

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 64996

Title: Biological, chemical and mechanical factors regulating migration and homing of mesenchymal stem cells

Reviewer's code: 03486645

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor, Associate Chief Physician

Reviewer's Country/Territory: China

Author's Country/Territory: Poland

Manuscript submission date: 2021-02-27

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-02-28 06:51

Reviewer performed review: 2021-03-08 07:48

Review time: 8 Days

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input checked="" 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 Grade E: Do not publish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 type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input checked="" type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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 review presents information on recent findings regarding the mechanism of recruitment and tissue homing by MSCs. The authors do a lot of work, but the structure of the review is poor and illogical. I think it's not suitable for publication in World Journal of Stem Cells. The opinions are as follows: 1. In the introduction part, the authors should define what is "homing of mesenchymal stem cells"? Is it the ability of the cells to reach damaged tissues? 2. The structure of the review lacks continuity in logic. It's better to divide the review in three parts, biological, chemical and mechanical factors regulating migration and homing of mesenchymal stem cells, just as the title indicates. 3. The review is intended to present information on recent findings regarding the mechanism of recruitment and tissue homing by MSCs and provide an overview of useful information for clinical practice on how by effectively regulating MSCs migration, uptake of MSCs in damaged tissues can be increased. However, this review lacks information for clinical practice on how by effectively regulating MSCs migration, uptake of MSCs in damaged tissues. This is important for readers and should be introduced in detail. 4. The reference "62. Aziz KA, Till KJ, Zuzel M, Cawley JC. Involvement of CD44-hyaluronan interaction in malignant cell homing and fibronectin synthesis in hairy cell leukemia. Blood 2000." is different from others, and this should be corrected. 5. Some of the subtitles of the review are not concerned with the title and it's hard for the readers to understand the theme. This should be corrected. 6. The review lacks the author's own opinion about the advantages and disadvantages about the methods of regulating migration and homing of mesenchymal stem cells. And this should be discussed in detail.

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 64996

Title: Biological, chemical and mechanical factors regulating migration and homing of mesenchymal stem cells

Reviewer's code: 03478635

Position: Editorial Board

Academic degree: PhD

Professional title: Senior Research Fellow

Reviewer's Country/Territory: Japan

Author's Country/Territory: Poland

Manuscript submission date: 2021-02-27

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-03-01 00:56

Reviewer performed review: 2021-03-12 04:49

Review time: 11 Days and 3 Hours

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 checked="" type="checkbox"/> Accept (General priority) <input 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 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 review describes the factors regulating migration and homing of mesenchymal stem cells (MSCs). The varieties of MSC-based therapies in terms of the administration route are well discussed.

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 64996

Title: Biological, chemical and mechanical factors regulating migration and homing of mesenchymal stem cells

Reviewer's code: 03280717

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Poland

Manuscript submission date: 2021-02-27

Reviewer chosen by: AI Technique

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Reviewer performed review: 2021-03-12 22:16

Review time: 13 Days and 7 Hours

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input 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
Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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 review provides valuable information about factors involved in MSC migration that eventually affects the efficiency of MSC therapy. The content is on the target and well organized. I may ask some small correction here: 1. P8, will the subtitle changed as 'Influence of hemodynamic forces' be better than 'Influence of shear stress'? 2. P9, last 4th row, should be 'shear stress' instead of 'shear tress'