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ESPS Peer-review Report

Name of Journal: World Journal of Stem Cells

ESPS Manuscript NO: 4383

Title: MicroRNAs as novel regulators of stem cell fate

Reviewer code: 00291404

Science editor: Song, Xiu-Xia

Date sent for review: 2013-06-28 19:09

Date reviewed: 2013-06-29 03:04

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input checked="" type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input checked="" type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

In this review article, the authors have summarized the roles of miRNAs in maintenance and differentiation of stem cells, and potential use of small molecules (inhibitors and activators of molecules in key signaling pathways and enzymes) in modulating the fate of stem cells. They discuss the future direction briefly. This is a very well-written review. It is very informative to readers working in the field, and highly educational to readers working outside of the field but wanting to get a quick update on roles of miRNAs on stem cells. There are just two minor points: 1. This is a suggestion, but the authors do not need to take it. It would be nice to have a few sentences, to discuss how many miRNAs have been discovered, and which Websites to look for additional information is the readers are interested. 2. There are some grammatical errors and typos in the manuscript. For example, (1). Page 7, line 4. "consident" should be "coincident"? (2). Page 17, line 15: "researches" should be "researchers"? Line 4 from the bottom: "filed" should be "field"? (3). There are quite a few sentences in the manuscript where some components of the sentences are missing. For example, page 5, line 8 from bottom. "Interestingly, the first two miRNAs discovered, lin-4 and let-7, characterized during the developmental stage transition in C. elegans[12,13]." This is not a complete sentence.



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ESPS Peer-review Report

Name of Journal: World Journal of Stem Cells

ESPS Manuscript NO: 4383

Title: MicroRNAs as novel regulators of stem cell fate

Reviewer code: 00202580

Science editor: Song, Xiu-Xia

Date sent for review: 2013-06-28 19:09

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	<input type="checkbox"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input type="checkbox"/> Major revision
		<input type="checkbox"/> No records	

COMMENTS TO AUTHORS

The paper titled "MicroRNAs as novel regulators of stem cell fate" by Choi, Choi, & Hwang is overall well written and interesting. It is publishable in largely its current form; however it could be improved by a few relatively minor changes (as outlined below):

Content-wise, the section near the end about small molecule manipulation of stem cell fate seems like a diversion from the main topic of the paper, which is focused on miRNAs. Eventually a link is made to the main focus of the paper in a short paragraph at the end of page 17 by discussing a few observations that small molecules can modulate miRNA via small molecules. It would be nice if this section could be expanded.

Minor points, typos (etc):

Page 3, Abstract - the word "showed" in the first line should be "shows"

Page 3, Core tip - the statement "Stem cells are responsible for regenerative medicine" is not really accurate (did the authors means something like "Stem cells are an indispensable or critical part of regenerative medicine"?)

Page 5, near the end of the first paragraph the statement "Adult stem cells are multipotent" is not always true (some are unipotent progenitor cells)

Page 5, start of the second paragraph "A determinant of" would be better as "Determination of" and in the next line, "gene expressions" should be "gene expression"

Page 5, fourth line from the bottom - "Excessive observations" might be better as "Numerous observations" and in the last line "discussed about" should be "discuss"

Page 7, the Vascular differentiation section should be expanded (it is a single sentence)

Page 7, in the last section (and then later on) the term "miRs" is used - is that the same as "miRNAs"



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used up to this point? If not, it would be helpful to include a sentence or two what the difference(s) are or otherwise, use consistent terminology throughout the paper.

Page 10, 3rd line - "Contrariwise" is not a word I am familiar with

Page 10, a few more lines down, should *Drosophila* be capitalized/italicized?

Page 13, at the start of the second paragraph, would it be better to say that "Only a re miRNAs are currently known to contribute to osteoclast differentiation? (or are the authors confident that a comprehensive understanding of this process is now known?)

Page 17, first sentence of the last paragraph, "are a very young field" should be "is a very young field"

Page 18, first sentence of conclusion section, "evidences have" should be "evidence has"