Reviewer's report

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

Version: 1 Date: 27 October 2011

Reviewer: Ashwell Ndhlala

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Materials and methods
Total phenolic content assay
Please state the strength of Folin C reagent used i.e. 1N or 2N
Please state the % of Na2CO3 used.

Antibacterial assay
Why were positive controls not included?
For future assays, it is much accurate to use indicators such as iodonitrotetrazolium chloride (INT) to detect the bacterial or fungal growth/inhibitions.
The starting concentrations used in the study were too high for MIC antibacterial assays (250 mg/ml) Usually a concentration of 50 mg/ml is used as a starting concentration to give the first well a conc of 12.5 mg/ml.
It is pointless to report disc diffusion methods in a paper when MIC methods were also used.
Please state which agar was used i.e. Mueller-Hinton???? or which one.
Please include positive controls for the Glucosidase inhibition assay and the Amylase inhibition assay.

Results section
Glucosidase inhibition assay
The authors reported that there was no dose dependant activity.... this is because they started the assay at very high concentrations. The authors were supposed to lower the concentration until a meaningful curve is observed. That way, then their results can be meaningful.
The authors should not compare plant extracts tested at 1 mg/ml e.g. Mucuna pruriens to ascorbic acid which was tested at 0.1 mg/ml and the authors went on to say the extracts were equally as potent as ascorbic acid.

Antibacterial assays
The authors should pre-define the levels of activity e.g. what is mild activity.
Table 1: Please indicate which plants are from India and which ones are from Australia to enable the reader to make good comparisons.

Table 2: Please include the standard errors

Table 3: But it is mentioned that percentage inhibition was calculated for the zones so why is it not presented here? Please use percentage inhibition instead of the symbols as it is more informative.

Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

Please insert a reference to the statement ‘ROS contribute to the development of diseases such as cancer, cardiovascular,…..’

Please add species after ‘streptococcus’

Please insert a hyphen ‘-‘ between ‘Gram’ and ‘negative’ or ‘positive’ i.e. Gram-negative

For future assays, it is much accurate to use indicators such as iodonitrotetrazolium chloride (INT) to detect the bacterial or fungal growth/inhibitions.

Please be consistent wit decimal places

The statement ‘…. Were unable to kill this species,…..’ Can be written as ‘were unable to inhibit this species…’

Please italicize ‘in vitro’ or ‘in vivo’

Please define the phrase ‘fasting blood sugar’

Please remove E. coli, S. aureus etc from the ‘List of abbreviations’

Graph Pad Prism allows you to remove the bold text on Figures 1 and 2 to make neat graphs

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.