

# 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.

In the present study, the authors performed preliminary experimentation on the topic "An Investigation of "The Phytochemical Richness of Fresh Musa Paradisiaca L. (Plantain) Stem Juice and Its Anticonvulsant Potential on Pentylenetetrazole (PTZ)-Challenged Rats" to evaluate the antiseizure potential of Musa Paradisiaca in rodents. The study included a few phytochemical tests and reported that the plant juice possessed anti-seizure potential due to the phenols and flavonoids present in the stem juice. It is an unignorable lacking in this study that no chemical characterization of the juice was carried out to identify the compounds present. Phenols and flavonoids are present in most fruits, but not all of them would protect against a chemoseizure convulsant like PTZ at its convulsive dose of 85 mg/kg.

The manuscript seems quite weak in all manners as the introduction did not provide any information on the significance of different seizure models and why the authors used the PTZ model only. Following are a few major concerns that need to be carefully addressed by the authors.

1. How did the authors decide to use 4 rats for each group? Did they use any pre-statistical program such as a power analysis program to justify the number of animals for each group? Was the sample size sufficient for statistical analysis?
2. The authors should give the company source, catalog number, and dissolution fluid used for PTZ, diazepam, and MP juice.
3. Clearly mention in the methodology that treatments were administered orally. The authors mentioned that the animals were treated for 10 days, but did not mention whether the dose was given once, twice, or how many times? Write it clearly.
4. How much normal saline was given to Group 1? Further, animals of groups 4-6 were given different dilutions of stem juice, but clearly mention the volume and dose given.
5. Provide the references for the diazepam and PTZ doses too.
6. What are the intermittent seizure episodes 1, 2, and 3, and at what time points these episodes were monitored? It will be beneficial to include an experimental layout in the methods section to make the understanding of the experimental approach easy to understand.

7. Authors need to include 2-3 lines regarding the objective of this study in the last paragraph of the introduction.
8. The authors must conclude the study, including its limitations and future perspectives.