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"

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Potential competing interests: No potential competing interests to declare.

Reviewer Comments:

Overall, the manuscript titled "An Investigation of The Phytochemical Richness of Fresh Musa Paradisiaca L. (Plantain) Stem Juice and Its Anticonvulsant Potential on Pentylenetetrazole (PTZ)-Challenged Rats" presents a compelling investigation into the potential therapeutic application of Musa paradisiaca (MP) stem juice for managing epileptic convulsions. The study design is sound, employing an appropriate animal model and treatment regimen to evaluate the anticonvulsant properties of MP stem juice. The findings are promising and contribute valuable insights to the field of natural remedies for neurological disorders.

However, before considering the manuscript for publication, I recommend the following minor modifications to enhance the clarity and scientific rigor of the study.

Bioactive Compound Identification: Specify the bioactive compounds identified in MP stem juice and their respective concentrations, along with p-values where applicable. This information is crucial for understanding the pharmacological properties of the extract and elucidating potential mechanisms of action underlying its anticonvulsant effects.

Discussion of Mechanisms: Expand the discussion to include potential mechanisms underlying the observed anticonvulsant effects of MP stem juice. Integrate relevant literature on the interaction of bioactive compounds with neurotransmitter systems involved in seizure regulation to provide a comprehensive interpretation of the results. Include p-values to support the significance of the findings.

Choice of Experimental Animals: Provide justification for choosing albino rats as the experimental animals. Include a brief explanation of why these rats were selected and how they relate to the study's objectives.

Supporting Studies: Incorporate more supporting studies in the discussion section to strengthen the interpretation of the results. Highlight relevant research that corroborates the anticonvulsant effects of bioactive compounds found in MP stem juice.

Flow Diagram in Materials and Methods: Include a flow diagram in the materials and methods section to illustrate the

experimental protocol, from animal selection and treatment allocation to data collection and analysis. This will improve the clarity of the methodology and enhance reproducibility.

Gaps in Conclusion: Identify any limitations or gaps in the study's findings and discuss potential avenues for future research. Acknowledging the study's limitations will provide a balanced perspective and guide future investigations in this area.

Latest References in Introduction: Update the introduction with the latest references to provide a comprehensive overview of the current state of research on epilepsy management and natural remedies.