PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 84165

Title: Neural stem cells for Parkinson's disease management: Challenges, nano-based support, and prospects

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05247020

Position: Peer Reviewer

Academic degree: PhD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Poland

Manuscript submission date: 2023-02-28

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-25 09:55

Reviewer performed review: 2023-03-28 10:05

Review time: 3 Days

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
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

The authors submitted a manuscript summarizing the challenges, pros and cons, and prospects of neural stem cells in the treatment of Parkinson's disease (PD).   PD is one of the most common neurodegenerative diseases caused by specific degeneration and loss of dopamine neurons in substantia nigra of the midbrain. Cell replacement therapy is a strategy to achieve long-term motor improvements by preventing or slowing disease progression. Several promising cell sources offer authentic and functional dopaminergic replacement neurons. These cell sources include fetal ventral mesencephalic tissue, embryonic stem cells, neural stem cells, mesenchymal stem cells from various tissues, induced pluripotent stem cells, and induced neural cells.   The paragraph organization of the manuscript is not very well organized. The "PARKINSON'S DISEASE AS A CHALLENGE" section and "EMERGENCE OF NEURAL STEM CELLS" section could be simplified and combined with the "INTRODUCTION" section. In the "PROS AND CONS OF THE USE OF NSCs IN PD" section, the description of ESCs and iPSCs can be deleted because it is not relevant to the topic (NSCs) of the manuscript. Individual English errors in formatting and grammar need to be corrected.

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Peer-review model: Single blind

Reviewer's code: 04245957

Position: Peer Reviewer

Academic degree: PharmD, PhD

Professional title: Academic Research, Emeritus Professor, Senior Researcher

Reviewer's Country/Territory: Spain

Author's Country/Territory: Poland

Manuscript submission date: 2023-02-28

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-04-08 07:47

Reviewer performed review: 2023-04-18 16:20

Review time: 10 Days and 8 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[Y] Grade A: Priority publishing [ ] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] 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

The review is well written, it is interesting for experts and those interested in the subject, it is updated and deserves to be published. A document is attached with some suggestions to improve the text.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 84165

Title: Neural stem cells for Parkinson's disease management: Challenges, nano-based support, and prospects

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05247020

Position: Peer Reviewer

Academic degree: PhD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Poland

Manuscript submission date: 2023-02-28

Reviewer chosen by: Li Li

Reviewer accepted review: 2023-04-28 11:21

Reviewer performed review: 2023-05-01 08:26

Review time: 2 Days and 21 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) [Y] Minor revision [ ] Major revision [ ] Rejection
Peer-reviewer	Peer-Review: [Y] Anonymous [ ] Onymous

statements	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The authors submitted a revised manuscript and made some corresponding changes highlighted based on the reviewers' comments. Any change, even a letter or a punctuation mark, should be highlighted for a revised manuscript. It is a waste of time and effort for me to compare the differences between the previous and revised versions of the manuscript, as the authors only highlighted the changes in response to reviewers' comments and left the other changes unmarked. Very few English errors still exist. However, the revised manuscript is still a major improvement over the previous one.