

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 56911

Title: Dihydromyricetin Ameliorates Chronic Liver Injury by Reducing Pyroptosis

Reviewer's code: 03477763

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Turkey

Author's Country/Territory: China

Manuscript submission date: 2020-05-19

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-06-09 12:38

Reviewer performed review: 2020-06-10 18:57

Review time: 1 Day and 6 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

I congratulate the authors for Dihydromyricetin Ameliorates Chronic Liver
Injury by Reducing Pyroptosis name's article.
Best regards

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 56911

Title: Dihydromyricetin Ameliorates Chronic Liver Injury by Reducing Pyroptosis

Reviewer's code: 02451459

Position: Peer Reviewer

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Singapore

Author's Country/Territory: China

Manuscript submission date: 2020-05-19

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-06-22 00:32

Reviewer performed review: 2020-06-27 07:37

Review time: 5 Days and 7 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

This study investigates if hydromyricetin is able to ameliorate chronic liver injury and how this process may affect pyroptosis. Using a mouse model with carbon tetrachloride injection, the authors demonstrates that hydromyricetin when administered daily is able to reduce liver injury, steatosis, as well as the inhibition of pyroptosis related genes and proteins. Another contribution from this study is the use of a subcutaneously injected carbon tetrachloride with better safety profile as compared to the intraperitoneally injected ones. Overall, the results are affirmative of the conclusions drawn and there are room to explore the mechanism behind this effect further. Specific comments are as shown below: 1. The abstract is not written clearly. In the methods section of the abstract, it seems to suggest that the vehicle and DHM treated arms does not have carbon tetrachloride injected concurrently. 2. In the abstract, it is written that 24 mice were used in the study. Whereas in the method section, the number cited is 32. This discrepancy should be clarified. 3. From this study, it is not clear if DHM is acting on pyroptosis directly, or is it acting as an anti-oxidant that abolishes carbon tetrachloride mediated injury. The study design lacks a DHM-only treatment arm, which will help to answer this question. In such a DHM-only control, we would expect similar effect on the pyroptosis related mRNA and proteins. 4. While most of the data is consistent across the experiments, the part on Caspase-1 requires further clarification. Figure 3 shows suppression with DHM vs control, Figure 4 shows slight elevation in immunostaining, while Figure 5 shows no change with RT-PCR. Is the same antibody used in Figure 3 as for Figure 4? Is the antibody picking up pro-caspase-1 or the mature caspase-1? Clarification on this aspect should be made. 5. It would also be of interest to know how DHM affects other cell death pathway, in order to determine if the effect DHM on pyroptosis is a selective one.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 56911

Title: Dihydromyricetin Ameliorates Chronic Liver Injury by Reducing Pyroptosis

Reviewer's code: 02451459

Position: Peer Reviewer

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Singapore

Author's Country/Territory: China

Manuscript submission date: 2020-05-19

Reviewer chosen by: Ya-Juan Ma

Reviewer accepted review: 2020-08-04 05:54

Reviewer performed review: 2020-08-04 06:06

Review time: 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

The authors have responded to all my queries. For some of the questions, authors have

acknowledged the limitation of the work and have commented on these points in the main text. I have nothing further to add.