

## ESPS PEER-REVIEW REPORT

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

**ESPS manuscript NO:** 29741

**Title:** Impact of T cells on hematopoietic stem and progenitor cells function: Good guys or bad guys?

**Reviewer's code:** 02446114

**Reviewer's country:** Taiwan

**Science editor:** Jin-Xin Kong

**Date sent for review:** 2016-08-26 19:03

**Date reviewed:** 2016-09-07 14:52

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input checked="" type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input checked="" 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
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		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

none

## ESPS PEER-REVIEW REPORT

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

**ESPS manuscript NO:** 29741

**Title:** Impact of T cells on hematopoietic stem and progenitor cells function: Good guys or bad guys?

**Reviewer's code:** 02104609

**Reviewer's country:** Canada

**Science editor:** Jin-Xin Kong

**Date sent for review:** 2016-08-26 19:03

**Date reviewed:** 2016-10-13 03:35

CLASSIFICATION	LANGUAGE EVALUATION	SCIENTIFIC MISCONDUCT	CONCLUSION
<input checked="" type="checkbox"/> Grade A: Excellent	<input checked="" type="checkbox"/> Grade A: Priority publishing	Google Search:	<input checked="" 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
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		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

A well written manuscript.

## ESPS PEER-REVIEW REPORT

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

**ESPS manuscript NO:** 29741

**Title:** Impact of T cells on hematopoietic stem and progenitor cells function: Good guys or bad guys?

**Reviewer's code:** 01851506

**Reviewer's country:** Japan

**Science editor:** Jin-Xin Kong

**Date sent for review:** 2016-08-26 19:03

**Date reviewed:** 2016-10-18 15:29

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 checked="" type="checkbox"/> Grade B: Minor language polishing	<input type="checkbox"/> The same title	<input type="checkbox"/> High priority for publication
<input checked="" 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
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade D: Rejected	<input type="checkbox"/> Plagiarism	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E: Poor		<input checked="" 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 checked="" type="checkbox"/> No	

## COMMENTS TO AUTHORS

General comments This review discusses the issues relevant to the successful hematopoietic stem cell transplantation, in particular, the yin and yang features of T cells in the donor cells. In general the text is well written. However, the lack of figures has significantly lowered the quality of this review. Major concerns: It will be difficult for those who are not expert in the field to follow the context without figures. Therefore, I strongly recommend the authors to provide some figures to facilitate reader's comprehension. For example, a figure depicting the problems and the advantages using UCB and MPB in HSPC transplantation is nice to illustrate the status quo. Another figure will illustrate what issues should be resolved, how they can be resolved (i.e. what type of T cells is desirable or should be eliminated to have a safe and efficient HSPC transplantation in the context of tumor eradication, or of GvHD, etc?). Furthermore, the authors can add another figure illustrating the different combination of HSPC (UCB alone, UCB combined with CD34+ cells from haploidentical grafts) pointing out the constraints, limitations, advantages, and disadvantages, if any. Regarding the effects of CD8 and/or CD4 (TCR $\gamma\delta$ ) T cells on HSPC transplantation, it is highly desirable to put

a figure illustrating possible interactions among the putative players with the effectors such as cytokines and cell adhesion molecules. Minor points 1 How do the authors distinguish HSC from HSPC? It is not clear for me whether or not the authors intentionally use these different terms. If it is, please clarify the difference. 2 The following sentence is difficult to follow. Therefore, I recommend authors to modify or restructure the sentence so that general readers could understand. Page 4 Allogeneic HSCT is regarded as a more precarious procedure, as HSPCs from a non-self origin are transplanted, which are thus subject to rejection. 3 What does "it" mean? Grafts depleted of T cells or simply it should be "they"? Page 6 While grafts depleted of T cells minimize the risk of developing GvHD, it also compromises the engraftment of transplanted HSPCs. 4 " is " should be " are ". Page 6 Further examination on the CD8+ TCR $\beta$ + cells, which is more predominately present in the BM, revealed that they express CD44 (Gandy et al. 1999). 5 The following sentence is difficult to follow. Therefore, I recommend authors to modify or restructure the sentence so that the general readers could understand. page 7 This indicates that the impact that T cells can have on the behavior and function of HSPCs is complex and not only dependent on the T cell subset, but also on its activation status and the cells it interacts with. 6 There is inconsistency in the format referring the literature at the beginning of sentence. For example, Stemberger and colleagues (line 3) vs. Rutella et al., 2000 (line 12), both in page 11. Although the format is at the discretion of the authors, it is better use the same one throughout the manuscript.