Reviewer’s report

Title: Evaluation of Hypoglycemic Potential of Tridax procumbens (Linn.)

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Reviewer: Theophile Dimo

Reviewer’s report:

The manuscript by Hemant et al. entitled “Evaluation of Hypoglycemic Potential of Tridax procumbens (Linn.)” describes experiments in with the authors examine hypoglycaemic and antihypoglycemic effect of hydro alcohol extract of T. procumbens in normal and diabetic rats using One Touch glucometer.

Overall I find this to be an interesting pharmacological screening work, but some questions need be answered and more explanation in order to obtain a better understanding of the present results.

Title
The author should modify the title. It should be: “Evaluation of hypoglycemic and anti-hyperglycemic potential of Tridax procumbens”

Material and methods:

The specimen voucher number of the plant must be given.
The ONE TOUCH glucometer is not accurate mainly for research purpose.
What was your motivation to choose two doses (250 and 500 mg/kg)? An explanation needs to be given why these concentrations were used. How do these concentrations relate to traditional use?
Which extract is currently used in folk medicine? Is it the methanolic extract? or aqueous extract?

In toxicity the author should determine the LD50 (Lethal dose 50). For justify doses used, the author must provide references. The World Health Organization request to use doses up to 5 g / kg.
The number of animals used, the sex, in acute toxicity and the parameters studied are not significant to conclude that the extract is not toxic.

Which method (or apparatus) did the authors use to evaluate the behavioural parameters (grooming, mood, hyperactivity, sedation, loss of righting reflex, respiratory rate and convolution).

Results and Discussion:

In table 1, the reference compound should be included
Table 2: The normal control values should be included
In table 3, the statistical analysis should be done between the initial (0d) and the final (30d) values.

Table 4: The authors have to explain how the percentage of glucose reduction is not dose-dependent? Is it as compared to initial values or to values 7 days before?

In table 5, the statistical analysis should be done with the diabetic control value at 120 min.

In discussion the author said that: “the increase in body weight in diabetic rats can be attributed to the improvement in insulin secretion”. But probably to the insulin like effect of the plant extract.