Review Form 3

Journal Name:	**Asian Journal of Biology**
Manuscript Number:	**Ms_AJOB_126492**
Title of the Manuscript:	**Neuroprotective role of zingerone: Investigation the effective doses of zingerone in lead acetate-induced brain dysfunctions in rats**
Type of the Article	**Research**

General guidelines for the Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guidelines for the Peer Review process, reviewers are requested to visit this link:

https://r1.reviewerhub.org/general-editorial-policy/

Important Policies Regarding Peer Review

Peer review Comments Approval Policy: https://r1.reviewerhub.org/peer-review-comments-approval-policy/
Benefits for Reviewers: https://r1.reviewerhub.org/benefits-for-reviewers

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback** *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	The manuscript on the neuroprotective role of zingerone in lead acetate-induced brain dysfunctions in rats is highly significant for the scientific community. Lead toxicity is a global health concern, especially for its damaging effects on the nervous system. Understanding how natural compounds like zingerone, a powerful antioxidant derived from ginger, could counteract these effects offers promise for developing low-cost, accessible therapies to mitigate lead-induced neurotoxicity. Furthermore, identifying effective doses is critical for translational research, guiding future studies and potential human applications. This research adds to the body of work on natural neuroprotectants and supports the move towards safer, non-synthetic treatment options.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The title of the article, "Neuroprotective role of zingerone: Investigation of effective doses of zingerone in lead acetate-induced brain dysfunctions in rats," is informative and provides a clear sense of the study's focus. However, a few adjustments could improve its readability and impact. 1. Determining Effective Doses of Zingerone for Neuroprotection in Lead-Induced Brain Dysfunction in Rats 2. Neuroprotective Potential of Zingerone Against Lead-Induced Brain Damage: Dose-Response Study in Rats	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	**The abstract is quite comprehensive and provides a good overview of the experiment. However, it could be made more concise and clear in a few areas. Here's a suggested revision with some rephrasing and structural adjustments for improved readability and clarity;** **1. Objective clarity:** Explicitly stating the primary objective at the beginning (e.g., to assess the neuroprotective effects of zingerone) would add clarity**.** **2. Implications:** Briefly mentioning the potential implications for neuroprotective therapies in cases of environmental lead exposure would help contextualize the study's relevance for the broader scientific community. **3. Statistical significance:** Consider adding more specific statistical outcomes (if available) to quantify the effect size.	
Are subsections and structure of the manuscript appropriate?	**Yes**	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The manuscript appears scientifically robust and technically sound due to its clear experimental design and systematic approach in determining the neuroprotective effects of zingerone against lead-induced brain dysfunction. By using a well-defined, dose-dependent methodology, the study effectively isolates the impact of varying zingerone doses on oxidative stress markers and neurotransmitter levels. The use of appropriate biomarkers such as malondialdehyde (MDA), neuroglobulin, and dopamine concentrations further supports the study's scientific accuracy, as these parameters are widely recognized indicators of oxidative stress and neuroprotection. Additionally, the study's inclusion of statistically significant results ($P < 0.05$) strengthens its validity and suggests that the findings are both reliable and reproducible**.**	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	**Yes**	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language quality of this excerpt is mostly clear but could benefit from revisions to align with the standards of scholarly communication. Here are a few specific areas for improvement: 1. **Grammar and Syntax**: There are some grammatical errors (e.g., "The aim of the present study is to determination the effective dose…" should be "The aim of the present study is to determine the effective dose…"). Careful proofreading for grammar and syntax will improve clarity. 2. **Consistency and Technical Language**: The terminology should be consistent (e.g., "zingerone" instead of "zengeron" in some instances). Scientific writing benefits from a consistent, precise use of technical terms. 3. **Conciseness**: Reducing redundancy and enhancing conciseness would make the text easier to read. For instance, phrases like "ginger powder that used in this study comes from ginger rhizomes from controlled organic cultivation in India" could be rephrased as "The ginger powder used in this study was derived from organically cultivated rhizomes in India." 4. **Formal Tone**: Phrases like "as shown in HPLC analysis (figure 1) with following specifications" could be improved by rephrasing for a more formal tone (e.g., "HPLC analysis (Figure 1) confirmed the following specifications…").	
Optional/General comments	**Flow and Structure**: The material could be better organized, with a clearer distinction between background information on zingerone/ginger and the specific study's methods or materials. This would help the reader easily distinguish between general information and specific study details Histopathology: Information as not present	

Review Form 3

PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

Reviewer Details:

Name:	**Vinod Kumar**
Department, University & Country	**G D Goenka University, India**