

PEER-REVIEW REPORT

Name of journal: *World Journal of Stem Cells*

Manuscript NO: 82312

Title: Harnessing and honing mesenchymal stem/stromal cells for the amelioration of graft-versus-host disease

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03246626

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Taiwan

Manuscript submission date: 2022-12-15

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-12-15 13:00

Reviewer performed review: 2022-12-25 12:04

Review time: 9 Days and 23 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 Grade E: Do not publish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 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 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 review concluded clinical studies in MSCs, animal models, and limited human patient trials. MSCs have been widely studied and growingly used in GVHD treatment with promising effects. Nevertheless, the studies differed in the cell concentration and the dose of MSCs infused in each patient, which could explain the variety of results. This review delineated real insights into this clinical entity, emphasized diagnostic and therapeutic considerations, and generated pathophysiology hypotheses to identify research avenues, which gave a comprehensive review to MSCs strategies. 1.It is well established that extensive culture expansion of primary donor-derived MSCs leads to marked changes in functionality, and that there is a high level of inter-donor variability in MSC properties, which should be further discussed in this study. 2.Meanwhile, further adequately powered prospective studies are required to confirm efficacy and establish the place of MSC therapy in the treatment of this condition. The ongoing clinical trials are better to be included in this review.

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Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 00532996

Position: Editorial Board

Academic degree: BSc, MSc, PhD

Professional title: Associate Professor, Senior Scientist

Reviewer's Country/Territory: India

Author's Country/Territory: Taiwan

Manuscript submission date: 2022-12-15

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-01-11 05:00

Reviewer performed review: 2023-01-15 08:03

Review time: 4 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 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 checked="" type="checkbox"/> Accept (General priority) <input 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 type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Review has been well written and has covered details of mesenchymal stem cells definition, characteristics features, clinical applications, Further authors have covered aspects of GVHD acute and chronic and how MSC or their exosomes can help regulated incidence of GVHD. This was done using digital library based review of studies published previously. Authors have provided acceptable evidence that MSC can be of therapeutic modality for controlling GVHD post allogeneic stem cell transplantation.