Review of: "Toxicity of Olea africana in Artemia Salina and Mice"

Shafia Arshad[1]

1 Islamia University of Bahawalpur

Potential competing interests: No potential competing interests to declare.

This study investigated the acute and subacute toxicity of the ethanol leaf extract of Olea Africana in brine shrimp and mouse models. The extract showed low toxicity in the brine shrimp assay with an LC50 of 2275 µg/mL. The oral LD50 in mice was 4297 mg/kg, also indicating low acute toxicity. In the 28-day subacute study, there were no significant effects on body weight or organ-to-body weight ratios in mice up to 600 mg/kg extract doses. However, some hematological, biochemical and histopathological changes were observed at higher doses, indicating possible toxic effects with prolonged use.

Comments:

- The introduction gives a good rationale for assessing toxicity of the plant extract, but is quite lengthy with excessive background on herbal medicine use. Should be more concise and focused on key points relevant to the study.
- Methods are appropriate, overall, but details are lacking in some areas - e.g. The solvents, equipment, procedures for phytochemical analysis and the extract preparation should be described.
- The results clearly present the toxicity study findings, but require better organization - findings from different assays should be separated into structured sections/subheadings.
- Include statistical outcomes like p-values, F-statistics etc. For the group comparisons made.
- Discussion is too superficial and lacks interpretation of toxicity mechanisms and relevance to ethnopharmacological uses. Should expand on potentially active compounds, mechanisms of action, human translation of findings.
- Conclusions are not well substantiated - the statement of significant toxic concern after prolonged use needs to be toned down or qualified given no adverse effects were seen up to 300 mg/kg in mice.
- Carefully proofread to fix typos, formatting issues throughout.