Reviewer’s report

Title: Mechanism underlying antidiarrhoeal, antispasmodic and bronchodilator activities of Ipomoea turpethum Linn.

Version: 1 Date: 20 June 2014

Reviewer: Qianqian Xu

Reviewer’s report:

Dr. Huma Shareef et al. have studied the antidiarrhoeal, antispasmodic and bronchodilator activities of Ipomoea turpethum Linn. and the possible mechanism, which have explained the traditional usage of Ipomoea turpethum Linn.. However, a few parts still need correct in the manuscript.

- Major Compulsory Revisions
  1. Background, first paragraph, Ipomoea tupethum (L.) R. Br. is a synonym of Operculina turpethum (L.) Silva Manso. It is often used as purgative to treat constipation, the authors should explain the traditional usage for antidiarrhoea, and list the cited references.
  2. In vitro experiments, Rabbit jejunum, the second paragraph, preparation of concentration-response curves needs add Ca++ to the tissue bath in cumulative manner, that is “Following an incubation period of 30 min, control concentration……” to “Following an incubation period of 30 min, Ca++ was added to the tissue bath in cumulative manner, control concentration……”.

- Minor Essential Revisions
  1. Abstract: Methods, statistical analyses were not needed in the abstract part.
  2. Abstract: Results, the authors should describe results in detail, such as effective dosage should be added.
  3. Abstract: Conclusion, “CCB-like” should use full name for the first time shown in the manuscript.
  4. Abstract: Keywords, “diarrhoea, asthma and Ca++ antagonist” should be changed to “antidiarrhoea, antispasmodic, bronchodilator activity”.
  5. Methods: Animals, “the study was part of the PhD project of Ms Huma Shareef, approved by the Board of Advanced Study and Research of the University of Karachi, Karachi, Pakistan” should list in the acknowledge part.
  6. In vitro experiments: Rabbit jejunum, the authors should mention spontaneous contraction test in the second paragraph.
  7. In vivo experiments: Castor oil-induced diarrhea, “…and divided in four groups, …” the group should correspondence with the results (figure 1, there are six groups).
  8. Results: Antidiarrhoeal effect of Ipomea turpethum black variety (ITB), the last sentence, authors should add the dosages that produce the correspondence
9 Figure 3: X-axis of figure 3 should be log[Ca++]M.

10 Results: Spasmytic effect of Ipomea turpethu black variety (ITB), paragraph 4, authors should describe the results in detail.

- Discretionary Revisions

1 Methods, Extraction and fractionation “……thick semi-solid extract of ITB (46.0 gm) was……”, “……to obtained ethyl acetate (11.65 gm) and hexane extract (5.0 gm) of ……”, what's the mean of “gm”?

2 Methods, Animals, the first sentence “……rabbits (1.5-2 Kg),” should change to “……rabbits (1.5-2 kg),”; the second sentence “The animal were housed……” should change to “The animals were housed……”.

3 Results: Antidiarrhoeal effect of Ipomea turpethum black variety (ITB), the first sentence “… and ethyl acetyl friction was …” change to “ … and ethyl acetyl frictions were…”.

4 Results: Spasmytic effect of Ipomea turpethu black variety (ITB), paragraph 3, “Figure 2” should be “Figure 2D”.

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.

Declaration of competing interests:

I declare that I have no competing interests