



# BAISHIDENG PUBLISHING GROUP INC

8226 Regency Drive, Pleasanton, CA 94588, USA

Telephone: +1-925-223-8242

Fax: +1-925-223-8243

E-mail: bpgoffice@wjgnet.com

http://www.wjgnet.com

## ESPS PEER-REVIEW REPORT

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

**ESPS manuscript NO:** 16943

**Title:** Common stemness regulators of embryonic and cancer stem cells

**Reviewer's code:** 02446014

**Reviewer's country:** United States

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2015-02-05 19:34

**Date reviewed:** 2015-03-31 01:03

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input checked="" 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 checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good		<input type="checkbox"/> Duplicate publication	
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

### COMMENTS TO AUTHORS

This is a complete and timely review. I would include a second table summarizing the various markers discussed in the section "General properties and markers for embryonic/pluripotent and cancer stem cells."



**ESPS PEER-REVIEW REPORT**

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

**ESPS manuscript NO:** 16943

**Title:** Common stemness regulators of embryonic and cancer stem cells

**Reviewer’s code:** 01236209

**Reviewer’s country:** China

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2015-02-05 19:34

**Date reviewed:** 2015-03-25 12:39

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good		<input type="checkbox"/> Duplicate publication	
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

**COMMENTS TO AUTHORS**

In this manuscript, the authors summarized common features shared by ESCs and CSCs, including biomarkers, signaling pathways, transcription factors, and epigenetic regulators. This part was comprehensively and well presented. The authors also claimed to discuss the potential use of ESCs and CSCs to design next generation biological and pharmaceutical approaches for regenerative medicine and cancer therapies. However, this part is too weak, and needs an in-depth discussion.

Minor comments: (1) Pay attention to the gene names. For example, mouse gene should be “Myc”, and human gene should be “MYC”. (2) There are many typos and misspelling in the text, such as “c-muc” in the introduction section. (3) For the biomarkers, the authors only introduced surface markers for ESCs. Therefore, it is unnecessary to mention the intracellular markers (nestin, SOX2, Musashi-1 and Bmi-1) in CSCs. (4) Page 18, “It is well-known that Myc is involved in the regulation of 15% of genes in the human genome 275 and regulates pro-tumorigenic transcription factors including KRAS, AKT, PTEN and p53 276, 277.” Indeed, PTEN and p53 are tumor suppressors, but not pro-tumorigenic factors. Moreover, KRAS, AKT, and PTEN are signaling molecules, but not transcription factors.



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## ESPS PEER-REVIEW REPORT

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

**ESPS manuscript NO:** 16943

**Title:** Common stemness regulators of embryonic and cancer stem cells

**Reviewer's code:** 02439754

**Reviewer's country:** Taiwan

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2015-02-05 19:34

**Date reviewed:** 2015-03-25 23:53

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	Google Search:	<input type="checkbox"/> Accept
<input checked="" type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input type="checkbox"/> Grade C: Good		<input type="checkbox"/> Duplicate publication	
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of language polishing	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E: Poor	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Minor revision
		BPG Search:	<input type="checkbox"/> Major revision
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input checked="" type="checkbox"/> No	

### COMMENTS TO AUTHORS

This is a review article with comprehensive summary of the convergence of biomarkers, signaling pathways, transcriptional regulation, and epigenetic regulators in embryonic and cancer stem cells. The structure of this review is well organized, and the contents are very comprehensive and updated. This comprehensive review can be published in your journal after a minor revision. Suggestions 1. Provide some insights about the epigenetic reprogramming in CSC. 2. Some typos in the text. For examples, p.1 Introduction, line 8: A typo: "c-muc" should be "c-Myc"? p. 6, 2nd paragraph, typo: "CC13" should be "CD13"? 3. p.3, section: CSC biomarkers in solid tumors: What is ESA? Embryonic surface antigen? Please provide the full name when it is first present in the text.



**ESPS PEER-REVIEW REPORT**

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

**ESPS manuscript NO:** 16943

**Title:** Common stemness regulators of embryonic and cancer stem cells

**Reviewer's code:** 00007461

**Reviewer's country:** United States

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2015-02-05 19:34

**Date reviewed:** 2015-02-09 02:20

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	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"/> The same title	<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"/> Duplicate publication	<input type="checkbox"/> Rejection
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<input type="checkbox"/> Grade E: Poor		<input type="checkbox"/> No	<input type="checkbox"/> Major revision
		BPG Search:	
		<input type="checkbox"/> The same title	
		<input type="checkbox"/> Duplicate publication	
		<input type="checkbox"/> Plagiarism	
		<input type="checkbox"/> No	

**COMMENTS TO AUTHORS**

The review article entitled "Common Stemness Regulators of Embryonic and Cancer Stem Cells" is an exhaustive and comprehensive review of the topic. The review will benefit from diagrams and tables summarizing each section. For example, a Table summarizing the known stem cell markers for each tumor type with reference. The authors should include a description of the rationale and approaches that led to the identification of these markers that mark CSCs, with a discussion of the pros and cons. Likewise, a diagram outlining each signaling pathway discussed should be included. On pg 21, 3rd paragraph from the top of page, "...Targeting the stemness-like properties of CSCs with epigenetic modifiers....", the authors are asked to make a clear statement of the problem. As presented is confusing. Specifically: as discussed, use of DNMT inhibitors are used to treat cancer.... on the other hand they state: "their low methylation state of CSCs may indicate..." What is the point they wish to make with these conflicting statements? Lastly, grammatical and spelling errors should be corrected. Overall, this review represents an impressive effort that will be very useful to the scientific community interested in CSCs.