Reviewer's report

**Title:** Attenuating effect of Acorus calamus in chronic constriction injury induced neuropathic pain in rats: an evidence of anti-oxidative, anti-inflammatory, neuroprotective and calcium inhibitory effects

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**Reviewer:** Nara L Quintão

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“Attenuating effect of Acorus calamus in chronic constriction injury induced neuropathic pain in rats: an evidence of anti-oxidative, anti-inflammatory, neuroprotective and calcium inhibitory effects”

**General Comments**

In this study, Muthuraman and Singh investigated the antinociceptive effect of Acorus calamus hydro-alcoholic extract using a CCI model of neuropathic pain in rats. They also investigated the possible involvement of anti-inflammatory and/or anti-oxidant activity in the antinociceptive effect of the herbal product. Although this work provides new evidences for the antinociceptive activity of this plant, some conducts and the description of the study give the work so confused and compromise the quality of the manuscript. There are several important points that should be considered in order to improve the quality of the publication.

**Major points to be considered for revision**

1- The title is very confusing and needs to be reformulated.

2- There are several grammar mistakes throughout the manuscript, making the text very confusing. The English must be carefully revised in all the manuscript.

3- In the abstract, the % of inhibition companied of standard error must be included. This section must be re-written.

4- In the background the definition of alldynia must be carefully revised. The fact of a stimulus that does not normally evoke pain and in neuropathy develops unpleasant sensation does not characterize an alldynic state.

5- The authors have mentioned in the background that this herbal product is used to treat insomnia, melancholia, neurosis, delirium and hysteria. It suggests that this plant exerts depressive actions in the CNS. Based on this hypothesis, the performance of experiments to assess the motor and exploratory activity of these animals is essential for the conclusion of the results.

6- For the Material and Methods Section:
a) The description of the animals used in the study is so confusing.

b) The authors did not include the score table used to evaluate the cold allodynia.

c) Please describe better the biochemical protocols.

d) The histopathological evaluation method must describe the analysed parameters and the figures must have legends.

7- RESULTS:

- a) In the Results Section, the authors did not include the percentage of inhibition.

- b) Why did the authors not use a third dose of the extract (50 mg/kg) for determining the ID50%. I think it is important.

9- Discussion Section should be re-written. Data are poorly discussed. The authors compared the effect of the extract with pregabalin, however they did not test the effect of the extract or isolated compound in the CNS (intrathecal or intracerebroventricular administration).

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

**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 interest.