Author's response to reviews

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

Authors:

Hemant Pareek (hemantipr@yahoo.com)
Sameer Sharma (sameer2592474@yahoo.co.in)
Balvant S Khajja (balvantsingh@yahoo.co.in)
Kusum Jain (kusum236974@yahoo.co.in)
GC Jain (jain-gc@uniraj.ernet.in)

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Author's response to reviews: see over
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? The reason given by the authors is not sufficient because it’s possible that the reduction by 50% of the dose used (250 mg/kg) could also show a pronounced effect of the plant.

In the literature very little (almost negligible) information is available pertinent to anti diabetic or hypoglycemic property of Tridax, the only one reference (no.21) is available that too not stating about how it is used? What is the methodology? The 250mg/kg dose was selected on the basis of information available in the literature i.e. at this dose the plant extract is reported to have wound healing activity. Therefore we have selected this dose (250mg/kg). The other dose level i.e. 500mg/kg was included with a view to determine whether doubling of the dose may cause any further effect (if any). However there is still a possibility that reduction by 50% of the dose used (250mg/kg) to 125mg/kg may also show pronounced effect of the plant, which we would take up in the detailed further studies.

The authors should add the quantity of the powder and the yield of extraction in material and methods section.

The required information about the quantity and yield of the plant extract has now been provided in the manuscript i.e The shed-dried plant material was coarsely powdered (6.9 kg) and extracted with 50% methanol using soxhlet apparatus for 36 hrs. The resulting mixture was filtered and the filtrate was evaporated in an oven at 40°C to get the dry residue (7.86 g).

Extract currently used in folk medicine? Is it the methanolic extract? Or aqueous extract? In the background, the authors said that the plant extract is used in flock medicine either alone or mixed with other plants to treat diabetes. This sentence stand as motivation to assess this plant in the treatment of diabetes, but in the answer, it is stated “no information is available about the current use of this plant in folk medicine in diabetic cases”. The authors should justify this contradiction.

As mentioned above almost negligible information is available pertinent to anti diabetic or hypoglycemic property of Tridax, the only one reference (no.21) is available that too not stating about how it is used? What is the methodology? However after the comments received from the reviewer; author Hemant Pareek personally visited to the Tribal area of Udaipur to gather the relevant information but the tribal people didn’t disclosed the methodology.

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. Base in reference n° 12, no sign of toxicity was observed at 2g/kg, but this does not exclude a possibility of toxicity at 2.1 to 5g/kg. Authors should perform a complete toxicity since the reference given was about wound healing and probably not oral toxicity. It’s advisable by WHO guideline
on medicinal plant (WHO 2002) to reach 5g/kg. Furthermore, the number of rats used is small to claim that the plant is not toxic.

To exclude a possibility of toxicity at 2.1 to 5g/kg we have performed a complete toxicity as suggested by the reviewer and the manuscript is accordingly modified.

In table 5, the statistical analysis should be done with the diabetic control value at 120 min. The signification of the letter is absent. In all table, (e.g tables 1, 2, 4 and 5) the signification of the latter a, b and c should be given.

The corrections are made as suggested by the reviewer and the manuscript is accordingly modified.