

Review of: "Haematological and Biochemical Patterns in the Liver Function of a Syrup Made From Vitex Doniana Fruit"

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Potential competing interests: No potential competing interests to declare.

Title

The title could be more specific. It should clearly state the objective and the animal model used. For example, "Effects of Vitex doniana Fruit Syrup on Haematological and Biochemical Parameters in Mice."

Abstract

Background: This sentence is somewhat vague. It should explicitly state why *Vitex doniana* was chosen and what specific parameters were of interest. There is no clear statement of the research question or hypothesis.

Methodology: Incorrect terminology ("Groups of seven with 5 mice in each" should be "Seven groups with 5 mice each"). No mention of Group 7.

Results: Inconsistent units (red blood cells in m/cu.mm and white blood cells in t/cu.mm).

Conclusion: The conclusion seems overly broad, stating that the syrup has "no health implications" and is beneficial for liver function without acknowledging potential limitations or areas for further research.

Introduction

Not well structured and lacks smooth transitions.

Opening sentence is awkwardly phrased and lacks specificity. It would be more impactful to directly state the importance of medicinal plants in traditional and modern medicine.

General background on medicinal plants: This is a relevant point, but it could be more effectively connected to the specific context of the study. Additionally, the reasoning behind the use of plant remedies should be more clearly linked to their accessibility and effectiveness.

Detailed information on *Vitex doniana*: While historical usage is important, the focus should be on current scientific evidence supporting its medicinal properties. The paragraph includes useful details but needs better organization and integration with the overall narrative.

The importance of the liver should be more concisely linked to the study's focus. The discussion on liver function could be

streamlined to emphasize its relevance to *Vitex doniana*'s potential effects.

The objective is stated, but the research gap is not clearly identified. It would be helpful to explicitly state what is unknown or inadequately studied about *Vitex doniana* and how this study addresses that gap.

Materials and methods

- Some references are outdated (e.g., 1944, 1959, 1970), which may indicate a lack of consideration for more recent methodologies or advancements.
- More details on probit analysis procedure
- The use of both rats and mice in the study is confusing and should be clarified.

Mention the specific strains of the mice.

Acute Toxicity Test: The weight range of the rats seems unusually low for standard laboratory rats, suggesting a possible typo. Specify the strain of rats used.

The term "LSD" should be corrected to "LD50" (median lethal dose).

Experimental Animals: "Swiss albino mice (*Mus musculus*) with a total number of 35 were selected for the study, were acclimatized for two weeks, and during which were allowed to normal rat feed and water." This sentence is awkward and unclear. The mice's initial conditions should be described more precisely.

"Before the experiment, the mice were starved for 18 hours but conducted according to the NIH guide." Clarify the meaning and ensure the sentence is complete.

Determination of In-Vivo Antioxidant: "The liver tissues of the experimental mice were harvested and washed severally with cold 10% saline (w/v)." The use of "severally" is awkward. Provide more details about the washing process.

Assay for Biochemical: "The alkaline phosphatase (ALP), aspartate aminotransferase (AST), and alanine aminotransferase (ALT) were carried out using the criteria of Bergmeyer et al. (1986a; b)." More detailed methodology for each biochemical assay should be included.

Histopathology of Liver: "From each treatment, about 3 cm pieces of the liver were cut, rinsed in normal saline, and dehydrated in grades of alcohol (20% - 100%)." Standardize the description of the histopathology process.

Discussion

- The section is overly long and dense, making it challenging to follow.
- Some paragraphs lack clear topic sentences or transitions, leading to a disjointed reading experience.
- There is excessive repetition of ideas and results, which could be condensed for clarity.

- Some statements are overly broad or lack supporting evidence (e.g., "the syrup could have reliable antioxidants to negate hepatotoxicity caused by some chemicals").
- The discussion could benefit from more critical evaluation of the results and limitations.

Conclusion

None