Reviewer's report

Title: Hepato-protective effect of rutin on the gene expression of sulfiredoxin-1, glutamate-cysteine ligase and paraoxonase-1 in hypercholesterolemic rats

Version: 1 Date: 9 March 2013

Reviewer: Shun-Wan Chan

Reviewer's report:

The manuscript, titled: Hepato-protective effect of rutin on the gene expression of sulfiredoxin-1, glutamate-cysteine ligase and paraoxonase-1 in hypercholesterolemic rats, submitted by Al-Rejaie et al. reported interesting hepatoprotective effect of rutin. It is suitable to publish on BMC Complementary and Alternative Medicine. However, there are several concerns need to be addressed.

Major Compulsory Revisions

1. How is the dose of rutin (2%) be selected? It is very high. A 300g rat eats ~30g rat chow per day. The dose is 2g/kg bw.
2. In the section of "Dietary protocol", should cite reference for the diet.
3. Figure 1 & 2 the bar of control with no error bar. The authors should not simple normalize the reading to 1 in control group. It is also important to let readers know the degree of variation in the control group. After doing that, please re-calculate the statistics.
4. Since high cholesterol diet was used, the authors should discuss the possible pathway related to lipid and cholesterol metabolisms.

Minor Essential Revisions

1. Running title shuld be shorted
2. P. 5, line 7, don't use rpm but g. same comment also applicable to other sections, such as P. 5, section "Estimation of MDA in liver".....
3. In the tables 2 & 3: Rutin (0.2%) is used.
4. P. 8, last 5th line: "This may be explained on the basis that rutin has a strong ability to chelate multivalent metal ions, especially zinc, calcium and iron." Provide reference for it.

Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests.