

Review of: "The use of Phytochemical, GC-MS Analysis and Hepatoprotective Effect of the Methanol Leaf Extract of *Camellia Sinensis* (L.) Kuntze on Paracetamol-Induced Liver Injury in Wistar Rats"

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The protective effect of green tea on paracetamol-induced liver disease in rats and mice has been documented in several reports. For example, Salminen, W. F., Yang, X., Shi, Q., Greenhaw, J., Davis, K., & Ali, A. A. (2012), reported in "Green tea extract can potentiate acetaminophen-induced hepatotoxicity in mice," published in *Food and Chemical Toxicology*, 50(5), 1439–1446, DOI: 10.1016/j.fct.2012.01.027, along with related references.

Furthermore, El-Bakry, H. A., El-Sherif, G., & Rostom, R. M. (2017), demonstrated in "Therapeutic dose of green tea extract provokes liver damage and exacerbates paracetamol-induced hepatotoxicity in rats through oxidative stress and caspase 3-dependent apoptosis," published in *Biomedicine & Pharmacotherapy*, 96, 798–811, DOI: 10.1016/j.biopha.2017.10.055, that the dose of green tea is critical, as using a concentrated extract could lead to liver damage.

In the present manuscript, the authors describe the protective effects of the methanolic leaf extract of *Camellia sinensis* on paracetamol-induced liver injury in Wistar rats. Despite *Camellia sinensis* being a source of antioxidants and having the potential to protect against cellular inflammation, certain aspects require attention. Here are some comments on the manuscript:

-The title should be revised to align with the contents as "Phytochemical analysis of *Camellia sinensis* leaf extract and evaluation of its hepatoprotective effect on paracetamol-induced liver injury in Wistar rats."

-The introduction lacks rationale. The reason for using a methanol extract instead of a water extract, commonly used as green tea, needs clarification.

-The use of mixed parts of the leaf and stem bark should be explained. Do they share any phytochemical profiles?

Additionally, the development stage of the plant material should be described.

-The absence of tannins in the extract contradicts the knowledge that tea is a good source of tannins. This discrepancy requires confirmation.

-GC-MS may not be the most appropriate method for tracking components, as only constituents of smell and fatty acids can be detected. LC-MS, as shown in previous reports, would be more suitable.

- Ethical approval for working with animals should be mentioned.
- Experiment design in the table should be revised, particularly for groups III-V.
- The chromatogram in Figure 1 and the corresponding peaks' retention times do not match. Careful verification of the chromatogram and results is necessary.
- The quercetin calibration curve needs improvement and repetition.
- Statistical analysis in Table 4 needs verification, and explanations for symbols should be provided.
- Tables 4 and 5, especially in groups III, IV, and V, require correction.
- Figure 3 needs revision for better resolution.
- Discussion on liver damage pathology and protective mechanisms should be elaborated.

This manuscript discusses a well-known effect of tea extract on liver damage. However, certain experiments, such as color tests and GC-MS analysis, need revision as they may not accurately reflect phytochemical profiles. The paper should undergo revisions before a decision is made.