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.

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

The subject is interesting, especially because it offers a possible alternative to delay the latency to the onset of epileptic seizures; however, it presents **many weaknesses**, which are detailed below point by point:

BACKGROUND:

Preclinical studies in murine models of epilepsy with PTZ should be included to help substantiate this project.

A weakness of this work is that it does not provide information on the adverse effects that the fresh stem juice of *Musa paradisiaca* could have at the systemic level (renal and hepatic).

EXPERIMENTAL GROUPS:

It is missing to include the strain of rats and mice, as well as the age of the rats and mice.

Indicate the temperature of the room where the rats were housed.

Preparation of MP stem juice:

Had the authors Onyenekwe et al. previously made a dose-response curve with the juice of this plant for the authors to take as a reference? If not, justify it punctually.

Experimental design:

Describe what the oral intubation consisted of.

What volume was administered to the experimental subjects?

The diazepam dose of 4mg/kg is too low to avoid seizures, so it should be justified with articles from other working groups that have used the mentioned dose.

Induction procedure:

What scale did you use to detect the different stages of seizures?

The experimental protocol was summarized as follows:

In all groups, the route of administration and volume were missing.

Evaluation of seizure activity (Seizure manifestation):

Does the method of Gupta et al. describe each of the stages of status epilepticus? If so, include those stages and describe them.

Results:

Determination of acute toxicity: For the moment, no rats died during the 10 days of administration, but it is important to perform biochemical studies that demonstrate that there is no long-term damage to the liver and kidney, since this study is focused on the use of this extract by humans.

The results presented in tables 3, 4, and 5 should include the scale to evaluate epileptic seizures that was useful to report these findings.

The following groups below the corresponding tables should include the final volume administered as well as the route of administration.

Group I: Normal Control (Saline only)

Group II: Untreated Control (saline + PTZ)

Group III: Standard Control (4 mg/kg b.w. diazepam) + PTZ. With this dose of diazepam used, I question whether any rat did not convulse, as it is very low.

Group IV: 50% (v/v) MP Stem Juice + PTZ

Group V: 75% (v/v) MP Stem Juice + PTZ

Group VI: 100% (v/v) MP Stem Juice + PTZ

Discussion:

Regarding the following paragraph: This study is in consonance with the report of Onyenekwe et al. (2013), who studied the phytochemicals and effect of *Musa paradisiaca* stem extrude on rat haematological parameters, in which all four (4) graded doses (25, 50, 75, and 100% v/v) were found safe amongst the tested animals. Presently, no literature has reported or documented any form of lethality for any part of the *Musa paradisiaca* plant. I make the following comment: the results of blood cytometry are not sufficient, since they should include at least liver and kidney function tests.