

## Review Form 1.7

Journal Name:	<a href="#">Asian Journal of Biochemistry, Genetics and Molecular Biology</a>
Manuscript Number:	Ms_AJBGMB_97242
Title of the Manuscript:	Evaluation of Acute Effects of Heavy Metal Exposure on Serum Total Protein, Albumin and Globulin in Male Albino Wistar Rats Treated with Ethanol leaf Extracts of <i>Tapinanthus bangwensis</i> and <i>Mangifera indica</i>
Type of the Article	Original article paper

### **General guideline for 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 guideline for Peer Review process, reviewers are requested to visit this link:

(<https://www.journalajbgmb.com/index.php/AJBGMB/editorial-policy> )

## Review Form 1.7

### PART 1: Review Comments

	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)
<p><b>Compulsory</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li>3. <b>Is the abstract of the article comprehensive?</b></li> <li>4. <b>Are subsections and structure of the manuscript appropriate?</b></li> <li>5. <b>Do you think the manuscript is scientifically correct?</b></li> <li>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><b>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</b></p>	<ol style="list-style-type: none"> <li>1. <b>Yes the manuscript represent a valuable study for the effect of Ethanol leaf Extracts of Tapinanthus bangwensis and Mangifera indica against acute toxicity of cadmium and its corresponding biochemical changes.</b></li> <li>2. <b>It is suggested to change the title to: (Evaluation of the Effects of Acute cadmium toxicity on Serum Proteins and its modulation by Treatment with Ethanolic leaf Extracts of Tapinanthus bangwensis and Mangifera indica in Male Rats).</b></li> <li>3. <b>Yes the abstract is comprehensive but need some corrections.</b></li> <li>4. <b>Subsections and structure of the manuscript are appropriate.</b></li> <li>5. <b>Yes, the manuscript is scientifically correct.</b></li> <li>6. <b>The references are sufficient but needs some additions.</b></li> </ol>	
<p><b>Minor</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></li> </ol>	<p>The language and English quality is good. But the manuscript needs proofreading for grammar and sentences structure by a native professional proof-reader.</p>	
<p><b>Optional/General</b> comments</p>	<ol style="list-style-type: none"> <li>1. The title should be corrected to be <b>(Evaluation of the Effects of Acute cadmium toxicity on Serum Proteins and its modulation by Treatment with Ethanolic leaf Extracts of Tapinanthus bangwensis and Mangifera indica in Male Rats.)</b>, because the paper involves studying the effect of cadmium only not other heavy metals.</li> <li>2. The study is extremely preliminary, just screening of the changes in 3 serum proteins (Albumin, globulin and Total) in Cd-treated rats and its modulation by two plant extracts. The study needs further biochemical and histopathological investigations and may molecular studies for investigating the possible mechanisms of Cd toxicity and its modulating drugs. Serum parameters are general, the authors should select organ to study the toxicity like liver, kidneys, testicles, ovaries,...etc.</li> <li>3. Please write wistar by capital initial Wistar all over the article.</li> <li>4. In the abstract, animal grouping should be rewritten to be clearer. Usually, groups 1 and 2 represent the control and positive control. Authors said that Groups 1-4 were orally administered with cadmium chloride, Groups 1 and 2 treated with TB and MI extracts respectively, Group 3 was treated with TB+ MI combination, then (group 4 and 5 were treated with the plant extracts and served as positive and normal control respectively) How? If group 4 given cadmium and plant extract, then it will be similar to groups 1 and 2.</li> <li>5. What is the duration of treatment with plant extract? Is it one week? Please indicate clearly.</li> <li>6. In the abstract: lines 12-13, (results revealed a significant increase (<math>P &lt; 0.05</math>) in serum total protein in group 2 and 3 when compared to group 1.) how comparison done with group 1 if</li> </ol>	

## Review Form 1.7

	<p>it is not the control or positive control group? (control = non-treated at all or saline treated; positive control = cadmium-treated) should be like this.</p> <ol style="list-style-type: none"><li>7. Abstract lines 15-16: {Group 3 showed significant increase (<math>P &gt; 0.05</math>)!! How results significant if <math>P &gt; 0.05</math>? the same for line 19 (but with <u>no significant</u> difference (<math>P &lt; 0.05</math>) compared to groups 4 and 5. and also line 22 (Serum globulin recorded significant decrease (<math>P &gt; 0.05</math>) in group 1 compared to group 2).</li><li>8. The implications of these results should be indicated concisely in the abstract, because it summarizes all aspects of the study.</li><li>9. Key words should be rewritten, all the words are general non-indicative to the study, it should be replaced by indicative words related to the study like (Cadmium, <i>Tapinanthus bangwensis</i>, <i>Mangifera indica</i>, total protein, Albumin, Globulin, ..etc).</li><li>10. Introduction page 2 line 8: replace rheumatism by rheumatoid arthritis. What do you mean by epidermal tumors? Please correct.</li><li>11. In the introduction, authors discussed the two selected plants TB and MI but not write anything about cadmium toxicity and its reported effects on serum proteins and other organs. Authors should add a paragraph giving the readers a background about the research problem.</li><li>12. The introduction should be closed by a sentence describing the aim of this study and its correlation with the obtained results.</li><li>13. What are the active constituents of the ethanolic extract of leaves of TB and MI? there is need for HPLC analysis for identifying the components and its percentage or at least to indicate the published components with suitable references to be added in methods and material section.</li><li>14. Page 3 line 16: Thirty (30) percent below the LD50 of Cd) .. Please indicate the reported value of Cd LD50 with the reference.</li><li>15. On which basis authors selected the dose 300 mg/kg of plants extracts? Please add references.</li><li>16. Page 4 line 2: Treatments were done daily via oral route for a period of 2 weeks. This is not in accordance with what is written in the abstract (3 doses of Cadmium, with 2 days intervals before treatment and all experimental period 14 days). Please rewrite correctly.</li><li>17. In the section of Collection of Blood Sample and Preservation of Serum: it is written that (At the end of 7 days experimental period.)!! so confusing. Please correct.</li><li>18. Authors used chloroform in anaesthesia although it is not recommended by the last ARRIVE guidelines of animal handling and anaesthesia. It also affects negatively the liver and serum proteins level.</li><li>19. Table-1 title: please replace Heavy Metal by cadmium chloride (dose mg/kg, orally) , and also doses of plant extracts TB and MI (300 mg/Kg, orally). Also the results showed significant difference should be indicated by asterisk (*) or small letters beside the mean <math>\pm</math> SEM value. And to be indicated in the table footnote.</li><li>20. Due to the inadequate experimentation and data, the authors in the discussion section were not able to approve the cause of the improvement in serum protein levels if it is related to the action on the liver or kidneys or other body tissues which may be exposed to proteolysis upon exposure to cadmium toxicity.</li></ol>	
--	--	--

[Review Form 1.7](#)

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> <i>(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)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

Name:	<b>Basel A. Abdel-Wahab</b>
Department, University & Country	<b>Najran University, Saudi Arabia</b>