

Authors' Responses for *World Journal of Stem Cells* 55039

Autophagy in fate determination of mesenchymal stem cells and bone remodeling

Xiao-Dan Chen, Jia-Li Tan, Yi Feng, Li-Jia Huang, Mei Zhang, Bin Cheng*

We are pleased to resubmit for publication the revised version of *World Journal of Stem Cells* 55039:

“Autophagy in fate determination of mesenchymal stem cells and bone remodeling”

We are very grateful to the editors and to the reviewers for their constructive comments that helped us to improve the paper. We have revised the paper taking all of their remarks into account.

1. The second time of revision

Science Editor: First of all, thank you very much for submitting your manuscript 55039 to the World Journal of Stem Cells, published by Baishideng Publishing Group. We have received your revised manuscript. **However, after my assessment, I found that there are still many places in the revised manuscript that do not conform to the journal's formatting and technical requirements. Please download the “55039_List of issues that need to be addressed by authors in conditionally accepted manuscript” uploaded by the science editor and revise your manuscript accordingly.**

Response: Thank you so much for your assessment for our paper. We have revised our manuscript carefully according to the “55039_List of issues that need to be addressed by authors in conditionally accepted manuscript”. All of the revisions that we make to the revised manuscript have been cited in the response column in the form “55039_List of issues that need to be addressed by authors in conditionally accepted manuscript”, which we have uploaded as supplementary material in F6 system and listed below. We have also highlighted (in red) all of the revisions that we make in the updated version of the manuscript.

List of issues that need to be addressed by authors in a conditionally-accepted manuscript

(1) General information of the manuscript

Response: Dr. Bin Cheng and Dr. Jiali Tan were listed as co-corresponding authors in

the manuscript we submitted for the first time. Though Dr. Jiali Tan was responsible for submitting the manuscript in the F6 system, Dr. Bin Cheng was the leader of our research group who took part in the conceptualization and funding acquisition, and participated in the supervision, and writing, review and editing of the manuscript, thus listed as the principle and last corresponding author. To meet the requirement of designating only one corresponding authors in the revision version, also basing on the author contribution, we change the order of the authors as follows: “**Xiao-Dan Chen, Jia-Li Tan, Yi Feng, Li-Jia Huang, Mei Zhang, Bin Cheng***”, which has been approved by all the listed authors as we re-signed in the BPG_Copyright_License_Agreement in May 16, 2020. Again, the authors declares no conflict of interest. We do apologize for causing this misunderstanding and trouble.

Here is the author contribution in this review:

Xiao-Dan Chen was involved in the conceptualization, funding acquisition, and writing of the original draft; Jia-Li Tan took part in the conceptualization, funding acquisition, and review and editing of the manuscript; Yi Feng, Li-Jia Huang, and Mei Zhang participated in the provision of resources, and review and editing of the manuscript; Bin Cheng took part in the conceptualization and funding acquisition, and participated in the supervision, and writing, review and editing of the manuscript; All authors have read and approve the final manuscript.

(2) Manuscript revision deadline

Response: Thank you so much for your reminding.

(3) Style and format

Response: We have revised our manuscript accordingly and highlighted the revision in red.

(4) Abbreviations

Response: We have checked all through the manuscript.

(5) Manuscript organization

Response: We have revised our manuscript accordingly and highlighted the revision in red.

(6) Running title

Response: We have added the running title as requirement.

(7) Author list

Response: We have revised our manuscript accordingly and added the ORCID ID number.

(8) Author names and affiliations

Response: We have revised our manuscript accordingly.

(9) Author contributions

Response: We have revised our manuscript accordingly.

(10) Supported by

Response: We have revised our manuscript accordingly.

(11) Corresponding author

Response: We have revised our manuscript accordingly.

(12) Citation

Response: We have added a citation accordingly.

(13) Core tip

Response: Audio Core tip file has been provided in mp3 and uploaded in F6 system.

**(14) Introduction, Materials and Methods, Results, Discussion, and Conclusion
(optional)**

Response: We have revised our manuscript accordingly.

(15) References

Response: We have checked all through the manuscript.

(16) Figures and Tables

Response: We have checked the figures accordingly.

(17) Final checks

Response: Thank you for your reminding.

2. The first time of revision

Language evaluation: Grade B. Language editing certificate was not properly provided.

Response: We are very grateful for your comments and for your time in handling our paper. We have used language editing services (provided by the American Journal Experts: <http://www.aje.com>) to edit our manuscript and uploaded the editing certificate in F6 publishing system.

Academic norms and rules: The conflict-of-interest disclosure the Copyright License Agreement were provided, but the order of signatures in the Copyright License Agreement was not consistent with that in the f6 publish system.

Response: Thank you so much for your reminding. Dr. Bin Cheng and Dr. Jiali Tan were listed as co-corresponding authors in the manuscript we submitted for the first time. Though Dr. Jiali Tan was responsible for submitting the manuscript in the F6 system, Dr. Bin Cheng was the leader of our research group who took part in the conceptualization and funding acquisition, and participated in the supervision, and writing, review and editing of the manuscript, thus listed as the principle and last corresponding author. To meet the requirement of designating only one corresponding authors in the revision version, also basing on the author contribution, we change the order of the authors as follows: “**Xiao-Dan Chen, Jia-Li Tan, Yi Feng, Li-Jia Huang, Mei Zhang, Bin Cheng***”, which has been approved by all the listed authors as signed in the BPG_Copyright_License_Agreement. Again, the authors declares no conflict of interest. We do apologize for causing this misunderstanding and trouble.

5 Issues raised: (1) PMID numbers are missing in the reference list. Please provide the PubMed numbers to the reference list and list all authors of the references. Please revise throughout.

Response: We are very grateful for your comments and we have revised the reference throughout as requirements.

(2) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor.

Response: We have prepared, arranged and uploaded the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor.

(3) The “Author Contributions” section is missing. Please provide the author contributions;

Response: The author contributions have been added in the manuscript.

(4) The authors did not provide the approved grant application form(s). Please upload the approved grant application form(s) or funding agency copy of any approval document(s)

Response: We've uploaded the approved grant application form(s) or funding agency copy of any approval document(s).

3. Reply to the reviewers

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: This review is very interesting and it is based in a great number of papers. The most of them recently published. Bone remodeling is a continuous physiological process that requires the constant generation of new osteoblasts from mesenchymal stem cells (MSCs). Differentiation from MSC to osteoblasts requires a metabolic shift from glycolysis to increased mitochondrial respiration to ensure sufficient energy supply to complete this process. Autophagy has been shown by several authors to be a crucial process necessary in the fate of MSCs. The latest results published in the field are consistent with a model in which MSCs require inducing autophagy and, therefore, reducing the high levels of ROS resulting from increased mitochondrial respiration during osteoblast differentiation. This review will provide an important contribution to our better understanding of the role of autophagy in bone physiology.

Concerns: 1-There are several mistyped words along the text (self renewal, A, exhibites, showes, reportes, ostsoclast...)

Response: Thank you so much for your reminding. We have resolved the language issues in the manuscript based on the peer review report. To make the manuscript's language meet direct publishing needs, we have also used language editing services (provided by the American Journal Experts: <http://www.aje.com>) to edit the manuscript for grammar, sentence structure, word usage, spelling, capitalization, punctuation, format, and general readability.

2-The figures' legends are not specific and they are indicating nothing. They must to be rewritten.

Response: We are very grateful for your comments and for your time in handling our

paper. We have rewritten the figure legends to make them specific and clear.