PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 83924

Title: Neural lineage differentiation of human pluripotent stem cells: Advances in disease modeling

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03949242

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: United States

Manuscript submission date: 2023-02-16

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-02-18 07:42

Reviewer performed review: 2023-02-20 02:30

Review time: 1 Day and 18 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Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish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	[ ] 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) [Y] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

This manuscript entitled "Neural lineage differentiation of human pluripotent stem cells: advances in disease modeling " did detailed study on hPSCs. The study is interesting. I have some comments for improvement before acceptance. 1 Please write the artical in a regular format, e.g. "Alzheimer's Disease (AD)" in the "abstract" 2 Some studies have shown that iPSCs can differentiate into microglia, is it possible to provide an overview of microglia in the paper? 3 The relationship between brain disease and stroke is mentioned in the abstract, but the text deals with stroke, can you add some review of hPSCs and stroke?

PEER-REVIEW REPORT

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish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

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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 [ ] Grade B: Minor language polishing [Y] 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

In the present review paper, the authors present the "Neural lineage differentiation of human pluripotent stem cells: advances in disease modeling". In detail, the paper and topic is good, but I have some major concerns about the paper which are listed as follows: o There are several grammatical errors in the text. Please control the text in that manner. The text should be written scientifically. For example, this type of writing is wrong: -Brain diseases affect 1 in 6 people worldwide, ranging from acute neurological diseases such as stroke to chronic neurodegenerative disorders such as Alzheimer's Disease (AD Recent advancements in tissue-engineered brain disease models have allowed us to overcome the shortcomings of animal models, tissue culture models, and epidemiologic patient data that is commonly used to study brain disease;   Or, hPSCs include both human embryonic stem cells (hESCs) and human induced pluripotent stem cells (hiPSCs); and etc. Please modify the text. o Where is the "Keywords"? o Table 1, "reference column" should be modified and the name of the authors should be replaced in this column. o The paper needs a "conclusion" part.

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