

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 53339

**Title:** Stem cell homing, tracking and therapeutic efficiency evaluation for stroke treatment using nanoparticles: A systematic review

**Reviewer's code:** 00906911

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** South Korea

**Author's Country/Territory:** Brazil

**Manuscript submission date:** 2020-01-23

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-01-26 12:21

**Reviewer performed review:** 2020-01-26 12:40

**Review time:** 1 Hour

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 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 checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" 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**

Generally, the analysis of this study appears to be sound. However, the further analysis according to the source of stem cells(MSC vs NSC) and of source(human vs animal, bone marrow vs others) might be needed to present the more advanced review.

#### **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:** 53339

**Title:** Stem cell homing, tracking and therapeutic efficiency evaluation for stroke treatment using nanoparticles: A systematic review

**Reviewer's code:** 03478635

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Senior Research Fellow

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** Brazil

**Manuscript submission date:** 2020-01-23

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-01-23 05:15

**Reviewer performed review:** 2020-01-29 02:40

**Review time:** 5 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 type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" 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**

This is a comprehensive review article about stem cell homing, tracking and therapeutic efficiency evaluation for stroke treatment using nanoparticles.

#### **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:** 53339

**Title:** Stem cell homing, tracking and therapeutic efficiency evaluation for stroke treatment using nanoparticles: A systematic review

**Reviewer's code:** 02446101

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Doctor, Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Brazil

**Manuscript submission date:** 2020-01-23

**Reviewer chosen by:** Ying Dou

**Reviewer accepted review:** 2020-03-26 11:41

**Reviewer performed review:** 2020-03-26 12:37

**Review time:** 1 Hour

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

#### **SPECIFIC COMMENTS TO AUTHORS**

This study was designed to evaluate stem cell migration homing, tracking and therapeutic efficacy in the treatment of stroke using nanoparticles. The results show that cellular therapy demonstrated considerable efficacy with regard to the functional and structural evaluation. The manuscript provides a comprehensive, up-to-date evaluation of the stem cell migration and efficacy of cellular therapy for brain injury to the readers. It's well organized and easy to read. So, acceptance should be recommended for this manuscript.

#### **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:** 53339

**Title:** Stem cell homing, tracking and therapeutic efficiency evaluation for stroke treatment using nanoparticles: A systematic review

**Reviewer's code:** 03086928

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Senior Lecturer, Senior Scientist

**Reviewer's Country/Territory:** Spain

**Author's Country/Territory:** Brazil

**Manuscript submission date:** 2020-01-23

**Reviewer chosen by:** Jie Wang

**Reviewer accepted review:** 2020-03-17 09:05

**Reviewer performed review:** 2020-03-26 17:49

**Review time:** 9 Days and 8 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 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 type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input checked="" 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 checked="" type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

## **SPECIFIC COMMENTS TO AUTHORS**

This review by Nucci et al, consists on a bibliographic review of different works covering the areas of stem cell tracking techniques using nanoparticles and stem cell based stroke treatments. The tracking techniques are aimed to analyse the homing and engraftment efficiency of transplanted stem cells. Major Comments. Overall I think this kind of review is interesting for the scientific community although I believe that in this particular case it tries to deal with several issues at the same time making it somehow confusing. Imaging techniques, tracking systems to evaluate homing and engraftment, effectiveness of stroke treatments based in stem cells, etc.... There should be a conductive thread that keeps all sections together and I am not able to find that. Instead, all sections seem somehow disconnected. In each of the sections a short introduction talking about the relevance of the section and how this fits in the global picture should be given. The aim and the connections between the sections are clear in the article highlights, but this is not reflected while reading the text. In the introduction, when different imaging methods are compared, it would be much more didactic to use a table to represent the advantages and disadvantages of each of these methods. The authors are way too succinct in their explanation about the relevance or role of magnetic nanoparticles in these techniques or other concepts very specific of this research area. For example, the rationale of using magnetic nanoparticles and a brief explanation of how they are used is a must do the work can reach a wider readership. I do not understand the logic of this sentence "Because of population growth, particularly among the elderly, the total number of stroke events and mortality have dramatically increased worldwide in the last two decades.". To measure impact of stroke on the population on absolute terms does not make sense. The authors should provide percentages to support the growth of these events worldwide over the last few years.



Minor Comments. Latin words such as “in vivo” and “in vitro” should always be in italics. Core tip is highly similar to the abstract. This should be re-written to avoid redundancy. The sentence “the efficacy of stem cell therapy depends on the stem cell homing ability and engraftment into the injury site over a long period of time and tracking stem cells from their niche to the target tissues. “ which is used both in the abstract and core tip does not make sense. Is there a missing link between the first part of the sentence and the second part (and tracking stem cells.....)? Use economic burden instead of economic cost in the introduction. A full stop after reference 5 should be included. In paragraph 3 of the introduction, what is exactly what the authors call stem cells “derivatives”. In some cases the verb “tracking” is used several times in the same sentence. You could substitute tracking by following or a similar verb to avoid being repetitive. I do not see the usefulness of the chapter entitled Stem cell characteristics. It would be much more useful if it would have described the nature of the stem cells used in addition to identify if they are murine or human.

## **INITIAL REVIEW OF THE MANUSCRIPT**

### ***Google Search:***

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- ☐ No

### ***BPG Search:***

- ☐ The same title
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- ☐ Plagiarism



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[ Y ] No

## RE-REVIEW REPORT OF REVISED MANUSCRIPT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 53339

**Title:** Stem cell homing, tracking and therapeutic efficiency evaluation for stroke treatment using nanoparticles: A systematic review

**Reviewer's code:** 03478635

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Senior Research Fellow

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** Brazil

**Manuscript submission date:** 2020-01-23

**Reviewer chosen by:** Ying Dou

**Reviewer accepted review:** 2020-04-03 01:07

**Reviewer performed review:** 2020-04-03 02:24

**Review time:** 1 Hour

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 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 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 type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" 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**

The manuscript has been revised according to the reviewers' comments.

#### **INITIAL REVIEW OF THE MANUSCRIPT**

##### ***Google Search:***

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**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Doctor, Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Brazil

**Manuscript submission date:** 2020-01-23

**Reviewer chosen by:** Ying Dou

**Reviewer accepted review:** 2020-04-04 15:20

**Reviewer performed review:** 2020-04-11 11:36

**Review time:** 6 Days and 20 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:
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		<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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- ☐ Plagiarism
- ☒ No

##### ***BPG Search:***

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