Reviewer's report

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

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Reviewer: Savarimuthu Ignacimuthu

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Reviewer comments

Title of the Manuscript: Antidiabetic potential, antioxidant and antibacterial activities of traditional medicinal plants

Major comments

1. Abstract is missing.

Extraction

1. Volume of plant samples taken and volume of solvent used for extraction should be mentioned
2. How the Indian ayurvedic plant samples were used for extraction? (Shade dried or fresh plant sample).
3. Percentage yield of each extracts and percent of ethanol used for extraction should be mentioned.
4. Concentrated at which temperature?

Glucosidase inhibition assay

1. Carbohydrate source (sucrose, starch or glucose) should be added along with enzyme and test samples.
2. Glucose concentration should be determined at initial and final period of the experiment.
3. Inhibition rates of extracts against blank control should be expressed in standard equations.
4. Inhibitory effect of #glucosidase should be presented as IC50 (µg/ml).
5. To better understand the effect of extract, the experiment should be conducted in different concentrations of enzyme and plant extracts.

Total phenolic content assay

1. Concentration of sodium carbonate should be mentioned.
2. Samples should be in five replicates.

Total flavonoids determination

1. Volume of sample or reagents taken should be expressed in uniform units (µl or ml)
2. Standard curve was prepared using 5-1000mg/l of quercetin. Aliquots of concentration of standard seems to be incorrect.

DPPH radical inhibition
1. The antiradical activity should be expressed as IC50 (µg/ml).
2. This study explains only about the reducing effect of stable free radical DPPH. It would be wise to refute the hypothesis by carrying out hydroxyl scavenging, nitric oxide reduced inhibition and lipid peroxidation assays together.
3. Where are the aliquots of standard
4. Percentage of inhibition should be expressed by the following equation:
DPPH scavenging effect (%) = A0 – A1/ A0
Where A0 is the absorbance of the control, and A1 is the absorbance of the sample.
5. All test samples should be analyzed in triplicate.

Tables
Table 2, concentration of plant extracts against #-amylase inhibition (mg/ml) seems to be high; usually µg/ml is expressed.

Figures
Figure 2, No standard error bar has been shown.

Recommendation: Major revision

Level of interest: An article whose findings are important to those with closely related research interests

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

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

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