



## PEER-REVIEW REPORT

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

**Manuscript NO:** 82485

**Title:** Current status and prospects of basic research and clinical application of mesenchymal stem cells in acute respiratory distress syndrome

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

**Peer-review model:** Single blind

**Reviewer's code:** 05935626

**Position:** Peer Reviewer

**Academic degree:** DDS, Doctor, MD

**Professional title:** Doctor

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

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

**Manuscript submission date:** 2022-12-20

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-12-23 16:30

**Reviewer performed review:** 2022-12-23 18:14

**Review time:** 1 Hour

<b>Scientific quality</b>	<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 Grade E: Do not publish
<b>Language quality</b>	<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
<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



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<b>Peer-reviewer statements</b>	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**

I would like to congratulate the authors for the manuscript. It is interesting and can bring new perspective. I have some comments: The manuscript discussed about current status and prospects of basic research and clinical application of MSCs in ARDS. Key points have been discussed by the authors, including immune regulation, tissue repair, and alleviation of fibrosis. Some other authors have discussed this similar topic, with regard to Covid-19. The authors should also discuss the role of EVs and small molecules produced by the MSCs, in relationship to ARDS. References number 94 to 105 and 120 to 127 are missing in the text, Table 2 is missing in the text. Please correct these.



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**Peer-review model:** Single blind

**Reviewer's code:** 03712811

**Position:** Editor-in-Chief

**Academic degree:** MD, PhD

**Professional title:** Director, Full Professor

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

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

**Manuscript submission date:** 2022-12-20

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-12-20 22:44

**Reviewer performed review:** 2022-12-25 14:25

**Review time:** 4 Days and 15 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 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
<b>Conclusion</b>	<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
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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<b>Peer-reviewer statements</b>	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**

This is a well-presented and comprehensive review on the application of mesenchymal stem cells in acute respiratory distress syndrome (ARDS). The current knowledge, and the perspectives disclosed by basic science are presented in a balanced way, along the discussion of the currently available clinical studies. Overall, this review article is an easy-to-read and updated work.



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**Peer-review model:** Single blind

**Reviewer's code:** 02446223

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Postdoctoral Fellow, Professor

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

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

**Manuscript submission date:** 2022-12-20

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2022-12-22 07:36

**Reviewer performed review:** 2023-01-03 10:58

**Review time:** 12 Days and 3 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>Novelty of this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
<b>Creativity or innovation of this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



<b>Scientific significance of the conclusion in this manuscript</b>	<input checked="" type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
<b>Language quality</b>	<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
<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="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**SPECIFIC COMMENTS TO AUTHORS**

The paper by Liang et al is very interesting and detailed, title and abstract reflect the work and the discussion fit the most important points. More in details, the author focused on the immunomodulatory properties of stem cells, but they also explored other mechanisms to explain the MSC potential against acute respiratory distress syndrome, such as fibrosis reduction and tissue repair. Tables help the reader, although very detailed in some cases. I suggest adding a picture to sum up all the potentially involved molecular mechanisms of action of MSCs.