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## ESPS Peer-review Report

**Name of Journal:** World Journal of Gastroenterology

**ESPS Manuscript NO:** 8863

**Title:** Targeted migration of mesenchymal stem cells modified with CXCR4, Ling-Ling to acute failing liver improves liver regeneration

**Reviewer code:** 00504441

**Science editor:** Wen, Ling-Ling

**Date sent for review:** 2014-01-09 21:55

**Date reviewed:** 2014-01-19 14:40

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	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"/> Existed	<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"/> No records	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	BPG Search:	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> Existed	<input checked="" type="checkbox"/> Minor revision
		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

## COMMENTS TO AUTHORS

The low number of MSC colonizing a particular diseased organ upon intravenous infusion is a concern, and a stumbling block in moving MSC forward for clinical use. This article by Ma et al showed that CXCR4-modified MSCs home better to damaged liver and improves recovery. The authors demonstrate an increased in HGF and VEGF level in the serum of treated mice. While the authors showed decreased ALT and AST level, it is not known whether complete functional recovery was achieved. Did the authors check the level of albumin in the treated mice vs the null mice? CXCR4-overexpressing cells has been shown to induced apoptosis in T cells, breast cancer cells, colorectal carcinoma cells, neurons, to name a few; it was also suggested to improve cell survival through upregulation of ERK. However, no difference was observed cell viability between TAA+CXCR4-MSC and TAA-null-MSC, why is that? One of the key question is how long does MSC reside in the target tissue. Is MSC visible after 5 days? Also, when was the H&E staining done? Are you able to detect MSCs? If MSC are no longer detectable after 5 days, yet the authors are able to see recovery beyond that, does it mean the MSC has differentiated into hepatocytes? Or the improve recovery is due to paracrine signaling? Please discuss .