PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 76465

Title: Combination of Mesenchymal Stem Cells and 3D Collagen Scaffold Preserves Ventricular Remodeling in Rat Myocardial Infarction Model

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03564643

Position: Peer Reviewer

Academic degree: Doctor, PhD

Professional title: Academic Editor, Associate Professor, Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Pakistan

Manuscript submission date: 2022-03-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-03-21 06:33

Reviewer performed review: 2022-03-25 09:04

Review time: 4 Days and 2 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good
	[ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing
	[ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority)
	[ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No

Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Qazi, et al explored the protective effect of mesenchymal stem cells combined with three-dimensional collagen scaffolds on ventricular remodeling in rat myocardial infarction model. This research is innovative. It has been proved that MSC is used in myocardial infarction model, and MSC and three-dimensional collagen scaffold are also reported in osteoarthritis, but this topic is still valuable at present. However, there is no in-depth mechanism research and no great clinical significance. At the same time, the manuscript also has many places to improve. Nevertheless, there are a number points that may deserve some revisions. 1. Abstract seems a little cumbersome. I think we should simplify the content of the background. 2. I recommend that the author mark the significance with an asterisk on the graph and express it with N.S. there is no significant difference 3. Figure 3: Gene expression analysis of cardiac markers The name of each gene should be marked on the figure. 4. Fluorescence images showing the expression of cardiac specific proteins. It may be clear on the original picture, but the clarity is very low after the author combines the pictures. Why not use WB quantitative analysis? 5. Cardiac function analysis should have pictures of cardiac ultrasound. Quantitative data alone is not enough. Many data of cardiac function analysis can be drawn in a table, perhaps better 6. The flow of the experiment should be able to draw a flow chart for patients to understand. 7. The article needs a great deal of language polishing, also, please avoid long sentences.

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No

Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

This manuscript is very interesting paper, I benefited a lot from it, it contains very valuable information, a good addition in the field of cardiovascular injuries that many suffer from. It is well organized with all the details of the study.   However, the quality of the manuscript can be improved if the authors considered and addressed the following concerns: 1- There are simple words written wrong 2- Please put the names of genes of cardiac markers on the figure 3.

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05935626

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Indonesia

Author's Country/Territory: Pakistan

Manuscript submission date: 2022-03-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-04-05 02:58

Reviewer performed review: 2022-04-05 13:21

Review time: 10 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No

Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

I would like to congratulate the authors for this manuscript. This study is interesting. I have some comments about the manuscript: Material and methods: Please refer related previous study on the methods that you use. Please meet the requirement of using SI units. Page 10 line 8: Please clarify the 'triangle Ct' method.   Page 10 line 11 and Page 12 last line: Please clarify the 'optimal temperature cutting' abbreviation, whether it is OCT or OTC.   Discussion: Regarding the scaffold used, please specify possible reasons of choosing non-denatured type 1 collagen scaffold over other scaffolds (e.g., hydrogels/chitosan/biomimetic microcarriers/fibrins). Please point out the limitations of your study within the methodology.   Please check for mistyped words.

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05817430

Position: Peer Reviewer

Academic degree: PhD

Professional title: Academic Research, Research Scientist

Reviewer's Country/Territory: Iran

Author's Country/Territory: Pakistan

Manuscript submission date: 2022-03-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-04-02 05:17

Reviewer performed review: 2022-04-10 04:53

Review time: 7 Days and 23 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [ ] Grade B: Minor language polishing [Y] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No

Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

In the current basic study, the authors introduce the "Combination of Mesenchymal Stem Cells and 3D Collagen Scaffold Preserves Ventricular Remodeling in Rat Myocardial Infarction Model". Overall, the study is clear and well done. But, there are some major points to improve the paper. At the first, there are misspellings and critical grammatical errors in the text which should be corrected (For example: Wistar rats weighing 150-250 gm were used for bone marrow isolation and development of MI model.). The abbreviations and symbol should be corrected. Also, the abstract part is long and should be modified. The authors should be added the "degrees of freedom, F" for any part of quantification results. Highlights is very long and only the important points should be mentioned. It should be note that some figures are not in high resolution and should be modified. In other words, some figures are very poor and is not acceptable.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 76465

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03564643

Position: Peer Reviewer

Academic degree: Doctor, PhD

Professional title: Academic Editor, Associate Professor, Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Pakistan

Manuscript submission date: 2022-03-18

Reviewer chosen by: Ying-Ying Liu

Reviewer accepted review: 2022-06-07 08:15

Reviewer performed review: 2022-06-07 08:19

Review time: 1 Hour

Scientific quality	[Y] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[Y] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Peer-reviewer	Peer-Review: [Y] Anonymous [ ] Onymous

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

SPECIFIC COMMENTS TO AUTHORS

The authors have addressed all the concrens from me.