Author’s response to reviews

Title: Bioinformatics prediction of miR-30a targets and its inhibition of cell proliferation of osteosarcoma by up-regulating the expression of PTEN

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Dear Editor and Reviewers,

Thank you for your letter and for the reviewers’ comments. We quite appreciate the opportunity to revise our manuscript. Those comments are very helpful and we have studied the comments carefully then tried our best to revise and improve the manuscript accordingly. We hope that the corrections will meet with approval. Revised portion are uploading through the summation system. Please feel free to contact us with any questions and we are looking forward to your consideration. The main corrections in the manuscript and the responses to the reviewer’s comments are as follows:
Reviewer reports:

Zhengdong Cai (Reviewer 1): Please include all comments for the authors in this box rather than uploading your report as an attachment. Please only upload as attachments annotated versions of manuscripts, graphs, supporting materials or other aspects of your report which cannot be included in a text format.

Please overwrite this text when adding your comments to the authors.

The manuscript by Zhong et al. evaluated the role of miR-30a in human osteosarcoma cells. The results revealed the anti-tumor effect of miR-30a mediated by positively regulating the expression of PTEN in human osteosarcoma cells. This is, therefore, an attractive work furthering our understanding of miR-30a function in osteosarcoma. The authors should, however, pay attention to the following concerns:

1. The picture of figure 1 obviously be missed in manuscript. It should be shown in the paper before publication.

Response: We are very grateful for you remind. We have added the figure 1 in revised manuscript.

2. In the section of "MG63 cells by confocal laser scanning microscope" on page 7, "figure 3" was mistakenly written in "figure 4". And in the section of "MiR-30a positively regulates the expression of PTEN in MG-63 cells", the authors were not mention the matching figures.

Response: We are very grateful for your comments on our manuscript. All the figures and corresponding discussion are corrected and marked in red in revised manuscript.

3. In discussion part, the authors state that "we also tested the expression of PTEN in osteosarcoma cell lines and the western blotting results showed that the expression of PTEN was obviously decreased in MG63, 143B and Saos-2 cells", Which figure and result can consistent with this conclusion? Please clarify.

Response: Thanks a lot for your comments on our manuscript. The western blotting results in Figure1 showed the expression of PTEN was obviously decreased in MG63, 143B and Saos-2 cells.
4. There are some minor grammatical mistakes in this paper which should be corrected carefully. For example, the sentence "MG-63 cells and Saos-2 cells were transfected with miR-30a inhibitor obviously promoted cell proliferation of osteosarcoma cells" on page 9.

Response: Thanks a lot for your comments on our manuscript. We already change the sentence "MG-63 cells and Saos-2 cells were transfected with miR-30a inhibitor obviously promoted cell proliferation of osteosarcoma cells" to "Transfection with miR-30a inhibitor obviously promoted cell viability of MG63 cells and Saos-2 cells."

5. The authors stated in discussion that "PTEN expression was significantly decreased in miR-30a-3p mimic-transfected MG63 cells", which was opposite to the experimental results. So this statement should be clarified.

Response: Thanks a lot for your comments on our manuscript. "PTEN expression was significantly increased in miR-30a-3p mimic-transfected MG63 cells. We already corrected the description and marked in red.

6. In figure 5 and 6, the authors detected cell proliferation of osteosarcoma cells by MTT assays. I would recommend using relative cell viability or Cell Viability(%) instead of OD values.

Response: Thanks a lot for your comments on our manuscript. We already reprocessing the data and renew the figure 5 and 6 in revised manuscript.

7. As the authors claimed that the anti-tumor effects of miR-30a was mediated by regulating the level of PTEN, the role of PTEN in miR-30a's function would be further investigated. I would suggest to evaluate the impression of PTEN inhibitor or PTEN siRNA on cell proliferation in miR-30a mimic-transfected cells.

Response: Thanks a lot for your comments on our manuscript. We already do the experiment about impression of PTEN inhibitor (SF1670, were purchased form Sigma-Aldrich) on cell proliferation in miR-30a mimic-transfected cells. The data showed PTEN inhibitor increased cell viability in miR-30a mimic-transfected cells in Figure 6C in revised manuscript.
Ming Xiang (Reviewer 2):

This research by Zhong et al. utilizes TargetScan analysis to predict the target of miR-30a. And identified the connection between miR-30a and PTEN in several osteosarcoma cell lines. This manuscript would be of interest to reader after minor revise.

The following concerns should be addressed:

1. Page 1. In abstract, "Transfection with miR-30a-3p significantly inhibited cell proliferation of osteosarcoma cells, while miR-30a inhibitor obviously suppressed cell viability of MG63 cells and Saos-2 cells." the description are inconsistent.

Response: Thanks a lot for your comments on our manuscript. We already corrected the mistaken description and marked in red. It corrected into "Transfection with miR-30a-3p significantly inhibited cell proliferation of osteosarcoma cells, while miR-30a inhibitor obviously promoted cell viability of MG63 cells and Saos-2 cells."

2. Page 14, Figure 1 can not be found in the manuscript.

Response: Thanks a lot for your comments on our manuscript. Figure 1 already be added in the revised manuscript.

Peng Cao (Reviewer 3): Zhong et co-authors in the paper submitted to BMC Medical Genomics which titled 'Bioinformatics prediction of miR-30a targets and its inhibition of cell proliferation of osteosarcoma by up-regulating the expression of PTEN" worked on the target searching for miR-30a through TargetScan analysis. PTEN was proved to be one of the target by transfection of mimic or inhibitor of miR-30a in osteosarcoma cells from data of cell proliferation and protein expression. It will be helpful to understand the mechanism and role of this miRNA in osteosarcoma.

Minor concerns:

1. Author didn't show the picture of figure 1 just with the legend.

Response: We are appreciating for your comments on our manuscript. We already add Figure 1 in the revised manuscript.

2. Some mistakes in spelling, e.g. page 4 line 21 "Reaseach" should be corrected to "Research", page 5 last line '…obtained from abm…" or "…obtained from abcam…”?
The manuscript should be read carefully to avoid such mistakes before be published.

Response: We are appreciate for your comments on our manuscript. We already corrected the spelling mistakes and marked in red.


We tried our best to improve the manuscript and also correct some other errors in the manuscript.

We are very sorry for negligence in our manuscript. Thanks a lot for your time on our manuscript. We hope you are satisfied with the revised version, however, if there any more question, we are willing to revise it again. It would be our great honor to have the manuscript published in BMC Medical Gnomics.

Sincerely yours

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