

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 46623

Title: Mesenchymal stem cells for cartilage regeneration in dogs

Reviewer's code: 03372021

Reviewer's country: China

Science editor: Fang-Fang Ji

Reviewer accepted review: 2019-02-20 12:30

Reviewer performed review: 2019-02-25 15:24

Review time: 5 Days and 2 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 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 type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input checked="" 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 manuscript, the authors summarize the current knowledge of mesenchymal stem cells (MSCs) from dogs, including in vitro characteristics, and in vivo cartilage regenerative potential and therapeutic effects for naturally developed osteoarthritis (OA). Dogs have distinctive characteristics compared to other laboratory animal species in that

they share an OA pathology with humans. Dogs in actual conditions of OA can serve as vulnerable translational animal models for human medicine in terms of the use of MSCs. In cartilage repair, MSCs are a promising therapeutic agent due to their self-renewal capacity, ability to differentiate into cartilage, potential for trophic factor production, and capacity for immunomodulation. There are still many problems in the application of MSCs in dogs, including ethical issues and difficulty of effect measurement. Regulations and guidelines for MSCs should be established in the future, and standardized methods for MSC usage would provide more unified and reliable results from the studies. More data on MSC characteristics and their use as an OA treatment in dogs will be needed, and they must be meaningful for the improvement of cartilage repair treatment in both human and veterinary medicine. The objective of this study is clear, however, some issues should be addressed by authors prior to the consideration for publication. Major comments: 1. A schematic showing the main content of the text should be added. 2. On Page 16, "However, one report showed a decrease in the effects of cMSCs between 30 and 90 days after the cMSC injection.", the injection is intravenous or intra-articular? 3. The references are too old, it would be better to be replaced by more references of the latest three years, for example, Stem Cells International 2015, 2015, 10; Journal of Materials Chemistry B 2018, 6 (47), 7822-7833; Acta Biomaterialia 2018, 73, 103-111. 4. The sections should have Figures, not just tables. Minor comments: 1. The full name of the first appeared abbreviations should be stated, such as "FGF". 2. Some references are incorrectly formatted, please check. 3. The resolution of all the figures in the manuscript should be improved.

INITIAL REVIEW OF THE MANUSCRIPT

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PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 46623

Title: Mesenchymal stem cells for cartilage regeneration in dogs

Reviewer's code: 02445886

Reviewer's country: Russia

Science editor: Fang-Fang Ji

Reviewer accepted review: 2019-02-20 13:17

Reviewer performed review: 2019-03-04 15:16

Review time: 12 Days and 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 type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input 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 type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

This review summarizes current knowledge concerning canine MSCs. The title is consistent with the main subject of the manuscript, the abstract and key words reflect the main topics of the entire text. The review is informative and helpful. Tables capture information concisely and are illustrative of the paper contents. The paper cites the



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relevant and important references. The manuscript is well written, and the literature data is discussed well. I suggest to accept the manuscript with no specific comments.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

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