Reviewer’s report

Title: A preliminary evaluation of antihyperglycemic and antinociceptive activity of Alternanthera sessilis aerial parts

Version: 1 Date: 2 May 2014

Reviewer: Shahabuddin Choudhuri

Reviewer’s report:

02 May 2014
Minor corrections for 3274052321250686

Re: ‘A preliminary evaluation of antihyperglycemic and antinociceptive activity of Alternanthera sessilis aerial parts’
Ahamed I Hossain, Md Faisal, Shahnaz Rahman, Rownak Jahan and Mohammed Rahmatullah
BMC Complementary and Alternative Medicine
Research article
Minor corrections for 3274052321250686
Dear Sir,
These are suggested minor corrections suggested for 3274052321250686.
Based on my assessment of the validity of the manuscript, I do advise:
- Accept after discretionary revisions (which the authors can choose to ignore)

It was a pleasure to be of some help to your esteem publishing house.
Prof. M. Shahabuddin K. Choudhuri
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Dear Prof Choudhuri,

Many thanks for agreeing to review the above manuscript, submitted to BMC Complementary and Alternative Medicine.
deadline for your report, which is 2 May 2014.

With best wishes,

Miss Carisse Reyes
on behalf of Prof Vanessa Steenkamp

TITLE
A preliminary evaluation of antihyperglycemic and antinociceptive activity of Alternanthera sessilis
aerial parts
Will be
A preliminary evaluation of antihyperglycemic and analgesic activity of Alternanthera sessilis
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RUNNING TITLE: Antihyperglycemic and antinociceptive activity of A. sessilis aerial parts
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ABSTRACT
Background. Alternanthera sessilis is used by folk medicinal practitioners of Bangladesh for alleviation of severe pain. The objective of this study was to scientifically analyze the antinociceptive property of aerial parts of the plant along with antihyperglycemic activity.
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Abstract
Background. Alternanthera sessilis is used by folk medicinal practitioners of Bangladesh for alleviation of severe pain. The objective of this study was to scientifically analyze the analgesic (non-narcotic) property of aerial parts of the plant along with antihyperglycemic activity.

METHODS. Antihyperglycemic activity was measured by oral glucose tolerance tests. Antinociceptive activity was determined by observed decreases in abdominal writhings in
intraperitoneally administered acetic acid-induced gastric pain model in mice.

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Results. In antinociceptive activity tests, the extract at the above four doses reduced the number of abdominal writhings by 27.6, 37.9, 41.4, and 44.8%, respectively. A standard antinociceptive drug, aspirin, reduced the number of writhings by 31.0 and 51.7%, respectively, when administered at doses of 200 and 400 mg per kg body weight.

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Key words: Antihyperglycemic, Alternanthera sessilis, glucose tolerance, antinociceptive, Amaranthaceae

Methods
Antinociceptive activity evaluation through abdominal writhing test
Antinociceptive activity of MEAAS was examined as previously described
divided into seven groups of five mice each. Group 1 served as control and was administered vehicle only. Groups 2 and 3 were orally administered the standard antinociceptive drug aspirin at doses of 200 and 400 mg per kg body weight, respectively.

A period of 5 minutes was given to each animal to ensure bio-availability of acetic acid,

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Antinociceptive activity evaluation results
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Discussion
Intraperitoneal administration of acetic acid can lead to gastric pain (with consequent
abdominal writhings) by inducing the release of mediators like prostaglandin E2, as well as
lipooxygenase products [26]. Prostaglandins [mainly prostacyclines (PGI
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and prostaglandin- (PG-E)], in
turn, has been shown to be responsible for excitation of A#-nerve fibers, leading to the sensation of pain
[27, 28]. Thus the observed antinociceptive activity of MEAAS can be due to its ability to block
prostaglandin synthesis through inhibition of lipooxygenase and/or
cyclooxygenase activities. A similar mechanism has been proposed before for antinociceptive activity of Ficus deltoidea aqueous extract in
acetic acid-induced gastric pain model [26].

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Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests