

# Review of: "Neurotherapeutic Comparison of Aripiprazole and Ethanolic Extract of *Fragaria Ananassa* on Cerebrum and Amygdala of Methamphetamine Intoxicated Male Wistar Rats"

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Potential competing interests: No potential competing interests to declare.

Good work! The research investigates the neurotherapeutic effects of the ethanolic extract from *Fragaria ananassa* (strawberry) on methamphetamine-induced cerebral and amygdala toxicity in Wistar rats. The study includes eight groups of rats treated with different combinations of methamphetamine, strawberry extract, and aripiprazole (an antipsychotic drug). Various analyses such as oxidative stress markers, neurobehavioral tests, and histological examinations were conducted. Results show that the extract, especially when combined with methamphetamine, improved neuronal cell integrity and prevented oxidative stress. The study suggests potential neuroprotective effects of the *Fragaria ananassa* extract against methamphetamine-induced toxicity.

The authors need to address some concerns in order to improve quality:

## Abstract

- Reconstruct this sentence to make it more direct. "The obvious need for other effective therapeutic medication for methamphetamine-induced cerebral and amygdala toxicity has warranted this research."
- Line 3. "Fragaria ananassa, extracted ethanolicly." The words look redundant.
- Mention the duration of the study.
- How was the extract administered?
- Mention the specific neurobehavioral tests and histological examinations that were conducted.

## Introduction

- Improve clarity by starting directly with the problem statement and the specific research objectives.
- What is the specific effect of *Fragaria ananassa* on brain function?
- Provide a reference for this statement: "The next generation is in huge trouble as over 41 million young people are plagued in deep meth addiction, and of course, this tragic trajectory goes far beyond an opioid epidemic but also from desire of other albeit higher sources of euphoric substances."

## Methods

- Provide more details on the conditions of acclimatization (temperature, humidity)
- Any voucher number for the identified plant?
- More details should be provided for the preparation of strawberry extract: exact quantity of strawberry fruit, temperature and duration of drying, type of oven.
- What are the graded doses administered to the rats to determine LD50.
- What is the dosage of methamphetamine administered?
- Why was methamphetamine administered intra-peritoneally?
- What criteria were used to assess changes in behavior?
- Justify from literature or clinical evidence why specific doses of methamphetamine, strawberry extract, and Aripiprazole were used.
- Clarify the criteria used for the histopathological analysis conducted.

## Discussion

- More needs to be done regarding discussion.

## Conclusion

- What are the potential clinical implications of the study findings.
- Suggest areas for future research based on your findings.