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.

The authors of this study investigated the anticonvulsant potential of fresh plantain (Musa Paradisiaca L.) stem juice in male albino rats with pentylenetetrazole (PTZ)-induced seizures. you found that the plantain stem juice had a similar effect to Diazepam in preventing convulsions. However, some aspects of the study need further clarification, such as:

1. How did the authors ensure the consistency and quality of the anticonvulsant activity of the plantain stem juice in each extraction batch, given the absence of chemical analysis of the active constituents? For instance, how did you verify that the plantain stem juice in each lot had the same anticonvulsant effect at the different concentrations used in this study (50, 75, and 100% v/v)? Do you have any evidence to suggest which compounds in the plantain stem juice are responsible for the anticonvulsant action or can serve as biomarkers for extraction?
2. Why did the anticonvulsant effect of the plantain stem juice not show a dose-response relationship, as indicated by the increased durations of tonic seizure latency, clonic seizure onset, and clonic seizure duration of group V in **Table 3.** What factors could explain this phenomenon?
3. The authors did not explain the reason for using MP stem juice as a pre-treatment before PTZ challenge, which does not reflect the clinical situation where patients with seizures receive anticonvulsant drugs after the seizure onset. Did you have any justification or discussion for their selection of stimulation protocol? Could the MP stem juice also prevent or reduce the seizure severity if administered after PTZ induction, as in the case of post-treatment?
4. The authors only examined the effect of plantain stem juice on male albino rats, without considering the possible influence of sex and sex hormones on the anticonvulsant activity of MP stem juice. Would the effect be similar or different in female rats? Could you address and discuss on this issue?
5. In this study, the authors did not explore the possible molecular mechanism of the anticonvulsant effects of MP stem juice. Could you review the literature on the potential mode of action of the MPstem juice in preventing seizures? And what additional experiments should be conducted to clarify the pharmacological activity of the plantain stem juice and its feasibility for clinical trials as a candidate anticonvulsant drug?

Overall, this manuscript present some interesting aspects, but the paper also has significant shortcomings that require considerable revisions before it can be considered for publication. I recommend that the authors attend to the major issues that I have listed in points 1-5.