Reviewer's report

Title: Chemical profile and in vivo hypoglycemic effects of Syzygium jambos, Costus speciosus and Tapeinochilos ananassae plant extracts used as diabetes adjuvants in Puerto Rico

Version: 3 Date: 24 April 2015

Reviewer: Vandana Gulati

Reviewer's report:

Major Revision:
1. Figure numbers don’t match with the results

2. Figure 1 Schematic drawing of in vivo experimental procedures. Figure 1 is not clear and it appears to be too much pixilated therefore, it would be recommended to the Authors to redraw the Figure in PowerPoint and save it a Tiff file.

3. Figure 2.B Blood glucose level for Syzygium 2.2 after 90 mins after 10% glucose injection is between 200 to 300 mg/dl whereas, it shots up to more than 400 mg/dl after 120 mins. Similarly Costus 2.2 pre incubation glucose level is between 300 to 400 mg/dl and it shoots up to more than 450 mg/dl it would be great if the authors can elaborate more on this anomaly.

4. Figure 2. D and H and Figure 3 D data points for Syzygium 220 are missing.

5. Figure 3 C and D- After treating mice with Costus 22 blood glucose level drops down to less than 200 mg/dl after 30 mins of treatment whereas we do not see such effects when mice were given Costus 220.

6. Plant extracts were dissolved in different solvents such as methanol, ethanol and DMSO. Can authors explain why they had to use three different solvents for solubilisation when the extraction had been done in methanol.

7. It is not clear from the study plan what the 12 treatment groups were being administered. It should be given in more detail what each group was administered?

8. Abbreviation used for the plant extract need to be mentioned clearly in figure legends or in the materials and method section.

9. Number of mice per cage as suggested in study varied between 4 to 5. Was there any specific reason for doing so and why a constant number of four animals per cage not maintained?

10. In the results section, authors have mentioned nine different plant remedies were used among the study population the last time that one of the family members was treated for diabetes. What do they mean by treatment of diabetes, was there any specific time frame of treatment? If yes, what was the time frame?
Minor Revision:
1. Figure legends are not same as they have been discussed in the results section e.g. figure 3A, need to be corrected.
2. Various grammatical mistakes are there in the manuscript.
3. Significance of doing TLC plants needs to be explained?
4. In vivo should always be in italics.
5. Authors can also look at the effect of selected plant extract on glucose uptake using cultured C2C12 myotubes and 3T3-L1 adipocytes. They could also carry out chromatographic fraction of Syzygium and isolating pure compound showing the blood glucose lowering potential.

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: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests