Iranian Journal of Pharmaceutical Research
Volume 23 · Issue 1 · e150017

OPEN PEER REVIEW

24-Dehydrocholesterol Reductase Facilitates Cisplatin Resistance of Non-small Cell Lung Cancer via Repressing Reactive Oxygen Species/Ferroptosis Pathway

Ce Qin, Jun Yuan, Rui Zhang, Li Liu, Yue-Song Ban

SUBMITTED	REVISED	ACCEPTED	DOI
15 Jun 2024	20 Jul 2024	3 Aug 2024	10.5812/ijpr-150017

About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

3 comments · 28 Jun 2024 – 6 Jul 2024

Referee 1 Reviewer

MINOR REVISION 28 Jun 2024

Please note the provided comments and ensure that they are carefully considered and that any necessary corrections are made to the relevant sections of the manuscript.

Abstract
In line 8, page 3:
The last sentence is written twice. Please correct and delete it.

Background
The background should provide a more comprehensive overview of the topic, incorporating relevant studies and emphasizing the current knowledge gaps that the present study aims to address. By doing so, the significance and novelty of the research will be highlighted.

Abbreviations
An abbreviations list should be included after the background section, clearly defining any abbreviations used throughout the manuscript for ease of comprehension.

Title
To ensure clarity and professionalism, avoid using abbreviations in the title and opt for full terms instead.

Control Group (in vivo Sections)
For proper comparison and analysis, a control group or a normal group should be included in the tissue section examination. The number of samples in the control group should be mentioned to ensure adequate representation and statistical power.

Figure 5 Part C Magnification
In Figure 5, Part C, the magnification level should be specified, such as x100 or x200, for better interpretation and comparison of the results.

Discussion
The discussion section should be expanded by incorporating relevant literature to compare and contrast the findings of the study. It should also highlight the implications of the results and address any potential limitations, providing suggestions for future research.

Conclusion
The conclusion should be impactful and concise, summarizing the significant outcomes of the study. It should emphasize the final benefits, contributions, and applications of the research findings, highlighting their importance to the scientific community.

Eisa Kaveh Vernousfaderani Reviewer

MINOR REVISION 6 Jul 2024

Dear Authors,

Your manuscript is carefully and scientifically written, but several points require revision:

Consistency in Terminology: Ensure all compound words are written in the same way throughout the manuscript. For example, use either "paracancerous" or "para-carcinoma" consistently.

References for Methods: In the "Cell culture, establishment of DDP-resistant cells, and treatments" section, references are missing. Please provide the necessary citations.

Section 3.6 - Cell Counting Kit-8 (CCK-8): In the first line of this section, "thousands" should be corrected to "thousand."

Section 4.1 - DHCR24 Expression and NSCLC Survival Rates: There is no referenced source for the statement: "Furthermore, NSCLC patients with high DHCR24 expression exhibited a lower survival rate than those with low DHCR24 expression (Fig. 1D)." Please add the appropriate reference.

Use of "et al.": When using "et al.," ensure it is written in full.

Conclusion Section - DHCR24 Up-Regulation: The conclusion inaccurately states that DHCR24 up-regulation was observed. The study only compared the effects of DHCR24 being present or absent. Up-regulation is a different concept and should be correctly represented.

Mention of the Gepia Database: The "Gepia database," referenced in the legend of Figure 1, should also be mentioned in the main body of the manuscript.

Thank you for addressing these issues to improve the quality and accuracy of the manuscript.

Best regards

Associate Editor

MINOR REVISION 6 Jul 2024

Review for Manuscript ID: 150017
Reviewer 1,
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Thank you for addressing these issues to improve the quality and accuracy of the manuscript.
Best regards
Reviewer 2:
Please note and ensure that the provided comments are carefully considered and that any necessary corrections are made to the relevant sections of the manuscript.
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In Figure 5, Part C, the magnification level should be specified, such as x100 or x200, for better interpretation and comparison of the results.

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The discussion section should be expanded by incorporating relevant literature to compare and contrast the findings of the study. It should also highlight the implications of the results and address any potential limitations, providing suggestions for future research.

Conclusion

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Review for Manuscript ID: 150017
Reviewer 1,
This manuscript is carefully and scientifically written, but several points require revision:
Consistency in Terminology: Ensure all compound words are written in the same way throughout the manuscript. For example, use either "paracancerous" or "para-carcinoma" type.
Response: Thank you for your advice. We have made all compound words in the same way throughout the manuscript. Please see the revised manuscript for detail.

References for Methods: In the "Cell culture, establishment of DDP-resistant cells, and treatments" section, references are missing. Please provide the necessary citations.

Response: We really appreciate your valuable suggestion. References 11-13 have been cited for this section.

Section 3.6 - Cell Counting Kit-8 (CCK-8): In the first line of this section, "thousands" should be corrected to "thousand."
Response: Thanks so much for your suggestion. We have corrected "thousands" to "thousand."

Section 4.1 - DHCR24 Expression and NSCLC Survival Rates: There is no referenced source for the statement: "Furthermore, NSCLC patients with high DHCR24 expression exhibited a lower survival rate than those with low DHCR24 expression (Fig. 1D)." Please add the appropriate reference.
Response: We really appreciate your suggestion. This result was obtained from Gepia database (http://gepia.cancer-pku.cn/detail.php). We have explained this in the Result section 4.1. Please see the revised manuscript for detail.

Use of "et al.": When using "et al.," ensure it is written in full.
Response: We really appreciate your kind advice. We have changed "et al." to its full name “et alia” throughout the manuscript. Please see the revised manuscript for detail.

Conclusion Section - DHCR24 Up-Regulation: The conclusion inaccurately states that DHCR24 up-regulation was observed. The study only compared the effects of DHCR24 being or not. Up-regulation is a different concept and should be correctly represented.
Response: Thanks so much for your reminding. We have corrected this inaccurate description.

Mention of the Gepia Database: The "Gepia database," referenced in the legend of Figure 1, should also be mentioned in the main body of the manuscript.
Response: Thanks so much for your suggestion. We have mentioned Gepia database in the Result section 4.1. Please see the revised manuscript for detail.
Thank you for addressing these issues to improve the quality and accuracy of the manuscript.
Best regards

Reviewer 2:

Please noted and ensure that the provided comments are carefully considered and that any necessary corrections are made to the relevant sections of the manuscript.

Abstract

In line 8, page: 3;

The last sentence is written twice. Please correct and delete it.

Response: We are sorry for our carelessness and thanks so much for your reminding. We have corrected this error.

Background

The background should provide a more comprehensive overview of the topic, incorporating relevant studies and emphasizing the current knowledge gaps that the present study aims to address. By doing so, the significance and novelty of the research will be highlighted.

Response: Thank you for your advice. We have provided a more comprehensive overview of the research background and emphasized the current knowledge gaps in the Background section. Please see the revised manuscript for detail.

Abbreviations

An abbreviations list should be included after the background section, clearly defining any abbreviations used throughout the manuscript for ease of comprehension.

Response: Thank you for your kind suggestion. An abbreviations list is not consistent with the format requirements of Iranian Journal of Pharmaceutical Research. Thus, we cannot add abbreviations list in our manuscript. Thanks for your understanding.

Title

To ensure clarity and professionalism, avoid using abbreviations in the title and opt for full terms instead.

Response: Thank you for your insightful suggestion. The abbreviations have been changed to their full terms in the title.

Control Group (in vivo Sections)

For proper comparison and analysis, a control group or a normal group should be included in the tissue section examination. The number of samples in the control group should be mentioned to ensure adequate representation and statistical power.

Response: Thank you for your advice. For in vivo xenograft model, the nude mice injected with control NSCLC cells were served as a control group in this study, which was consistent with a series of similar studies[1-3]. N=6 for each group has been mentioned in the Methods section (3.9 Animal model).

References:

1 Zhang, C., He, L. J., Zhu, Y. B. *et al.* Piperlongumine Inhibits Akt Phosphorylation to Reverse Resistance to Cisplatin in Human Non-Small Cell Lung Cancer Cells via ROS Regulation. *Front Pharmacol* **10**, 1178 (2019).

2 Fan, C. C., Tsai, S. T., Lin, C. Y. *et al.* EFHD2 contributes to non-small cell

lung cancer cisplatin resistance by the activation of NOX4-ROS-ABCC1 axis. *Redox Biol* **34**, 101571 (2020).

3 Wu, D. M., Zhang, T., Liu, Y. B. *et al.* The PAX6-ZEB2 axis promotes metastasis and cisplatin resistance in non-small cell lung cancer through PI3K/AKT signaling. *Cell Death Dis* **10**, 349 (2019).

Figure 5 Part C Magnification

In Figure 5, Part C, the magnification level should be specified, such as x100 or x200, for better interpretation and comparison of the results.

Response: Thank you for your kind suggestion. The magnification is x400 for Figure5 C. We have explained this in the Figure legend for Figure5 C.

Discussion

The discussion section should be expanded by incorporating relevant literature to compare and contrast the findings of the study. It should also highlight the implications of the results and address any potential limitations, providing suggestions for future research.

Response: Thank you for your advice. We have performed comparisons between our outcomes and results from different studies, and discussed the limitations and future perspectives in the discussion section as you suggested.

Conclusion

The conclusion should be impactful and concise, summarizing the significant outcomes of the study. It should emphasize the final benefits, contributions, and applications of the research findings, highlighting their importance to the scientific community.

Response: Thank you for your insightful comment. We have revised the Conclusion section to meet the above requirements. Please see the revised manuscript for detail.

2 Revision 1

0 comments

No public comments in this round.