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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology
Manuscript NO: 34361
Title: Adipose-derived stromal cells resemble bone marrow stromal cells in their hepatocytic differentiation potentials in vitro and in vivo
Reviewer's code: 00008736
Reviewer's country: Germany
Science editor: Ze-Mao Gong
Date sent for review: 2017-04-27
Date reviewed: 2017-05-07

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

COMMENTS TO AUTHORS

In this paper, Xu et al investigate a novel method of generating differentiated hepatocytes from two sources of mesenchymal stem cells and test their ability to recover liver damage in an experimental mouse model. The paper thus adressed an important question as stem cell therapy could help overcome current limitations of Treatment for metabolic liver diseases and liver injury. Yet, several Points Need to be adressed, the paper is not considered adequate for publication at this time. 1. The BALB/c mouse model of CCl4 induced liver damage was used. Yet, the authors describe rats and rat diet in the methods section. 2. Is it correct that the cell phenotype of the isolated populations was tracked only after P2 and P3? 3. Concentrations are sometimes given as mM or uM and sometimes as e.g. 10^-7. Please use uniform Formats. Also language editing is needed. 4. The part on osteogenic Differentiation of the cells is not relevant here. The detailed results are neither shown nor used for any of the conclusions relevant

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to the paper. This can be deleted. 5. How was the cell fate tracked in the mouse model? Was a mixed-sex-Transplantation Approach used? Otherwise it is unclear how this was really done specifically. 6. All histological microphotographs are very difficult to read and higher power magnifications are needed to Support the Claims from the results text part. 7. FACS Scans should be shown for the phenotypic characterization and not only listed in a supplementary tabl.e 8. Results for Primary hepatocytes should be included into Fig 1. As different scales are used between ADSCs and BMSC, it is difficult to compare the data. It is unclear for which markers the controls were stained in Fig 1C. This Looks as if only nuclear staining was performed and no other marker applied and the Statement may thus be misleading. PLease verify and correct. 9. Results for Fig 2 are difficult to see, too. Data should be quantified. 10. The Statement on p 16 on the ability to provide protection against CCl4 induced liver injury should be corrected. Actually, cells were applied after the injection of CCl4 so the observed results are rather a repair than a protection effect in my view. 11. Data in Fig 3 are unclear. There seems no difference at all between the two cell type Systems and CCl4 injection! Also CCl4 Groups Shows a return to baseline after day 3 to 7. Therefore, the Major Claim on this work seems not to be supported by this finding.