Author's response to reviews

Title: Anti-diabetic potential and antioxidant activities of traditional medicinal plants

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

Re: Revised submission of manuscript "Anti-diabetic potential and antioxidant activities of traditional medicinal plants" (MS: 3368017925852625)

Dear Sir,

We have pleasure in submitting our revised manuscript in which we have made the following amendments as recommended by the nominated reviewers. The reviewer’s comments are followed point-by-point by our revisions and corrections. We thank the reviewers for their comments and hope that the changes made meet with your approval.

Kind regards,

Vandana Gulati
Environment and Biotechnology Centre
Faculty of Life and Social Sciences
Swinburne University of Technology
Reviewer: Ashwell Ndhlala

Reviewer’s report:
The paper has been re-reviewed and is now reading well. The authors have made the necessary adjustments and the paper 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: No, the manuscript does not need to be seen by a statistician.

Response: No further action necessary

Reviewer 2: Alejandro Tapia

Reviewer’s report:
The authors have done most of the changes suggested.

There are two minor changes, I suggest in the manuscript, after which the paper should be accepted for publication

Minor Essential Revisions

1- In the statistics in the texto, the data and the standard deviations do not have the same precision (i.e. the same number of decimals). This should be reviewed.

Response: This has been corrected in the manuscript.

2- Figure 1A,B, 2A,B and table 3,4 are presenting same results
The Tables 3 and 4 should be eliminated and mention in the text.

Response: We have removed Tables 3 & 4 and the results have been mentioned in the text.

Accept after minor essential revisions

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.
Reviewer 3: Savarimuthu Ignacimuthu

Reviewer's report:

- Major Compulsory Revisions

Title:

• The authors have claimed the antidiabetic potential of the extracts merely by studying some simple in vitro assays. Thus, the name of the topic and their claims in the text should be rephrased.

Response: The term “anti-diabetic potential” is used appropriately to indicate that the plant extracts studied have shown in vitro activity suggesting they could be used as leads for the development of drugs to treat or prevent diabetes. Nowhere in the manuscript we are claiming that the extracts have anti-diabetic activity as this would require testing in appropriate animal models or human volunteers.

Methods:

• The authors have selected seven Australian medicinal plants, for this study. The ethnopharmacological relevance for selecting these plants for this study is not mentioned.

Response: The ethnopharmacological relevance of selecting these plants has been mentioned in the Table 1 for Australian plants. We have further explained (page 15) the traditional hunter-gatherer lifestyle and diet of Aboriginal people meant that cardiovascular diseases and diabetes were not common in these people. Thus, it would be impossible for these plants to have an ethnopharmacological history in the treatment of diabetes since the condition did not exist until the influence of recent life-style changes. Nonetheless, the use of these plants as traditional medicines was the rationale for their selection.

Likewise, there are number of articles published on the antidiabetic efficacies of B. diffusa, E. jambolana and P. marsupium. The authors should mention the reason for selecting these plants.

Response: We have stated on pages 4-5 “These plants were known to possess anti-diabetic action and but not all plants had been screened using enzymatic inhibition assays used in this study.” Therefore, we have performed the first systematic study of all plants for their enzyme inhibitory and antioxidant activities.

• Voucher specimen numbers have not been mentioned.

Response: Voucher specimens for the Australian plants are listed in the original reference 23 (see page 5). For the Indian plants, these were commercial samples provided by Promed Research Centre. We have therefore included the batch codes (page 5).

• Estimating DPPH scavenging Ferric ion reducing abilities of the extracts is only
a preliminary step. Thus, the authors should include some advanced assays such as ABTS, etc.

Response: The ABTS assay has been included to support the antioxidant activity of plant extracts done by DPPH assay.

• There are some typographical errors that have to be rectified (For eg: Prism Graphpad prism)

Response: These have been corrected in the manuscript.

Discussion:
• The discussion part contains many general comments, and describing these general facts is not needed, for the MS.

Response: The discussion has been revised and we feel that the contents are appropriate in length and context.

Tables:
• Tables 3 and 4 are not necessary.

Response: Tables 3 & 4 have been deleted as suggested.

• Tables 1-2 and 5-6 can be merged.

Response: Tables 1 & 2 have been merged into Table 1 and Tables 5 & 6 have been merged into Table 2.

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Response: The manuscript has been revised to ensure that the English is acceptable.

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Response: We have performed appropriate statistical analysis.