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JOURNAL EDITOR-IN-CHIEF'S REVIEW REPORT

Name of journal: World Journal of Gastroenterology
Manuscript NO: 34090
Title: Effect of human umbilical cord-derived Mesenchymal stem cells on liver fibrosis and hepatic differentiation potential in vivo
Journal Editor-in-Chief (**Associate Editor):** Bei-Cheng Sun
Country: China
Editorial Director: Jin-Lei Wang
Date sent for review: 2017-06-27
Date reviewed: 2017-06-29

ACADEMIC CONTENT EVALUATION	LANGUAGE QUALITY EVALUATION	CONCLUSION
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	[ ] Accept
[ ] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] High priority for publication
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Rejection
[Y] Grade D: Fair	[ ] Grade D: Rejected	[ ] Minor revision
[ ] Grade E: Poor		[Y] Major revision

JOURNAL EDITOR-IN-CHIEF (ASSOCIATE EDITOR) COMMENTS TO AUTHORS

In this manuscript, authors demonstrated that the infused human UC-MSCs were able to differentiate into hepatocytes in rat model. Since the genetic gap, we suggested authors provide further evidences that human derived mesenchymal stem cells could differentiate into hepatocytes in wistar rat, since wistar rat is not a gene-deficient rat. Secondly, authors should described the methods that how they use CCl4 induced liver fibrosis. Like the dose or interval in detail.

Answer:

1. Since the genetic gap, we suggested authors provide further evidences that human derived mesenchymal stem cells could differentiate into hepatocytes in wistar rat, since wistar rat is not a gene-deficient rat.

HMSCs differentiated into hepatocyte-like cells in vitro [1]. HMSCs labelled with CM-Di I well integrated into the injured liver tissue in CCl4-induced cirrhotic rats [2]. We detected ALB, AFP, CK18 and CK19 from human origin, so the rats derived ALB, AFP, CK18 and CK19 were not detected, and the differentiated hepatocytes of rats had no effect on the results.

2. authors should described the methods that how they use CCl4 induced liver fibrosis. Like the dose or interval in detail.

The rat model of liver fibrosis and cirrhosis were established by hypodermic injection of CCl4 mixed with olive oil at the concentration of 40% (2 ml/kg) every Monday and Thursday. Saline served as the control group.

1 Hong SH, Gang EJ, Jeong JA, Ahn C, Hwang SH, Yang IH, Park HK, Han H, Kim H. In vitro differentiation of human umbilical cord blood-derived mesenchymal stem cells into hepatocyte-like cells. Biochem Biophys Res Commun 2005; 20(4): 1153–1161. [PMID: 15823564]

2 Jung KH, Shin HP, Lee S, Lim YJ, Hwang SH, Han H, Park HK, Chung JH, Yim SV. Effect of human umbilical cord blood-derived mesenchymal stem cells in a cirrhotic rat model. Liver Int. 2009; 29(6): 898-909. [DOI: 10.1111/j.1478-3231]