

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 53270

Title: Bone marrow mesenchymal stem cells induce M2 microglia polarization via secreting MANF and mediating PDGF-AA/miR-30a*/XB Y/MANF signaling

Reviewer's code: 02542063

Position: Peer Reviewer

Academic degree: FACG, MD, MSc, PhD

Professional title: Doctor, Professor, Surgeon

Reviewer's Country/Territory: Japan

Author's Country/Territory: China

Manuscript submission date: 2020-01-20

Reviewer chosen by: Le Zhang

Reviewer accepted review: 2020-02-18 02:26

Reviewer performed review: 2020-02-27 11:14

Review time: 9 Days and 8 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 Grade E: Do not publish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 type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input 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

Bone marrow mesenchymal stem cells are well known as rare multipotent cells and are characterized as potent modulators of regeneration and immune responses. Bone marrow mesenchymal stem cells transplantation may be an effective multitarget therapeutic strategy to facilitate functional recovery after ischemic stroke through pleiotropic mechanisms. Recently, several in vitro and in vivo studies have shown that bone marrow mesenchymal stem cells promote M2 polarization and neurogenesis and tissue repair, probably depending on the trophic and growth factors secreted by bone marrow mesenchymal stem cells. However, the precise mechanism underlying bone marrow mesenchymal stem cells-induced M2 polarization is not yet clear. miRNAs are a new class of endogenous, small, 19–25-nucleotide noncoding RNAs that act as negative regulators of gene expression by inhibiting mRNA translation or promoting mRNA degradation. In this study, the authors explore whether bone marrow mesenchymal stem cells-mediated mesencephalic astrocyte-derived neurotrophic factor paracrine signaling and the PDGF-AA/miR-30a*/XBP1/MANF axis can drive M2 polarization. Overall, the manuscript is very interesting, and worth to publication. Comments: 1. The title seems too long, please short it. 2. Methods are very clear, and reasonable. 3. Results are excellent. Figures are good. However, some of the figures are too small, please make an update. If authors can provide the original figures, it will be better. 4. The discussion is OK. The results are well discussed with updated ref. 5. Manuscript is well written.

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Name of journal: World Journal of Stem Cells

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Title: Bone marrow mesenchymal stem cells induce M2 microglia polarization via secreting MANF and mediating PDGF-AA/miR-30a*/XB Y/MANF signaling

Reviewer's code: 02856243

Position: Peer Reviewer

Academic degree: FRCPA, MD, PhD

Professional title: Professor, Research Scientist, Surgeon

Reviewer's Country/Territory: United Kingdom

Author's Country/Territory: China

Manuscript submission date: 2020-01-20

Reviewer chosen by: Le Zhang

Reviewer accepted review: 2020-02-18 02:26

Reviewer performed review: 2020-02-27 11:39

Review time: 9 Days and 9 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 checked="" type="checkbox"/> Accept (High priority) <input 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 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



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SPECIFIC COMMENTS TO AUTHORS

Excellent study about the how mesencephalic astrocyte-derived neurotrophic factor influences Bone marrow mesenchymal stem cells-mediated M2 polarization. The authors have done a lot of work. The results are informative, especially the figures, also the discussion is acceptable. I have no sepcific comments.

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Manuscript NO: 53270

Title: Bone marrow mesenchymal stem cells induce M2 microglia polarization via secreting MANF and mediating PDGF-AA/miR-30a*/XB Y/MANF signaling

Reviewer's code: 02855115

Position: Peer Reviewer

Academic degree: MSc, PhD

Professional title: Associate Professor, Research Associate

Reviewer's Country/Territory: United Kingdom

Author's Country/Territory: China

Manuscript submission date: 2020-01-20

Reviewer chosen by: Le Zhang

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Reviewer performed review: 2020-02-27 11:47

Review time: 9 Days and 9 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
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Re-review	<input 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

Very interesting study about the BMSCs. The results of the study are very important. I suggest to accept the study for publication as it was.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Reviewer's code: 02542063

Position: Peer Reviewer

Academic degree: FACG, MD, MSc, PhD

Professional title: Doctor, Professor, Surgeon

Reviewer's Country/Territory: Japan

Author's Country/Territory: China

Manuscript submission date: 2020-01-20

Reviewer chosen by: Ze-Mao Gong

Reviewer accepted review: 2020-04-13 10:44

Reviewer performed review: 2020-04-13 10:45

Review time: 1 Hour

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent <input 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
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SPECIFIC COMMENTS TO AUTHORS



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No specific comments. The authors well revised the manuscript.