

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 46673

Title: Orchestrating stem cell fate: Novel tools for regenerative medicine

Reviewer's code: 02929791

Reviewer's country: Iran

Science editor: Fang-Fang Ji

Reviewer accepted review: 2019-02-20 08:55

Reviewer performed review: 2019-02-22 05:36

Review time: 1 Day and 20 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 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

SPECIFIC COMMENTS TO AUTHORS

This review article is focused on understanding stem cell behavior, proliferation and pluripotency, and stem cell applications. This manuscript is very interesting. Comment 1: There are minor grammatical and language errors. Comment 2: To summarize "Epigenetic regulation of self-renewal and pluripotency" and "Bioactive molecules in



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orchestrating cell differentiation “, two separate graphical images should be clearly depicted. Comment 3: Other epigenetic regulator of stem cells should be explained. For example: DNA methylation and demethylation, chromatin remodeling, and micro RNAs.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ [Y] No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ [Y] No

PEER-REVIEW REPORT

Name of journal: World Journal of Stem Cells

Manuscript NO: 46673

Title: Orchestrating stem cell fate: Novel tools for regenerative medicine

Reviewer's code: 03472394

Reviewer's country: Russia

Science editor: Fang-Fang Ji

Reviewer accepted review: 2019-03-05 14:36

Reviewer performed review: 2019-03-19 19:40

Review time: 14 Days and 5 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 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 is a comprehensive review. Authors analyzed the great databases of scientific literature. But they don't present the data in a clear form of figures and tables. Authors described the data from scientific literature. Authors describe the main factors affecting stem cell behavior, proliferation and differentiation. Authors propose a complex

multiple combination of many factors that control the fate of MSCs. But they didn't mention some important factors. For example, the effect of biomaterials used in tissue engineering on MSCs growth and differentiation, e.g. the effect of mechanical properties of scaffolds on MSCs growth and differentiation, as well as the effect of the biomechanics of extracellular matrix on MSCs fate. Authors are really sure that mesenchymal stem cells are pluripotent cells? The tables, graphs or any other figures are absent. The manuscript doesn't contain any numerical data. The number of references is 132 from 1986 to this year with the majority of them for last 5 years. It's great for the review. The manuscript well organized and presented. The style and language are OK. Authors prepared their manuscript according to manuscript type and the appropriate category: a Review.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ [Y] No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ [Y] No