

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 54803

Title: Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation

Reviewer's code: 02446177

Position: Editorial Board

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: Germany

Author's Country/Territory: China

Manuscript submission date: 2020-02-27

Reviewer chosen by: Ruo-Yu Ma (Quit in 2020)

Reviewer accepted review: 2020-04-14 11:10

Reviewer performed review: 2020-04-28 14:20

Review time: 14 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 Grade E: Do not publish
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 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

In this manuscript the authors establish that the positive effects of hippocampal NSC transplantation followed by accupuncture enhance its effects on neuroregeneration in mice. The methods and controls are appropriate. The study is of interest and I support its publication.

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 54803

Title: Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation

Reviewer's code: 02445886

Position: Peer Reviewer

Academic degree: DSc, PhD

Professional title: Chief Doctor

Reviewer's Country/Territory: Russia

Author's Country/Territory: China

Manuscript submission date: 2020-02-27

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-07-27 11:23

Reviewer performed review: 2020-07-28 09:52

Review time: 22 Hours

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
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 paper aimed to explore the anti-dementia mechanism of acupuncture by regulating the microenvironment of exogenous neural stem cells (NSC) isolated from senescence-accelerated R1 pregnant mice (SAM), labeled with BrdU, and injected into the hippocampus of SAMP8. Synaptophysin plays a key role in synaptic development and synaptic plasticity of neurons and is closely related to the cognitive process of Alzheimer's disease (AD) patients. Sanjiao acupuncture was administered. Morris water maze showed significant cognitive impairment of learning and memory in 8-month SAMP8, which improved in all the NSC transplantation groups. The behavioral change in the PTA group (acupoint, NSCs transplantation) was stronger than the other two groups ($P < 0.05$). Flow cytometry showed that after co-culture of NSCs with hippocampal slices in vitro, the synaptophysin expression of PC decreased in comparison to the RC SAMR1 group, that in PT, PTA, and PTN groups increased as compared to the PC group, and that in the PTA group increased significantly as compared to the PTN group with acupoint-related specificity ($P < 0.05$). The authors conclude that Sanjiao acupuncture may promote nerve regeneration and synaptogenesis in SAMP8 mice by regulating the microenvironment of NSCs transplantation to improve the nerve activity and promote the recovery of AD-damaged cells. The title reflects the main subject of the manuscript, the abstract and key words reflect the main topics of the entire text. The results are discussed in detail using 54 references for the previous 5 years. There are comments on the article. Based on histopathological data, the authors state that the hippocampal structure was clear, the cell arrangement was dense and orderly, and the necrosis of cells in CA1 and CA3 areas was significantly reduced in the PTA group when compared with the PC SAMP8 group. The BrdU-positive proliferating cells were found in NSC hippocampal transplantation groups, and the number increased

significantly in the PTA group than that in the PT NSCs transplantation and PTN non-acupoint and NSCs transplantation groups ($P < 0.05$). However, low quality photomicrographs are at too low magnification to illustrate what their legends say and not even allow the identification of individual cells. The article does not indicate what type of microscope was used. I suggest replacing the photomicrographs with those of good quality that confirm the authors' conclusions. After corrections, the article can be accepted for publication.

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 54803

Title: Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation

Reviewer's code: 00504436

Position: Peer Reviewer

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: Serbia

Author's Country/Territory: China

Manuscript submission date: 2020-02-27

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-07-24 07:40

Reviewer performed review: 2020-07-29 13:01

Review time: 5 Days and 5 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

SPECIFIC COMMENTS TO AUTHORS

Relevance, significance and potential impact of the manuscript is moderate. The topic is appropriate and of general interest. The manuscript is novel and interesting and adds to the knowledge base. The presentation should be improved. Grammar and style should have a revision. Insert line numbers. Without page and line numbers, it is difficult to give specific comments to the spotted weaknesses in the text. Citation need to be inserted into several parts of the text. Avoid repetition. Add information about software used for Morris water maze recording. Add information regarding HE and immnocytochemical staining - cross-sectional thickness, cutter, concentrations, dilutions and producers of the used chemical. Add conclusion.

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 54803

Title: Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation

Reviewer's code: 03976790

Position: Editorial Board

Academic degree: DSc, PhD

Professional title: Emeritus Professor

Reviewer's Country/Territory: France

Author's Country/Territory: China

Manuscript submission date: 2020-02-27

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2020-07-24 07:06

Reviewer performed review: 2020-07-29 15:35

Review time: 5 Days and 8 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" 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 type="checkbox"/> Minor revision <input checked="" 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

Comments on the manuscript: "Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation" Numerous people worldwide are living with dementia, and the number will increase in the future. The purpose of this study was to observe the effects of acupuncture on nerve regeneration and synapse production after the regulation of the microenvironment of neural cells injected into mouse embryos. To do this, the authors studied the effect of acupuncture in mice accelerated by senescence that received exogenous neural stem cells. This consistent study brings interesting results, and it will certainly be useful in developing treatments for the prevention of demence. However, This manuscript needs several improvements before to consider it for publication. I have several remarks. Title : specify that the experiment was carried out on mice Introduction : The use of mice for current experimentation is not indicated at the end of the introduction: add a sentence indicating this use (although it is written that previous work used experimental mice). Material and methods : In general, observational methods are very little described, with basic details missing. Check this part carefully and complete. NSCs transplantation : specify what samR1 mice are (accelerated Senescence R1 pregnant mice, I guess, as it is written in the methods given in the abstract, or in the discussion). What were the characteristics of centrifugation (number of g? duration?) The authors have written: "The positive rate of Nestin staining, the proliferation of NSCs, and the differentiation to neurons and neurogliocytes were observed (immunocytochemical positive staining of anti-nuclear antibody, NeuN and glial fibrillary acidic protein, and GFAP, respectively)" Give some details on the antibodies used (supplier, characteristics...) to detect NeuN and GFAP. What was the type of reactions used: direct or indirect immunocytochemistry, use of fluorescent dye or enzyme coloration? Which one? Have you used amplification

methods? If so, what methods have you done? How were the negative controls confirmed? I have the same questions for the immunocytochemical detection of BrdU: what is the anti-BrdU used? What is the chromophore used (giving a blue coloration). Have you used an indirect method with or without amplification? What were the negative controls? These specifications must be written in the paragraph "hematoxyline-eosine (HE) and immunohistochemical coloration." Also give some details on the coloration of hematoxylin-eosin: What was the inclusion medium (paraffin, plastic wax ...?), the thickness of the section? Figures Figure 3 : in this figure, BrdU was detected with an immunocytochemical reaction. It would be better to write "Positively labeled cells with an anti-BrdU were observed and counted" instead "The brdU positive cells were observed and counted". Specify in the legend the chromophore used to detect the anti BrdU by giving a blue coloration. It would be useful to show negative control in an insert

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: World Journal of Stem Cells

Manuscript NO: 54803

Title: Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation in mice

Reviewer's code: 03976790

Position: Editorial Board

Academic degree: DSc, PhD

Professional title: Emeritus Professor

Reviewer's Country/Territory: France

Author's Country/Territory: China

Manuscript submission date: 2020-02-27

Reviewer chosen by: Chen-Chen Gao

Reviewer accepted review: 2020-09-24 15:34

Reviewer performed review: 2020-09-26 09:50

Review time: 1 Day and 18 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
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



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

Comments on the revised manuscript : “ Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation in mice” This manuscript about an intersting and useful study has been improved. I have just a minor remark : page 7, lines 5 -6 : give the speed of centrifugation in number of g, which is more universal than the rpm, which is related to the model of the centrifuge used. This article can be published after this minor correction.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: World Journal of Stem Cells

Manuscript NO: 54803

Title: Acupuncture accelerates neural regeneration and synaptophysin production after neural stem cells transplantation in mice

Reviewer's code: 02445886

Position: Peer Reviewer

Academic degree: DSc, PhD

Professional title: Chief Doctor

Reviewer's Country/Territory: Russia

Author's Country/Territory: China

Manuscript submission date: 2020-02-27

Reviewer chosen by: Chen-Chen Gao

Reviewer accepted review: 2020-09-24 11:08

Reviewer performed review: 2020-09-27 18:04

Review time: 3 Days and 6 Hours

Scientific quality	[<input checked="" type="radio"/>] Grade A: Excellent [<input type="radio"/>] Grade B: Very good [<input type="radio"/>] Grade C: Good [<input type="radio"/>] Grade D: Fair [<input type="radio"/>] Grade E: Do not publish
Language quality	[<input checked="" type="radio"/>] Grade A: Priority publishing [<input type="radio"/>] Grade B: Minor language polishing [<input type="radio"/>] Grade C: A great deal of language polishing [<input type="radio"/>] Grade D: Rejection
Conclusion	[<input checked="" type="radio"/>] Accept (High priority) [<input type="radio"/>] Accept (General priority) [<input type="radio"/>] Minor revision [<input type="radio"/>] Major revision [<input type="radio"/>] Rejection
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

My only comment on this article was that the photomicrographs were not illustrative enough. Now this flaw has been corrected, and I recommend the article for publication.