



**PEER-REVIEW REPORT**

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

**Manuscript NO:** 68279

**Title:** Dental mesenchymal stromal/stem cells in different microenvironments – implications in regenerative therapy

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer’s code:** 00504362

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Professor

**Reviewer’s Country/Territory:** Chile

**Author’s Country/Territory:** Serbia

**Manuscript submission date:** 2021-05-17

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-05-17 23:06

**Reviewer performed review:** 2021-05-20 16:30

**Review time:** 2 Days and 17 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 Grade E: Do not publish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 checked="" type="checkbox"/> Grade A: Priority publishing <input 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 checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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<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**

This is a very interesting and well-written manuscript in an emerging and hot topic in biomedical research. The article covers the most important topics on the role of different environments on dental mesenchymal stromal/stem cells and its implications in regenerative therapy.



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**Peer-review model:** Single blind

**Reviewer's code:** 03810998

**Position:** Editorial Board

**Academic degree:** BSc, MPhil, PhD

**Professional title:** Associate Professor

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

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

**Manuscript submission date:** 2021-05-17

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-05-19 03:52

**Reviewer performed review:** 2021-05-24 05:49

**Review time:** 5 Days and 1 Hour

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" 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



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<b>Peer-reviewer statements</b>	Peer-Review: [ <input type="checkbox"/> ] Anonymous [ <input checked="" type="checkbox"/> ] Onymous Conflicts-of-Interest: [ <input type="checkbox"/> ] Yes [ <input checked="" type="checkbox"/> ] No
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### **SPECIFIC COMMENTS TO AUTHORS**

This is an interesting review paper to summarize the effects of hypoxic and inflammatory microenvironment on the differentiation capacity of dental MSCs. The review is well written and it will be useful for the researchers in this field. I suggest the author prepare one more table (table 2) to introduce how the inflammatory factors regulate the regenerative potential of human dental mesenchymal stem cells.



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**Peer-review model:** Single blind

**Reviewer's code:** 04738361

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Director, Research Scientist

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

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

**Manuscript submission date:** 2021-05-17

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-05-17 14:01

**Reviewer performed review:** 2021-05-25 11:55

**Review time:** 7 Days and 21 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 checked="" type="checkbox"/> Grade A: Priority publishing <input 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 type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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### **SPECIFIC COMMENTS TO AUTHORS**

Manuscript ID 68279 describes different dental MSCs and compares their reaction in hypoxia and inflammatory conditions. This is a very interesting manuscript. Especially the first section that anatomically describes the dental tissues is missing in the other similar review articles. Although this is a great work the following points need to be clarified before its publication. \* Please add line's number. \* The references are sometimes very old. \* Page 5 , paragraph 2; MSCs exist in many fetal tissues as well. Please correct this sentence. \* Page 6, line 7 needs a reference. \* Concerning the immunoregulatory aspect of MSCs, the authors have mentioned that the mechanism behind their function is not elucidated. This is not quite true. Please refer to these recently published references to build up this section. (PMIDs: 33344453, 32669116, 33303019, 30359308). \* Important! Although figure 1 is interesting, the authors need to illustrate more figures mostly on the functions MSCs. \* Important! Regarding the role of hypoxia and inflammation on MSC's osteogenic and adipogenic capacities, the authors have only mentioned different published results in recent years. Please discuss what you think about these controversial results? In general author's viewpoint is missing in this manuscript.



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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**Reviewer's code:** 04738361

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Director, Research Scientist

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

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

**Manuscript submission date:** 2021-05-17

**Reviewer chosen by:** Jia-Ping Yan

**Reviewer accepted review:** 2021-08-01 22:07

**Reviewer performed review:** 2021-08-02 08:57

**Review time:** 10 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 checked="" type="checkbox"/> Grade A: Priority publishing <input 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>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

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

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

The authors have answered most of my concerns, I have no further comments.