

## PEER-REVIEW REPORT

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

**Manuscript NO:** 81044

**Title:** Stromal cell-derived factor-1 $\alpha$  regulates chondrogenic differentiation via activation of the Wnt/ $\beta$ -catenin pathway in mesenchymal stem cells

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

**Peer-review model:** Single blind

**Reviewer's code:** 05573866

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Assistant Professor

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

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

**Manuscript submission date:** 2022-11-09

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-11-09 12:45

**Reviewer performed review:** 2022-11-16 19:10

**Review time:** 7 Days and 6 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 Grade E: Do not publish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 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 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

<b>Peer-reviewer statements</b>	Peer-Review: [ <input checked="" type="radio"/> ] Anonymous [ <input type="radio"/> ] Onymous
	Conflicts-of-Interest: [ <input type="radio"/> ] Yes [ <input checked="" type="radio"/> ] No

## SPECIFIC COMMENTS TO AUTHORS

Authors investigated the role of SDF-1 $\alpha$  in cartilage differentiation of MSCs and primary chondrocytes. MSCs were induced to differentiate in vitro along the three skeletal cell lineages of bone, cartilage, and adipose tissue. There are numerous comments and questions the authors should address, all were detailed below:

- Some spelling mistakes are present
- The manuscript needs punctuation correction particularly in the abstract.
- What's the rational for using both MSCs and chondrocytes
- Describe the detailed component of culture media used for expansion of chondrocytes

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

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**Reviewer's code:** 02560127

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Professor

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

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

**Manuscript submission date:** 2022-11-09

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-11-30 05:39

**Reviewer performed review:** 2022-12-06 18:27

**Review time:** 6 Days and 12 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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<b>Peer-reviewer statements</b>	Peer-Review: [ <input checked="" type="radio"/> ] Anonymous [ <input type="radio"/> ] Onymous
	Conflicts-of-Interest: [ <input type="radio"/> ] Yes [ <input checked="" type="radio"/> ] No

## SPECIFIC COMMENTS TO AUTHORS

The overall manuscript is well written however, minor corrections are needed to be incorporated. 1. Abstract needs correction. Aim and methodology used are not clear in the abstract. 2. Since most of the MSCs do not express CXCR4, authors should have considered using flow cytometry instead of immunocytochemistry as it describes more precisely the number of MSCs expressing CXCR4. 3. The information mentioned in line number 286-289 is irrelevant to the manuscript. 4. The manuscript needs grammatical and language editing. 5. Statistical analysis must be rechecked. Some graphs show a 1 to 2-fold increase compared to the control which is not corresponding to the 1-star significance. 6. Some images of the manuscript show a scale bar while some do not. Images need uniformity whereas the protein ladder is missing from figure 6. 7. The references lack uniformity.