

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 53991

Title: Advances in treatment of neurodegenerative diseases: perspectives for combination of stem cells with neurotrophic factors

Reviewer's code: 03947685

Position: Editorial Board

Academic degree: PhD

Professional title: Professor

Reviewer's country: Saudi Arabia

Author's country: China

Manuscript submission date: 2020-02-06

Reviewer chosen by: Ying Dou

Reviewer accepted review: 2020-02-13 21:30

Reviewer performed review: 2020-02-16 18:46

Review time: 2 Days and 21 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

Nice and fluently written review of literature. It would be prudent if the authors provide some information on protein therapy with NTFs as well. Page# 5 second paragraph from bottom, the clinical trial mentioned reads out of context as the author is talking about gene therapy and out of nowhere provides an example of cell therapy which may be confusing for the reader. This needs a bit of more clarity.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 53991

Title: Advances in treatment of neurodegenerative diseases: perspectives for combination of stem cells with neurotrophic factors

Reviewer's code: 03712811

Position: Editor-in-Chief

Academic degree: MD, PhD

Professional title: Director, Full Professor

Reviewer's country: Italy

Author's country: China

Manuscript submission date: 2020-02-06

Reviewer chosen by: Ying Dou

Reviewer accepted review: 2020-02-13 16:17

Reviewer performed review: 2020-02-17 11:13

Review time: 3 Days and 18 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input checked="" type="checkbox"/> Accept	Peer-Review:
<input checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

In this Review Article, the Authors have been focusing on the analysis of the advances provided by the combinatorial use of stem cells with different Neurotrophic Factors (NT) in the treatment of neurodegenerative diseases. This is a kind of systematic review which is highly needed, due to the lack of consistent improvement afforded by the currently available conventional therapies. The Review has been essentially focused on the dissection of the effects provided by stem cell transplantation alone or by the transplantation of genetically modified stem cells, capable of secreting targeted individual NTs or a mixture of them. The description and analysis of the underlying experimental data is well conducted, and balanced across the different forms of neurodegenerative disorders considered. The presence of detailed Tables is highly appreciated, and it is further supporting the discussion of experimental and clinical findings. The conclusions are in keeping with the overall narrative under consideration.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

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BPG Search:

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[Y] No

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 53991

Title: Advances in treatment of neurodegenerative diseases: perspectives for combination of stem cells with neurotrophic factors

Reviewer's code: 02495033

Position: Editorial Board

Academic degree: DVM, PhD

Professional title: Professor

Reviewer's country: South Korea

Author's country: China

Manuscript submission date: 2020-02-06

Reviewer chosen by: Ying Dou

Reviewer accepted review: 2020-02-14 06:58

Reviewer performed review: 2020-02-19 04:18

Review time: 4 Days and 21 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

WJSC-53991 In the present review, the authors reviewed the roles (neuroprotection and neuroregeneration) of neurotrophic factors (NTFs) such as growth factors (GFs) and neurotrophic factors (NFs) in major CNS diseases. Therefore, they emphasized that MSCs over-expressing GF/NF could be good tools for continuous delivery of the NTF. The mini-review is well organized, and may provide readers and investigators with good information. 1. However, in the review, only NTFs were included as functional molecules adopted in genetically-engineered stem cells. There are important functional molecules such as choline acetyltransferase (ChAT) for acetylcholine synthesis (for AD) and tyrosine hydroxylase (TH) for dopamine synthesis (for PD). It is recommended that in possible, the authors review papers on NSC-ChAT, NSC-TH-GTPCH1, etc. 2. The authors pointed out the limited penetration of stem cells and functional proteins (NTFs) into the injured regions of brain due to BBB. Nowadays, extracellular vesicles (EVs, so called exosomes) containing NTFs released from stem cells are an emerging tool to deliver the functional molecules. The nano-sized (50 – 100 nm) exosomes were found to readily penetrate BBB, nasal mucosa, and even the skin, and to regenerate damaged neurons. Review on these points are also recommended.

INITIAL REVIEW OF THE MANUSCRIPT

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