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PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 50798

Title: Regeneration in Central Nervous System - Principles from Regenerating Brain of Adult Zebrafish

Reviewer's code: 03372021

Position: Editorial Board

Academic degree: PhD

Professional title: Professor

Reviewer's country: China

Author's country: Germany

Reviewer chosen by: Artificial Intelligence Technique

Reviewer accepted review: 2019-08-11 02:38

Reviewer performed review: 2019-08-21 13:35

Review time: 10 Days and 10 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

In this manuscript, the authors introduced the cellular environment of different brain regions of zebrafish under physiological conditions and the injury models used to study the regeneration response of zebrafish. In addition, the authors also summarized the cellular and molecular mechanisms of zebrafish in repairing the tissue and function of the central nervous system and expounded the critical role of inflammation in the process of nerve repair. However, the potential applicability and challenges of zebrafish central nervous system to reveal the repair mechanism for mammal central nervous system have not been well described, which is the main problem of this manuscript. 1. The nerve repair therapy mentioned by the authors in the Abstract section is not reflected in the text. 2. In this manuscript, the authors did not elaborate on the significance of the zebrafish central nervous system repair mechanism to the study of mammal nerve repair, which is very necessary. 3. The authors should analyze in detail the potential risks and challenges of the current research on the mechanism of central nervous system repair in zebrafish. 4. In the section of "Progenitor lineages in the adult zebrafish brain", the authors compared neural progenitor cells in the brains of zebrafish and mammals instead of describing the "progenitor lineages in the adult zebrafish brain". 5. P14L10: "Moreover, Notch1b is not present during heart embryogenesis...". The heart-related mechanism of zebrafish is not the focus of this manuscript. 6. P15L30: "Different kinetics of the inflammatory response between...". This point deserves further discussion. 7. A summary of the text is necessary for the manuscript. 8. A variety of minor issues should be corrected. 8.1. The resolution of all figures is too low. 8.2. The references should be updated. It would be better to be replaced by more references of the latest three years, such as Cells 2019, 8 (8), 886. 8.3. Some spelling and grammatical errors should be corrected, such as "divide" should be replaced with "divides" (P5L14).



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