Reviewer's report

Title: Experimental assessment of antidiarrheal and antisecretory activity of Zehneria scabra in mice

Version: 2 Date: 8 July 2014

Reviewer: workineh shibeshi

Reviewer's report:

Major Compulsory Revisions:

The abstract: the method and results are not clearly written. The types of models used and the variables collected are not indicated, the results are not described in a clear language, needs rewriting.

Method:
Plant material: the authors stated that the leaves of the plant were collected here, but under extraction procedure, it states the aerial parts were collected?

experimental animals: the authors did not justify why only male mice were used for experiments? and why animals are kept at 25-30 degrees Celsius? that is to mean room temperature?

Extraction procedure:
why decreasing volumes of 500,400, 300 ml were used for extraction?

In the introduction and discussion, the authors indicated that boiled decoction of water is used traditionally, but why 80% methanol was used for extraction?

Acute toxicity test: what was the sex of mice used?

Grouping and dosing of animals: once the text described here, almost the same is described in individual experimental protocols, this could be redundancy, either this title could be removed or redundancy avoided in separate protocols.

What is the reference used for scoring of stool consistency?

Ethical clearance: the ethical approval is described in section (experimental animals), this is part could be removed.

Results:
The authors described the results statistical significance usually, but they did indicate such significances compared to negative control, but it is not clear whether they compared test doses and positive control. This is clearly seen in legends of all tables. So it needs revisiting.

The authors described some results as dose-dependent in loose terms, how was dose-response tested, as dependent or independent?
Why the 200 mg/kg dose increased intestinal transit even beyond negative control? could be artifact?

The antidiarrheal activity of test substances is usually expressed using antidiarrheal index. The authors should show this parameter.

Discussion:

The authors normally discuss their results and may compare it with other related findings, but they have written a literature review in discussion for the first 2 pages, this is the duplication of background information. So, they should focus on critical discussion of their major findings and relate that with existing literature.

The authors indicated that phytochemical screening was done previously, they did not justify the need for repeating it?

Minor Essential Revisions:

There are some editorial errors to correct

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I do not have any competing interests