Reviewer’s report

Title: Efficacy and safety of Curcuma longa essential oil to inactivate hydatid cyst protoscoleces

Version: 1 Date: 25 Aug 2018

Reviewer: María Celina Elissondo

Reviewer's report:

In their manuscript entitled, "Efficacy and safety of Curcuma longa essential oil to inactivate hydatid cyst protoscoleces", the authors investigate the chemical composition the essential oil, its in vitro and ex vivo activity against protoscoleces, and its toxicity in mice.

Mayor shortcomings

1) Proper use of English language requires more attention. I recommend that someone who speaks English as their first language carefully edit your manuscript. The MS cannot be accepted in the actual form.

2) Although the authors evaluate the intraperitoneal toxicity of the essential oil in mice; in contrast, during hydatid cysts surgery and/or PAIR, the potential communication between the hydatid cyst and the biliary tree substantially increases the safety requirements for using protoscolicides, which can cause chemical cholangitis leading to frequently fatal subsequent sclerosing cholangitis, as it occurs when formalin is used (WHO/OIE Manual on Echinococcosis in Humans and Animals: a Public Health Problem of Global Concern. WHO-OIE,, Ekert et al. (Eds), 2001.); thus, this potential adverse aspect needs to be stated and analyzed with more relevance.

3) Page 6, Lines 43-44. Figure 1 does not give relevant information. Give a reference in Methods section. I suggest remove this figure and add, instead figures comparing the viability of control protoscoleces vs treated protoscoleces (in Results section).

4) Scanning electron microscopy of protoscoleces could provide more information related to the changes provoked by the essential oil.

5) Please revise the conclusion (abstract and text). It seems too early to state this: "therefore it might be applied as a natural protoscolicidal drug for surgeons in hydatid cyst surgery".

6) Page 8, lines 39-40. "esthetized by Ketamine-Xylizine". This is no clear. Anesthetized? How did the animals were euthanized? By cervical dislocation? Please explain. Moreover give the doses of the cocktail of ketamine-xylazine.
Minor shortcomings

1) Page 3, Lines 12-13. Delete " (World Health Organization".

2) Page 3, Lines 32-33. motionless cysts?? Explain.

3) Page 4, Lines 51-53. Change "the mice model" to "mice".

4) Page 6, lines 28-29. Change "the protoscoleces were washed in duplicate" to "protoscoleces were washed twice".

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Not suitable for publication unless extensively edited

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