

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 56649

**Title:** Neurotrophic effects of dental pulp stem cells in the repair of peripheral nerve after crush injury

**Reviewer's code:** 02438879

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor, Senior Scientist

**Reviewer's Country/Territory:** India

**Author's Country/Territory:** China

**Manuscript submission date:** 2020-05-20

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-05-20 10:56

**Reviewer performed review:** 2020-05-27 10:34

**Review time:** 6 Days and 23 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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#### **SPECIFIC COMMENTS TO AUTHORS**

Authors have presented the data in very significant way. Study have given valuable information of neurotrophic effect in repair of peripheral nerve injury. However, the source of cells represent a major limitation which can't be used for wider applications in large number of patients. Authors could have tried MSCs from human umbilical cord blood or induced pluripotent stem cells which are widely acceptable cell sources for clinical applications. Although authors have provided enough proof of concept and wrote manuscript nicely, still few grammatical and formatting errors could be seen throughout the manuscript which need to be corrected.

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 56649

**Title:** Neurotrophic effects of dental pulp stem cells in the repair of peripheral nerve after crush injury

**Reviewer's code:** 00724464

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor

**Reviewer's Country/Territory:** Brazil

**Author's Country/Territory:** China

**Manuscript submission date:** 2020-05-20

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-05-21 13:55

**Reviewer performed review:** 2020-05-28 13:47

**Review time:** 6 Days and 23 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

The scientific paper "The Neurotrophic Effects of Dental Pulp Stem Cells in the Repair of Peripheral Nerve after Crush Injury" aimed to explore the potential roles and molecular mechanisms of dental pulp stem cells in crushed nerve recovery and demonstrated that DPSCs were inclined to differentiate into neural cells. It can be considered that: 1) In the introduction, the author refers to lesions of the inferior alveolar nerve and lingual nerve but uses an experimental model with sciatic nerve injuries. There are several works in the literature with the two experimental models. It is suggested that you change the focus for injuries from ischiatic or change your experimental injury model to inferior alveolar nerve or lingual nerve. What is the innovative fact of your experiment? Example: Martins, D.O., dos Santos, F.M., Ciena, A.P. et al. Neuropeptide expression and morphometric differences in crushed alveolar inferior nerve of rats: Effects of photobiomodulation. *Lasers Med Sci* 32, 833-840 (2017). <https://doi.org/10.1007/s10103-017-2181-2> 2) In 2.9 Animal model of sciatic nerve crush injury, the difference between the normal and control groups was not clear. Why did you use euthanasia at 30 days if the vast majority of research on nerve repair uses 8-12 weeks? 3) In 3.5 N-DPSCs and DPSCs alleviated gastrocnemius muscle atrophy after nerve crush injury, it is suggested to insert the statistical data in a table for easier understanding. 4) In the legend of figure 5 remove repetition of the figure number. 5) As a suggestion, for a greater innovation of the experiment, it is suggested to insert at the end of the discussion the limitations of the study, such as, for example, the lack of photobiomodulation therapy in nerve regeneration. Example: Rosso MPO, Buchaim DV, Kawano N, Furlanette G, Pomini KT, Buchaim RL. Photobiomodulation Therapy (PBMT) in Peripheral Nerve Regeneration: A Systematic Review. *Bioengineering (Basel)*. 2018;5(2):44. Published 2018 Jun 9. doi:10.3390/bioengineering5020044



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