

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

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 Grade E: Do not publish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 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 type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



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Peer-reviewer statements	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

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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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: 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

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 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

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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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: 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

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
Novelty of this manuscript	<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
Creativity or innovation of this manuscript	<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

Scientific significance of the conclusion in this manuscript	<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
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 type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" 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

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.