Reviewer’s report

Title: Hepatoprotective effect of curcumin and alpha-tocopherol against cisplatin-induced oxidative stress

Version: 2 Date: 4 February 2014

Reviewer: Somchai Pinlaor

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Major comments

1) Why the author pre-treated with single dose of #-tocopherol (250 mg/kg b.w.), curcumin (200 mg/kg b.w.) and #-tocopherol with curcumin, respectively, via i.p. route for 24 h prior the administration of cisplatin? Timing, route and dose of #-tocopherol and curcumin are necessary or cited reference.

2) Why animal were sacrificed after 72 h of first injection? Is this time show the highest activity for the pharmacokinetic of curcumin and #-tocopherol on hepatoprotective effect?

3) Background should be re-written because it is not clear whether for the major problem to study between oxidative stress and cisplatin. The author can start with the major problem first, such as cisplatin-induced adverse effect on chemotherapy treatment of many cancers. Although the mechanism of cisplatin-induced adverse effect is still unclear; however, many evidences showed that its hepatotoxicity is believed via free radical generation-mediated oxidative stress dependent mechanism.

4) Discussion should be re-written based on the results and explained the results. Why curcumin and #-tocopherol have hepatoprotective effect in cisplatin-induced oxidative stress in rat? Why the combination can enhance this hepatoprotective effect?

Minor comments

1) The detail of curcumin such as number of catalogue and purity are necessary to show. Because of the different purity of curcumin have different protective effect on oxidative stress markers and antioxidant enzyme activity.

2) Also detail of #-tocopherol is necessary to mention.

3) Liver function test includes not only ALT and AST, Fig.1 should change to use ALT and AST directly or liver injury markers (ALT and AST).

4) Mitochondria SOD is SOD2 but not SOD1, page 15, line 334.

5) The term oxidative stress is an imbalance between oxidant and antioxidant, this term should be carefully used throughout ms.

6) How many experiments were performed for each technique, duplicate or triplicate?
7) Fig 4 and Fig5 can be combined because the author used the same technique.

8) RT-PCR is semi-quantitative technique, especially loading of PCR product. This should state in the method whether “all sample was equally loaded on 2% gel”

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests