

Andrzej S Tarnawski
Editor-in-Chief
World Journal of Gastroenterology

Dear Professor Tarnawski,

We thank you and the reviewer for your thoughtful suggestions and comments. The manuscript has benefited from these insightful suggestions. We look forward to working with you and the reviewer to move this manuscript closer to publication in *World Journal of Gastroenterology*.

The manuscript has been re-checked and the necessary changes have been made in accordance with yours and the reviewer's suggestions. The detailed responses to all the comments have been prepared and are given in a point-by-point manner below. We hope that the revised manuscript addresses all the reviewers' concerns satisfactorily.

Thank you for your continued consideration. We look forward to hearing from you.

Sincerely,

Hai-Ning Fan
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China
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POINT-BY-POINT RESPONSES TO THE REVIEWER'S COMMENTS

Reviewer #1:

Scientific Quality: Grade A (Excellent)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Chen CS et al aimed to investigate the NLRP3 inflammasome and its mechanism of activation in HAE. They concluded that *E. multilocularis* induces hepatocyte damage and inflammation by activating the ROS-mediated NLRP3–caspase-1–IL-1 β pathway in Kupffer cells, indicating that ROS may serve as a potential target for the treatment of HAE. The hypothesis, design and presentation of results are acceptable and after minor language editing, the article could be published. (for example in the abstract instead of To investigate, it is written to investigated).

Response: Thank you very much for your recognition of our manuscript. We have revised the spelling mistake in Abstract as follows:

AIM

To investigate the NLRP3 inflammasome and its mechanism of activation in HAE.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

As a minor suggestion core tip should express the most important findings briefly, it can be organized i that way.

Response: Thank you for your comment. We have revised this section as follows:

Core Tip:

In recent years, the role of the NOD-Like Receptor Family Pyrin Domain-Containing 3(NLRP3) inflammasome in parasitic diseases has attracted widespread attention. However, the role and clinical significance of the NLRP3 inflammasome in Hepatic alveolar echinococcosis(HAE) remain unclear. Herein, We explored the mode of NLRP3 inflammasome activation in the tissues of patients with HAE, a rat model of HAE, rat Kupffer cells, and hepatocytes. Our experiments showed that inhibiting ROS production reduces NLRP3-caspase-1-IL-1 β pathway activation. Decreased IL-1 β expression alleviated inflammation and apoptosis rates in hepatocytes in HAE. We conclude that ROS-mediated NLRP3 inflammasome activation was a key factor leading to hepatocyte injury and triggering a cascade of inflammatory reactions. Therefore, ROS production may be a promising target for the treatment of HAE.

Reviewer#3:

Scientific Quality: Grade B (Very good)

Language Quality: Grade A (Priority publishing) Conclusion:Minor revision

One minor comment. The introduction states "It is estimated that nearly 2 billion people worldwide are infected." 2 billion people is clearly an excessive number for echinococcosis. It is recommended that this sentence be clarified.

Response: We have revised this section as follows:

It is estimated that nearly 600,000 people worldwide have been infected

POINT-BY-POINT RESPONSES TO THE EDITOR'S COMMENTS

Science editor:

The manuscript has been peer-reviewed, and it's ready for the first decision.
Language Quality: Grade B (Minor language polishing) Scientific Quality: Grade B (Very good)

Response: Thank you for your comment.

Company editor-in-chief:

I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Gastroenterology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". Please provide decomposable Figures (in which all components are movable and editable), organize them into a single PowerPoint file. Please authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2022. Before final acceptance, when revising the manuscript, the author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the Reference Citation Analysis (RCA). RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at: <https://www.referencecitationanalysis.com/>.

Response: Thank you very much for the suggestions, we have carefully revised the manuscript to meet the publishing requirements.

1. We have checked the figure legends to make sure that they can meet the requirements.
2. We have prepared decomposable Figures and organized them into a single

PowerPoint file. The copyright information was added to the bottom righthand side of the picture in PowerPoint.

3. We have checked three-line table to make sure it can meet the requirements.
4. We have made necessary changes in accordance with Guidelines for preparation of bitmaps, vector graphics, and tables in revised manuscripts.
5. We have revised the references according to the Format for References Guidelines.