Review of: "An Investigation of The Phytochemical Richness of Fresh Musa Paradisiaca L. (Plantain) Stem Juice and Its Anticonvulsant Potential on Pentylenetetrazole (Ptz)-Challenged Rats"

Saraswathy Mini[1]

1 University of Kerala

Potential competing interests: No potential competing interests to declare.

The study investigates the anticonvulsant properties of freshly prepared Musa paradisiaca (MP) stem juice in adult male albino rats. The research delves into the impact of various doses of MP stem juice on PTZ-induced seizures, emphasizing the potential influence of bioactive compounds, including phenolics and flavonoids. Additionally, the study assesses the acute toxicity of MP stem juice in albino mice. However, the manuscript should address the following queries:

1. What was the sample weight used to prepare 100% of the stem juice?
2. What was the weight of the animals employed in the study?
3. Were there any changes in body weight compared to the control group in the extract-treated groups?
4. What was the daily volume of extract administered to the animals?
5. How were the doses of MP stem juice selected, and do they reflect potential real-world consumption scenarios?
6. Were the experimental conditions effectively controlled to minimize confounding variables, and were the experiments conducted in a blinded manner?
7. How do the concentrations of flavonoids and phenolics in MP stem juice compare to those reported in other studies on anticonvulsant plants?
8. Although acute toxicity tests showed no lethality, did the study investigate sub-acute or chronic toxicity over an extended period?
9. Were other toxicity parameters, such as histopathological changes or organ weights, considered in assessing the safety of MP stem juice?
10. How does the observed anticonvulsant effect of MP stem juice compare with other known anticonvulsant agents, both natural and synthetic?
11. Are there any contradictory findings in the literature regarding the safety or efficacy of Musa paradisiaca plant components?
12. What is the proposed mechanism of action for the anticonvulsant effects of MP stem juice, especially in relation to bioactive compounds like flavonoids and phenolics?
13. How translatable are the findings of this study to clinical applications for epilepsy or seizure management in humans?
14. Are there potential limitations or challenges in extrapolating results from animal models to human conditions?

15. Could external factors, such as diet or environmental conditions, have influenced the outcomes of the present study?
16. How well do the study's findings align with traditional or folk claims regarding the use of Musa paradisiaca stem juice for managing seizures?