Reviewer’s report

Title: In vitro antioxidant and antimalarial activities of leaves, pods and bark extracts of Acacia nilotica (L.) Del.

Version: 1 Date: 28 Mar 2017

Reviewer: Ramzi Mothana

Reviewer's report:

Dear editor,

I am pleased to contact you and thank you for choosing me as a referee for this manuscript for the journal "BMC Complementary and Alternative Medicine".

This manuscript describes the evaluation of antioxidant as well as the antimalarial activities of the ethanolic extracts of three organ parts from Acacia nilotica. The authors used several well-known methods to determine the antioxidant activity. The antiplasmodial activity was determined using schizont maturation inhibition assay.

There are several previous reports on these activities of this plant species. In my opinion, the topic of the manuscript is not of a high scientific importance since the investigated plant is well-studied species and even these activities (antioxidant and antiplasmodial) were previously investigated and several reports were already published. So, the novelty is missing in this manuscript. Nevertheless, I can't neglect that a lot of work was done and the paper is well written and that pharmaceutical and pharmacological relevance is somehow still there. So, I think it can be accepted for publication after major revision. There are few points of the manuscript that need revision before acceptance. The authors are requested to consider some few points listed below.

1- Although the overall language is very good, there are some errors, e.g. format/style, grammar/syntax, and/or spelling/typographical errors. The authors would therefore be advised to read through the manuscript carefully to eliminate these typos.

2- Name of the plant species as well as bacterial or protozoal strains should be written italic in all parts of the manuscript (especially in references). "In vitro" should be also written italic (in title and many references).
Abstract:

3- Page 2/line 27: Write the full name of the plant for the first time. Plants extracts should be corrected to plant extracts.

4- Page 2/line 30: against falciparum…. Write the full name of the parasite.

5- Give an account on the results of LC-MS and HPLC.

Introduction:

6- Page 4/line 51: write Fabaceae instead of Mimosaceae.

7- Last paragraph (line 68-76): needs a reference.

Methods:

8- Line 80: Preparation of extract: Plants should be plant. This part is also too long. Reduce and rephrase.

9- Line 95: write in all subtitles: determination of ……..

10- Lipid peroxidation is about one page. It is too long. Reduce it

11- Antimalarial activity: is too long (more than one page). So, reduce it.

12- Add a paragraph for the LC-MS and HPLC methods (Briefly write about the mobile and stationary phases, conditions of the experiments, etc…).

Results and discussion:

13- In general, the discussion was poor. A good comparison and discussion with literature data was missing in certain paragraphs of this part. Compare and discuss the obtained results with published data. There are some references which were not cited such as:


14- Try to find a correlation between the antimalarial activity and the results of LC/MS.

15- I couldn't understand the values of the compounds (chemical content) in page 12 (line 227-234). What does 87,502 mg/kg mean?? This a very very high content which is impossible. This number means that about 87 g of gallic acid is present in 1 kg of the plant!!!!!!! The standard error values are also so high. Thus, correct what is wrong or explain what you mean withes values.

16- Last paragraph in discussion: line 267: the value of artemisinin crude extract….. it should be corrected to Artemisia annua crude extract

Conclusion:

17- There is no need for the sentence in line 276: crude extract of Artemisia ….. This should only be mentioned in the discussion.

References:

18- Ref. 1: the pages should be given.

19- There are few mistakes in the references Ref 4, 5, 6, 13, 16, 20, 22.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

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6. Do you have any non-financial competing interests in relation to this paper?
I declare that I have no competing interests.

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