

Review of: "Cadmium Toxicity Induced Changes on Antioxidative Enzymes Level in Fresh Water Catfish *Channa Punctatus* (Bloch)"

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Potential competing interests: No potential competing interests to declare.

Although the topic poses interest in the piscine community, there are several issues that should be brought to the author's view.

General recommendations

1. As such, cadmium is vastly studied both as a waste from non-point and point sources. Moreover, several reports are available regarding the manuscript topic that you posted. Hence, for this publication to go through even as a 'short communication,' authors should supply more data in regards to it. The manuscript in its current form is mostly unsuitable for publication.
2. References are outdated. I believe that it is an old manuscript, and so the updating of references and citations was not done. Please update the same.
3. The language and sentence construction require thorough checks. Language can be of 2 types: flowery, wherein the use of apt words is required, or scientific, wherein the sentences should be small and to the point.
4. While oxidative stress markers are apt for this study, the same should be supported with histopathological findings. I could find only the liver. Gill, kidney, and residue studies should have been demonstrated also.
5. Why was recovery not studied? Any particular reasons for it?

However, please find a thorough review sectionwise below.

Introduction

1. The write-up is fine. However, since your focus is on oxidative stress, more literature should be made available regarding the same. I hardly found 1 paragraph of Cd-associated stress in the whole section. More literature should be cited. The authors can even provide a table with different authors that have worked on Cd-stress, their findings, parameters they have tested, and so on. That constructive review will speak for itself.
2. Again, the references are outdated. There is loads of literature pertaining to your study area.

Materials and methods

1. Why was market fish used for the study? Why not farm-raised fish? Are there any particular reasons for it? If so,

please mention.

2. Market location should be made available in Lat and Long.
3. The fish were in live conditions. This is not mentioned. Again, if live fish are required, why was a market chosen? Market fish will be naturally stressed owing to constant handling. A stress-related study should not be done in this aspect as it may hamper enzymatic stress parameters.
4. The CdCl₂ concentrations were taken as 35 mg/L and 70 mg/L. It was an exposure study, right? Duration? Replicates? Water quality parameters? Nothing has been mentioned.
5. Animal ethics statement is missing in the study.
6. Cadmium chloride was laboratory or analytical grade? Mention product details. The same details should be made available for all the chemicals used in the study.
7. The manufacturer's details of the instruments should be elucidated.
8. Absorbance was recorded in a spectrophotometer? It is not mentioned in the manuscript.
9. I suggest the authors go through other literature and modify their writeup. The parameters and their method of study can be written in a better form.
10. Abbreviations should be expanded. DNTB, BSA....
11. "Protein was estimated by the colorimetric method and BSA as the standard (Lowry et al. 1951)." This is not a proper way of writing. Moreover, colorimetric estimation can require a spectrophotometer or a colorimeter. What has been used in this study?

Results

1. Tables and graphs provide the same information, even in the writeup. Again, do not do this. Either provide a graph or table. A table can cite the data obtained, whereas the graph can illustrate the percentage of change compared to the control.
2. Liver HP images are missing.
3. Was scoring done? Based on what parameters was scoring done? Follow Bernet et al. (1999) paper for more information.
4. "After 30 days of exposure, vacuolisation and necrosis were found to be more prominent.....After 60 days of exposure, the cellular architecture was almost lost due to degenerative change." The duration of the study should be made available in the first para of the Materials and Methods section.

Discussion

Overall, the discussion is too lengthy. Owing to the data generated, it may only pertain to one page. Don't exaggerate in the discussion section. Please be to the point. Moreover, as several issues are there in the previous sections of the manuscript, it is of no use to follow the lines of the discussion. You can modify the whole manuscript and upload it again for a more critical review.

Good Luck!

