Reviewer’s report

Title: Anti-viral activity of culinary and medicinal mushroom extracts against dengue virus serotype 2: an in-vitro study

Version: 2 Date: 29 Dec 2018

Reviewer: Ying-Ray Lee

Reviewer's report:

In this manuscript, entitled "Anti-viral activity of culinary and medicinal mushroom extracts against dengue virus serotype 2: an in-vitro study", authors prepare the various extracts from six mushrooms and provide the data intended to claim that some of these extracts have an anti-dengue-2 activity. However, plaque reduction assay and real-time RT-PCR for DENV-E and NS5 proteins expression are examined in this study. This data seems like a pilot study, and more studies are recommended to accord the aims and scope of this journal.

1. What are the mechanisms of the extracts on anti-DENV2.
2. The extracts can block which step of the life cycle of DENV2 (attachment, entry, uncoating, replication, assembling, release)?
3. The human cell lines are recommended to verify the anti-DENV2 activity of these extracts.
4. The study procedure to detection of the expression of DENV-E and NS5 by Q-PCR, the data suggested that extracts might reduce the viral transcription or replication in the cells, but not the explain "inhibited the viral attachment" in the page 25 lines 571 to 572.
5. The data of cytokines modulation of these extracts in human monocytes are recommended to include in this manuscript.
6. If authors explain that glucan and protein complex is the reason for the anti-DENV activity, this is difficult to be used as an agent for anti-DENV therapeutic in the further.
7. The discussion section is too long, and needs to summarize.

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.

Not relevant to this manuscript

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

Needs some language corrections before being published

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