

## PEER-REVIEW REPORT

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

**Manuscript NO:** 73370

**Title:** Optimization of adipose tissue-derived mesenchymal stromal cells transplantation for bone marrow repopulation following irradiation

**Provenance and peer review:** Unsolicited 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:** South Korea

**Manuscript submission date:** 2021-11-19

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-11-21 14:22

**Reviewer performed review:** 2021-11-21 17:09

**Review time:** 2 Hours

<b>Scientific quality</b>	<input checked="" type="radio"/> Grade A: Excellent <input type="radio"/> Grade B: Very good <input type="radio"/> Grade C: Good <input type="radio"/> Grade D: Fair <input type="radio"/> Grade E: Do not publish
<b>Language quality</b>	<input type="radio"/> Grade A: Priority publishing <input checked="" type="radio"/> Grade B: Minor language polishing <input type="radio"/> Grade C: A great deal of language polishing <input type="radio"/> Grade D: Rejection
<b>Conclusion</b>	<input type="radio"/> Accept (High priority) <input type="radio"/> Accept (General priority) <input checked="" type="radio"/> Minor revision <input type="radio"/> Major revision <input type="radio"/> Rejection
<b>Re-review</b>	<input checked="" type="radio"/> Yes <input type="radio"/> 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
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## SPECIFIC COMMENTS TO AUTHORS

I would like to congratulate the authors for this manuscript. This study is interesting, resourceful and brings new perspective. I have some comments about the manuscript:

**Materials and methods** Please check all the materials used for consistency / uniformity in writing (trademark, corporation name, city, state, country). Line 380-383: please correct the sequence for chondrogenic and osteogenic staining accordingly with Alcian blue and Alizarin Red S. Line 372: Please explain how did you distribute P3-P7 cells into the treatment groups and clarify if there is any special appointment of certain passage into certain treatment group. Line 821: Please correct Table S1 into Table 1 as corresponds with Table 1 in line 441. **Discussion** Please explain briefly about your reasons of using multiple passage cells (P3-P7). Please point out the limitations of your study within the methodology.

## PEER-REVIEW REPORT

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

**Manuscript NO:** 73370

**Title:** Optimization of adipose tissue-derived mesenchymal stromal cells transplantation for bone marrow repopulation following irradiation

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

**Peer-review model:** Single blind

**Reviewer's code:** 04055018

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Assistant Professor

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

**Author's Country/Territory:** South Korea

**Manuscript submission date:** 2021-11-19

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-11-25 12:13

**Reviewer performed review:** 2021-12-07 17:09

**Review time:** 12 Days and 4 Hours

<b>Scientific quality</b>	<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
<b>Language quality</b>	<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
<b>Conclusion</b>	<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
<b>Re-review</b>	<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
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## SPECIFIC COMMENTS TO AUTHORS

“Optimization of adipose tissue-derived mesenchymal stem cells transplantation for bone marrow repopulation after irradiation” by Won Moon et al. In my opinion, the topic is interesting, since “Bone marrow suppression is one of the most common side effects of radiotherapy” The authors report that single peritoneal administration of adipose-derived mesenchymal stem cells increase the survival rate of mice, if compared with mice transplanted three times. Moreover, it is suggested that such intraperitoneal administration might suppress erythropoiesis and improve myelopoiesis in sub-lethally irradiated mice Methods are satisfactorily carried out and Results are clearly presented. However, it should be better emphasized the clinical relevance of these findings. Specific comments: Line 382: Alizarin Red S and Alcian Blue staining are likely inverted. Line 754: In the legend to Fig.2, description of panel A and panel B are likely inverted. Check magnification (200x ?). Figure 2: Photomicrographs should be enlarged and a scale bar should be indicated. Line 767: Check magnification (400x ?) in the legend to Fig.3. Figure 3: A scale bar should be indicated in the Photomicrographs. Line 780: Check magnification (400x ?) in the legend to Fig.4. Figure 4: A scale bar should be indicated in the Photomicrographs. Figure 5, panels E: IL-7R levels reported in the histograms are in contrast to what is described in the text (line 161) Figure 5, panels G: CD45RA levels reported in the histograms are in contrast to what is described in the text (line 162) Figure 5, panel J: A quantification of RT-PCR data would be suitable. Figure 6: Data on IL-2 levels are in contrast to what is reported in the text (line 187,188)