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 MS is an extended work of the earlier published MS entitled “Antiepileptic Effect of Musa paradisiaca Stem Juice on Pentylenetetrazole (PTZ)-induced Seizures in Albino Rats”. Though the earlier publication covered a new aspect, the present work does not seem novel or promising. Moreover, very basic work has been performed compared to the earlier one. Therefore, the MS is rejected.

Specific comments:

The title is excessively lengthy and fails to encompass the extent of the work accomplished.

The abstract lacks information about the phytochemistry and the methodology employed to acquire the extract utilized for the therapy, despite its inclusion in the title. The objective of the study was to investigate the therapeutic efficacy of the specified plant stem juice. However, administering the plant stem juice prior to PTZ, a seizure-inducing medication, is more preventive than a therapeutic investigation of this juice. The authors neglected to specify the function of group I and the distinction between group I and II, as well as the utilization of diazepam in group III.

The authors provided an overview of the risk factors associated with a significant prevalence of seizure disorders in sub-Saharan Africa, including brain infection, cranial and neonatal injuries, and infections. It is necessary to conduct screening of the experimental animals for these parameters. It is illogical to assert that the bulk of these risk factors may be mitigated or averted by conventional pharmaceutical interventions.

The rationale for employing adult albino mice of uncertain sexes and male albino rats in conjunction with this study is perplexing. The untreated control is subjected to PTZ-confounding treatment. The rationale for employing extract concentrations of 50%, 75%, and 100% in these therapies remains unexplained.

Without the use of established tools such as EEG and MRI of the brain, it is challenging to accurately define and exclude other illnesses that may have caused the observed tonic and clonic seizures.