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ESPS PEER REVIEW REPORT

Name of journal: World Journal of Stem Cells
ESPS manuscript NO: 12785
Title: Early B lymphocyte development: similarities and differences in human and mouse.
Reviewer code: 00505881
Science editor: Ling-Ling Wen
Date sent for review: 2014-07-26 23:04
Date reviewed: 2014-08-07 12:14

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
[Y] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] Existing	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] No records	
[ ] Grade D: Fair		BPG Search:	[ ] Rejection
[ ] Grade E: Poor	[ ] Grade D: Rejected	[ ] Existing	[Y] Minor revision
		[ ] No records	[ ] Major revision

COMMENTS TO AUTHORS

The authors of this manuscript compare early B lymphocyte development between human and mouse. The authors summarize the experimental models for studies on B lymphopoiesis,and the role of microenvironment and signaling molecules, such as cytokines, TGF-βsuperfamily, Wnt family and Notch family. Overall the paper is written in a clear and concise manner. Main concerns: 1. The authors did not address the commitment to the B lineage and early B cell development which is essential for this topic. Signaling from E2A – EBF1 – Pax-5 that regulate expression of Rag-1, Rag-1, lambda-5 and CD19, which may be added in an early section. 2. BCR editing occurs in the bone marrow which also needs to be discussed. Minor concerns: 1. Flt3 is not cytokine. Authors need update to Flt3L in page 10. The important role of Flt3L in the early B cell development may be updated. 2. B lymphocute subsets include B-1 cells in fetal liver and B-2 cells in the bone marrow. The authors may point out that the review is focusing on B-2 cells.

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ESPS PEER REVIEW REPORT

Name of journal: World Journal of Stem Cells
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Title: Early B lymphocyte development: similarities and differences in human and mouse.
Reviewer code: 02445848
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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	Google Search:	[ ] Accept
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[Y] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] No records	
[ ] Grade D: Fair	[ ] Grade D: Rejected	BPG Search:	[ ] Rejection
[ ] Grade E: Poor		[ ] Existing	[Y] Minor revision
		[ ] No records	[ ] Major revision

COMMENTS TO AUTHORS

Authors compare B lymphocyte development between human and mouse. The manuscript is clearly written and summarizes available information. Main concerns: 1. bone marrow BCR editing should be discussed. 2. Flt3 is not a cytokine. 3. Practical implications should be much more deeply discussed.

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ESPS PEER REVIEW REPORT

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CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
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[Y] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] Existing	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] No records	
[ ] Grade D: Fair		BPG Search:	[ ] Rejection
[ ] Grade E: Poor	[ ] Grade D: Rejected	[ ] Existing	[Y] Minor revision
		[ ] No records	[ ] Major revision

COMMENTS TO AUTHORS

The following points could be improved 1. The English language 2. Acronyms. MPPs are Multipotent progenitors in page 4 but ECM proteins in page 49. Hematopoietic stem/ progenitor cells (HSPCs) and HSC are used in Fig 3 legend as synonyms, which is confusing. 3. Acronyms' plurals. It might be easier to forget about adding an "s" and accepting that any acronym can be singular or plural depending on the context. Otherwise they should be checked out (Fig 3 legend reads "It is believed that HSC is consistently…" but should read "It is believed that HSCs are consistently…") 4. Figures. More figures would aid to follow the text. Figure 1 has very low quality. Figure 3 is difficult to follow, it could be explained better. Page 10: a figure comparing the cytokines required for human vs mouse B lymphopoiesis would be helpful here 5. Page 6, line 16. The culture system to generate human B cells is very interesting: a deeper explanation would be helpful. PhD student Ana V Marin helped with this revision.