

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

Scientific quality	<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 Grade E: Do not publish
Language quality	<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
Conclusion	<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
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

Peer-reviewer statements	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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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: 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

Scientific quality	<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
Language quality	<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
Conclusion	<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
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Peer-reviewer statements	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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Provenance and peer review: Invited Manuscript; Externally peer reviewed

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

Scientific quality	<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
Language quality	<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
Conclusion	<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
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Peer-reviewer statements	Peer-Review: [<input checked="" type="radio"/>] Anonymous [<input type="radio"/>] Onymous Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] 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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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: 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

Scientific quality	<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
Language quality	<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
Conclusion	<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
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
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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.