



PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 55166

Title: Role of CXCR4-SDF1-HMGB1 pathway on the directional migration of cells and regeneration of affected organ

Reviewer's code: 02446120

Position: Peer Reviewer

Academic degree: PhD

Professional title: Associate Professor, Doctor, Research Scientist

Reviewer's Country/Territory: Argentina

Author's Country/Territory: Malaysia

Manuscript submission date: 2020-03-03

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-04-14 11:07

Reviewer performed review: 2020-04-18 14:58

Review time: 4 Days and 3 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 Grade E: Do not publish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
Re-review	<input 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

Comments to the authors The manuscript by N. Haque et al., entitled “Role of CXCR4-SDF1-HMGB1 Pathway on the Directional Migration of Cells and Regeneration of Affected Organ” describes the pathways of elicited by HMGB1-SDF1-CXCR4 which orchestrate migration of cells toward the injured tissues and the role of different types of cells involved in regeneration. So far, the bulk of information regarding regeneration has been focused on stem cells, but proper consideration of the role of stromal cell-derived factor-1, SDF1, in migration of the cells needed for regeneration is still scarce. In this sense the present article covers an important and required issue. In particular, the authors gave attention to the not very well-known roles of the protein non-histone nuclear protein, HMGB1, in orchestrating the process of migration and regeneration. Also, the authors provided a description of the mechanisms of action of many paracrine factors released by transplanted stem cells and emphasized on the role of activation of SDF1-CXCR4 or HMGB1-SDF1-CXCR4 pathway during migration and retention of the transplanted cells. In addition, the manuscript reviewed the role of many cell types, including Mesenchymal stem cells, among others, in regeneration and, very importantly, the authors described how MSCs interact with their microenvironments to modulate regeneration during inflammation and tissue injury. Finally, the schematic diagram, included as Fig 1, about the role of HMGB1-CXCL12-SDF1 axis in regenerative processes clarify many of the concepts explained in the text. The manuscript is well written, and it gathered many of the currently available references. Up to now one the major problems faced to use stem cells in the clinic is to control migration and retention of transplanted cells. So, the manuscript is important and necessary to enlighten our knowledge about this critical medical problem. Minor point Authors please check carefully all the abbreviations used need to be explained



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when used for the first time in the article



PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 55166

Title: Role of CXCR4-SDF1-HMGB1 pathway on the directional migration of cells and regeneration of affected organ

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: Malaysia

Manuscript submission date: 2020-03-03

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-04-14 15:07

Reviewer performed review: 2020-04-21 04:30

Review time: 6 Days and 13 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" 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 type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input checked="" type="checkbox"/> Rejection
Re-review	<input 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

In this review manuscript, the authors plan to describe the role of HMGB1-SDF1-CXCR4 pathway in the migration of cells for tissue regeneration. However, there is nothing new can be obtained by the readers and the summary and the discussion are not in-depth. I suggest the authors should focus on the regeneration of one specific tissue with few cell types and then discuss the role of HMGB1-SDF1-CXCR4 pathway.



PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 55166

Title: Role of CXCR4-SDF1-HMGB1 pathway on the directional migration of cells and regeneration of affected organ

Reviewer's code: 01196501

Position: Peer Reviewer

Academic degree: PhD

Professional title: Academic Research, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Malaysia

Manuscript submission date: 2020-03-03

Reviewer chosen by: Xiao-Quan Yu

Reviewer accepted review: 2020-06-01 08:11

Reviewer performed review: 2020-06-01 08:23

Review time: 1 Hour

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 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

The review has given a detailed review about role and mechanism of CXCR4-SDF1-HMGB1 axis in directional migration of cells and regeneration of injured tissues. The structure of the paper is clear and illustrated. Review is rigorous and conclusion is credible according to total induction and description.



RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: World Journal of Stem Cells

Manuscript NO: 55166

Title: Role of CXCR4-SDF1-HMGB1 pathway on the directional migration of cells and regeneration of affected organ

Reviewer's code: 02446120

Position: Peer Reviewer

Academic degree: PhD

Professional title: Associate Professor, Doctor, Research Scientist

Reviewer's Country/Territory: Argentina

Author's Country/Territory: Malaysia

Manuscript submission date: 2020-03-03

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-06-19 14:41

Reviewer performed review: 2020-06-19 14:49

Review time: 1 Hour

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 statements	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



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The authors have made the required changes. The manuscript is interesting and valuable



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Title: Role of CXCR4-SDF1-HMGB1 pathway on the directional migration of cells and regeneration of affected organ

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: Malaysia

Manuscript submission date: 2020-03-03

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-06-19 15:34

Reviewer performed review: 2020-06-25 06:51

Review time: 5 Days and 15 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
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No