PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 65109

Title: Central nervous system tumors and three-dimensional cell biology: Current and future perspectives in modeling

Reviewer's code: 05863667

Position: Peer Reviewer

Academic degree: PhD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Lebanon

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-03-11 15:48

Reviewer performed review: 2021-03-23 17:54

Review time: 12 Days and 2 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish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

SPECIFIC COMMENTS TO AUTHORS

This manuscript introduces the development of CNS tumor model preparation and application from the perspective of three-dimensional models, which is of great value. However, the overall logic of the manuscript is not clear, and it fails to intuitively reflect the associations and differences between the 3D-sphere, organoids and brain chip models. In general, although the selected topic of the manuscript is good, there are still many areas that need to be revised. The details are as follows: 1. For the 3D-sphere model, simply summarize a table of CSC biomarkers for readers will be better. 2. It is necessary to supplement the comparison table of 3D-sphere model and organoids so that readers can choose the model in a targeted manner. 3. After the introduction, the common advantages of the 3D model compared to the 2d model should be summarized (such as the content of citations [28-34] in the manuscript) and cited (PMID: 33520358), so as to highlight the value of this review. 4. In addition, in my opinion, the chip model should be distinguished from the organoids. As you show in Figure 1, the 3D-sphere model, organoid and chip model should be the same level of model manufacturing solutions. 5. For each type of model, the manuscript should be divided in more detail. For example, the content could be further divided into modeling technology, application, and limitations, etc... In addition, if possible, I think that appropriate supplementation of the content of cell interaction in the tumor microenvironment may be more helpful to attract readers.