line 68: “8.5gm” – 8.5 g?
Line 68: “The crude ethanol extract was further extracted” - What kind of extraction – liquid-liquid or fractionated extract?
Line 70: “water” - or hydroethanolic?
Line 76: “AlCl3” - by extensive
Line 76: “Trichloro acetic acid” - Replace for trichloro acetic acid.
Line 77: “FeCl3” and “EDTA” - by extensive
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.

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

DISCUSSIONS

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

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.
CONCLUSION

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

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