Author's response to reviews

Title: A Study of Antioxidant Activity, Enzymatic Inhibition and In vitro Toxicity of Selected Traditional Sudanese Plants with Anti-diabetic Potential

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Version: 4 Date: 1 April 2014

Author's response to reviews: see over
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Title: A Study of Antioxidant Activity, Enzymatic Inhibition and In vitro Toxicity of Selected Traditional Sudanese Plants with Anti-diabetic Potential

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Author’s response to reviewers: see over
Thank you for consideration of our manuscript for publication in your journal. We have reviewed the above manuscript according to your reviewer’s comments.

**Reviewer's report**
**Title:** A Study of Antioxidant Activity, Enzymatic Inhibition and In vitro Toxicity of Selected Traditional Sudanese Plants with Anti-diabetic Potential  
**Version:** 3  
**Date:** 26 February 2014  
**Reviewer:** Amro Amara  
**Reviewer's report:**  
Now it is ok to be published  
**Level of interest:** An article of importance in its field  
**Quality of written English:** Acceptable  
**Statistical review:** No, the manuscript does not need to be seen by a statistician.  
**Declaration of competing interests:**  
It is ok

Review has no suggested changes for the revised manuscript.
Reviewer's report
Title: A Study of Antioxidant Activity, Enzymatic Inhibition and In vitro Toxicity of Selected Traditional Sudanese Plants with Anti-diabetic Potential
Version: 3 Date: 13 March 2014
Reviewer: Sarangapani Sreelatha

Reviewer's report:
The manuscript after revision is well presented and can be accepted
Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
No

Review has no suggested changes for the revised manuscript.
**Reviewer's report**

**Title:** A Study of Antioxidant Activity, Enzymatic Inhibition and In vitro Toxicity of Selected Traditional Sudanese Plants with Anti-diabetic Potential

**Version:** 3  **Date:** 14 March 2014

**Reviewer:** Mohammad Ali Ebrahimzadeh

**Reviewer's report:**

This is a weak and only a preliminary work. I cannot recommend it for publication. There are some major problems.

1- All plant extracts with exception of Acacia senegal exhibited significant antioxidant activity in DPPH free radical scavenging assay. Significant antioxidant activity should be supported by statistical analysis. p values should be mentioned.

*Samples will be considered to have high or significant antioxidant capacity with IC50 < 50 µg/ml (extract) or IC50 < 10 µg/ml (compounds), moderate antioxidant capacity with 50 < IC50 < 100 µg/ml (extract) or 10 < IC50 < 20 µg/ml (compounds) and low antioxidant capacity with IC50 > 100 µg/ml (extract) or IC50 > 20 µg/ml (compounds) [Kuete V, Efferth Th, Cameroonian medicinal plants: pharmacology and derived natural products. *Frontiers in pharmacology* 2010, 1:123].

*The IC50 results for selected plants were included in the text.*

2- “Foeniculum vulgare showed moderate toxicity. Ethanolic extract of Nigella sativa showed no toxicity while all other ethanolic extracts exhibited high toxicity.” What is the meaning of moderate toxicity and high toxicity really? They are qualitative words. There is no statistical consideration. These words should be clearly defined.


*This was added to the manuscript for clarification as recommended by reviewer.*

3- All tests used in this study need control (blank) and/or positive controls. Vitamin C, BHA and/or quercetin for DPPH method, EDTA for iron chelating activity and …

*Vitamin C was used as positive control for DPPH
EDTA was used as standard, and DMSO used as control for iron chelating assay
These are now mentioned in the manuscript*

4- The logic for selection of some plants such as Ammi visnaga, Foeniculum vulgare and Sesamum indicum is not clear. According to the data cited in Table 1, there is no reported antidiabetic activity for these plants.
The plants were selected based on their traditional use for treating DM in Sudan.

5- Each column needs unit. I do not know what really they are (Absorbance, percentage of inhibition, IC50 or something else). Units should be inserted.

Units were added to tables

6- The names of plants should be italic throughout the text.

Done throughout the text

7- Method of extraction and solvents used for extraction should be mentioned in abstract.

Done

8- The full name of DPPH is not correct.

1,1-Diphenyl-2-picrylhydrazyl (2,2-Diphenyl-1-(2,4,6-trinitrophenyl) hydrazyl)
The name was corrected in the revised manuscript

Level of interest: An article of limited interest
Quality of written English: Needs some language corrections before being Published

Done in the revised manuscript

Statistical review: Yes, and I have assessed the statistics in my report.
Declaration of competing interests: I declare that I have no competing interests
From Editor: Victor Kuete
Please include criteria for antioxidant activities to provide more understanding on what you consider significant. See Front Pharmacol. 2010; 1: 123.

Criteria for antioxidant activities is now included in the text