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REVIEWER'S REPORT

Manuscript No.: IJAR-55845

Title: Hepatoprotective Effect of Kalmegha (Andrographis paniculata): Insights from an Animal Experimental Study

Recommendation:

Accept after major revision ……

Rating	Excel.	Good	Fair	Poor
Originality				✓
Techn. Quality				✓
Clarity				✓
Significance			✓	

Reviewer Name: Dr. Sudheer Aluru

Detailed Reviewer's Report

The manuscript evaluates the hepatoprotective activity of *Andrographis paniculata* (Kalmegha) against paracetamol-induced liver injury in rats using biochemical and histopathological endpoints. While the topic is relevant and the experimental model is standard in pharmacological research, the study largely confirms already well-documented effects of Kalmegha and lacks novelty, mechanistic depth, and methodological rigor expected for a journal.

The manuscript also contains conceptual bias toward traditional medicine claims, inadequate statistical reporting, limited experimental detail in key areas, and substantial language and formatting problems.

Major Comments

1. Hepatoprotective effects of *A. paniculata* and *andrographolide* are already extensively reported.
2. No new formulation, dose–response evaluation, mechanistic biomarkers (oxidative stress enzymes, inflammatory cytokines), or molecular analyses are included.
3. The study does not clearly state what is unique compared with earlier animal experiments.
4. The Materials and Methods section is fragmented and lacks critical details. The core experimental design is not described. The provided **Table (lines 96-103) is confusing and contains a fatal**

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logical error. It lists only **4 groups (I-IV)** but the description refers to treating "Group I, III, IV" with paracetamol and later mentions a "Group V" in the discussion (line 171). Most critically, **the treatment for Groups III and IV is not defined.** It states they received "2 ml decoction" or "2 ml dilution" but does NOT specify the **concentration/dose (e.g., mg/kg) of the active extract.** Without the dose, the experiment is unreproducible and the results are meaningless. The method for preparing the decoction/dilution is also absent.

5. The manuscript fails to describe the standard hepatoprotective study protocol. Key missing information includes:
    a. Timeline: When was paracetamol administered relative to the start of Kalmegha treatment? (Pre-treatment, concurrent, post-treatment?)
    b. How many days were the animals treated?
    c. There is no mention of a standard hepatoprotective drug control (e.g., Silymarin), which is essential for validating the model and contextualizing the potency of the test drug.
6. The text claims "significant difference" but provides no F-values, p-values, or details of the test used (e.g., ANOVA). The data cannot be evaluated

Minor Comments

7. Abstract contains placeholders instead of final methodological details.
8. Numerous grammatical, typographical, and formatting errors.
9. Inconsistent group numbering (reference to Group V).
10. Tables lack clarity regarding statistical comparisons.