Reviewer’s report

Title: Carbon tetrachloride induced kidney and lung tissue damages and antioxidant activities of the aqueous rhizome extract of Podophyllum hexandrum

Version: 1 Date: 23 November 2010

Reviewer: Mujdat Uysal

Reviewer’s report:

Authors found that aqueous rhizome extract of Podophyllum hexandrum (PH) has a strong superoxide and H2O2 scavenging activity and they investigated the protective effect of PH against acute carbon tetrachloride (CCl4)-induced kidney and lung tissue damages. PH caused significant decreases in oxidative stress parameters in kidney and lung tissues of CCl4-treated rats probably by increasing the activities of antioxidant defence system. The subject and observations are interesting in this study. However, there are serious points that should be considered.

1. Although CCl4 is a strong hepatotoxin, authors have investigated protective effect of PH against tissue damage in kidney and lung tissues in CCl4-treated rats. Why have the authors not performed the experiments in liver tissue? This subject should be mentioned. General information for oxidative stress should be shortened in Background section. There is no information about what has been studied with PH. These studies should be added to Background section and the aim of this study should be clearly mentioned.

2. The composition of PH should be given. More detailed information about the antioxidant efficiency of PH is needed.

3. Discussion section is not written well. Findings and comparisons are poorly discussed. No mechanism of action of extract is suggested.

4. Language of the paper must be checked and spelling corrections must be made.

5. Literature is long. It can be shortened.

6. GSH-Px activity in Figs 3 and 4 should be corrected as nmol NADPH oxidized/min/mg protein as mentioned in Methods section.

7. GSH-reductase activity in Figs 5 and 6 should be corrected as ‘nmol NADPH oxidized /min/mg protein as mentioned in Methods section .

8. GSH values in Figs 8 and 9 should be corrected as nmol/mg protein as mentioned in Methods section.

9. Figs 2 and 7 should be presented as bars like other Figs.

10. Figs 3-10 should be rearranged. Bars showing control and CCl4 groups should replace each other and statistical significance of CCl4 group as compared to control group should also be demonstrated.
11. MDA (very low) and GSH (very high) values must be checked in kidney and lung tissues.

12. Enzyme activities must also be checked in both tissues as nmol NADPH oxidized/min/mg protein.

**Level of interest:** An article of limited interest

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

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

**Declaration of competing interests:**

'I declare that I have no competing interests'