Reviewer’s report

Title: Anthelmintic and relaxant activity of Verbascum thapsus Mullein.

Version: 1 Date: 18 August 2011

Reviewer: Bishnupada Roy

Reviewer’s report:

Major Compulsory Revisions

This is a very preliminary account of anthelmintic and relaxant activity of a traditionally used medicinal plant. The authors should be more focused and should take-up only one aspect at a time i.e. either to investigate anthelmintic activity or relaxant activity. The parasites chosen are of major regional importance and the potential for plant-based anthelmintics is of relevance. The authors showed that the plant is effective against both nematode and cestode parasites. These two kinds of helminths belong to different phyla and are structurally and physiologically different, therefore, drugs which work well against one are generally not useful against other, with a few exceptions. Therefore, the authors should perform the experiment again and include data on structural and/or biochemical changes caused by the plant extract in these two different types of parasites to support their conclusion.

Minor Essential Revisions

Background:
1. Authors should not abbreviate “crude extract of Verbascum thapsus” as “Vt cr”

Experimental:

Collection, identification and preparation of plant materials
1. “The dilute extract was concentrated (Yield = 9.9%) under ......”

From this statement it is not clear whether the extract is free from methanol or not. A trace of methanol may have deleterious effect on parasites.

Preliminary phytochemical screening
2. Author should elaborate the protocol followed for phytochemical tests.

Anthelmintic activity
3. Authors prepared the test sample in distilled water, instead of phosphate buffered saline (PBS). PBS is used in in vitro experiment to provide the parasite a medium near to its natural habitat.

Statistical interpretation and reading of chart data
4. Student “t” should be replaced by “student’s t-test”

Results:
5. In the experimental the authors mentioned that the test materials were prepared in distilled water, however, in Table 1, it is indicated as saline. So it is not clear whether the test medium was distilled water or saline water.

6. The manuscript (as a whole) need minor language correction

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

**Declaration of competing interests:**

'I declare that I have no competing interests'.