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Wan Chai, Hong Kong, China

**ESPS Peer-review Report**
**Name of Journal:** World Journal of Gastroenterology
**ESPS Manuscript NO:** 3956
**Title:** Curcumin Protects Against Acetaminophen-Induced Hepatic Injury in Mice by Inhibition of Hepatocyte Apoptosis
**Reviewer code:** 00504497
**Science editor:** Zhai, Huan-Huan
**Date sent for review:** 2013-06-05 22:41
**Date reviewed:** 2013-07-08 10:01

| CLASSIFICATION | LANGUAGE EVALUATION | RECOMMENDATION | CONCLUSION |
|---|---|---|---|
| [ ] Grade A (Excellent) | [ Y] Grade A: Priority Publishing | Google Search: | [ ] Accept |
| [ Y] Grade B (Very good) | [ ] Grade B: minor language polishing | [ ] Existed | [ ] High priority for publication |
| [ ] Grade C (Good) | [ ] Grade C: a great deal of language polishing | [ ] No records | [ ]Rejection |
| [ ] Grade D (Fair) | [ ] Grade D: rejected | BPG Search: | [ Y] Minor revision |
| [ ] Grade E (Poor) | | [ ] Existed | [ ] Major revision |
| | | [ ] No records | |

**COMMENTS TO AUTHORS**
WJG-3956 the authors report curcumin effects on the acetaminophen-induced hepatic injury. Data is presented convincingly that acetaminophen can induce hepatic injury, with elevated ALT, lipid peroxidation and apoptosis. Further data shows a dose-responsive decrease in these parameters with curcumin pre- or post-treatment. Overall, the data is solid. Major 1. The figures are not very consistent. They have to show the same treatment time of CMN before and after APAP treatment and also dose-dependent (10 or 20 mg/kg) effects of CMN on APAP induced-hepatic toxicity in all figures. 2. Curcumin is known to have antioxidant activity via regulating mitochondrial system. I wonder CMN could regulate caspase activity induced by APAP in this model. Minor 1. The reason they choose the concentrations (10 or 20 mg/kg) of CMN have to discuss. Since the CMN could have role of antoapoptotic and proaptototic depending on concentration. 2. In Fig. 1B. and 4A, numbering is missed and x10 and x40 looks misprint.

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**Reviewer code:** 00503832
**Science editor:** Zhai, Huan-Huan
**Date sent for review:** 2013-06-05 22:41
**Date reviewed:** 2013-07-12 19:30

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| | | [ ] No records | |

**COMMENTS TO AUTHORS**

In the present study, authors attempt to test the protective effect of curcumin on acetaminophen-induced hepatocyte injury and the possible mechanisms in vivo. It is an interesting study and the experimental evidences could strongly support the conclusion of the study. However, there are some queries that would be clarified. 1. One report (ref. 8) has described that "curcumin protects rats against acetaminophen-induced hepatorenal damage……". Authors should analyze the main differences and improvements of their study with ref. 8. 2. Could authors explain the reason for the administration of both drugs by using peritoneal injection to mice rather than oral administration? 3. On the second paragraph of phage 5, authors should explain using normal saline as the buffer of tissue homogenization. Because normal saline lacks protease inhibitors, I worry proteins may be degraded in homogenate and influence the results. 4. Could authors provide more detail procedure about TUNEL assay and the measurement of SOD and MDA. 5. On the second paragraph of page 7, the first sentence is too long to read. 6. On the second paragraph of page 7, "…., pretreatment of mice with APAP induced a significant increase in the activity of SOD", I think the "APAP" would be "curcumin". 7. In Fig. 4B, reverse transcription PCR is not a suitable quantitative method for gene expression. Authors may provide Q-PCR or protein expression results (such as western blot or immunohistochemistry) to analyze the expression of Bax and Bcl-2. 8. Could authors discuss the possible reasons that curcumin could enhance Bcl-2 expression and suppress Bax in hepatocytes, since the same drug could suppress Bcl-2 and enhance Bax in some cancer cells?