

PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 83096

Title: Potential effects of stem cell exosomes regulating the inflammatory response in ischemic stroke treatment

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03073529

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: China

Manuscript submission date: 2023-01-07

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-01-07 06:25

Reviewer performed review: 2023-01-07 06:57

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 Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" 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 type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation



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Scientific significance of the conclusion in 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 scientific significance
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" 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 type="checkbox"/> Minor revision <input checked="" 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

None.

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Manuscript NO: 83096

Title: Potential effects of stem cell exosomes regulating the inflammatory response in ischemic stroke treatment

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06351861

Position: Peer Reviewer

Academic degree: PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: United States

Author's Country/Territory: China

Manuscript submission date: 2023-01-07

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-21 15:12

Reviewer performed review: 2023-03-21 15:32

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
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
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Scientific significance of the conclusion in 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 scientific significance
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 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

This manuscript reviewed the process in research on inflammatory response mechanisms associated with Exos therapy after ischemic injury and provided a new thought for clinical treatment. A few concerns for the authors. 1. Page 4, last paragraph: "Brain cell death after stroke can lead to a series of pathological processes, including cell energy failure, neuronal apoptosis, leukocyte infiltration, inflammatory immune response, tight junction (TJ) protein breakage and degradation, BBB destruction, and increased permeability.", references will be needed. 2. Page 5, 2nd paragraph, more references will be needed regarding the M1 and M2 and their functions. 3. Page 6, 1st paragraph, more references will be needed about MSCs including their types and functions.

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Title: Potential effects of stem cell exosomes regulating the inflammatory response in ischemic stroke treatment

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05156586

Position: Editorial Board

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: South Korea

Author's Country/Territory: China

Manuscript submission date: 2023-01-07

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-03-22 10:33

Reviewer performed review: 2023-04-03 12:16

Review time: 12 Days and 1 Hour

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 type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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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 authors demonstrated about mesenchymal stem cell-derived exosomes (MSC-Exos) that can improve ischemic stroke. It is already known that the ischemic condition of the brain is improved by using various therapeutics, and the possibility of MSCs among stem cells and exosomes derived from MSCs as a treatment method is emerging. There is a disadvantage of limiting the use of cells due to barriers to entry into the brain, however MSC-Exos are used in various ways. The authors well-organized the research from a therapeutic point of view, focusing on papers that have recently attracted attention. There seems to be a need to clarify a few issues. 1. What does 'cell membrane a' mean in page 6 / lane 11? 2. In the neuroprotection concept, controlling inflammation may be a major reason for improving ischemic stroke. However, the authors also need to mention the controlling after ischemic stroke including neurogenesis and angiogenesis. 3. The signaling pathway following the explanation of the chapter 'MSC-EVS REGULATE INFLAMMATORY RESPONSE IN ISCHEMIC STROKE TREATMENT' seems to be a description of factors related to inflammation. However, the author did not mention what criteria of these factors were selected for and what the order of presentation means.

We suggest that the authors mention about it. In addition, the factors enclosed in MSC-EVs are diverse, but the reason for presenting miRNAs in particular has not been clearly explained. 4. miRNAs associated with MSC-EVs and activated Treg cells were not presented. Have the authors ever checked?