Journal Name: British Journal of Medicine and Medical Research  
Manuscript Number: Ms_BJMMR_34411  
Title of the Manuscript: Effect of Curcumin on Spatial Working Memory and Oxidative Stress Biomarkers in Alloxan-Induced Diabetic Swiss Albino Mice  
Type of the Article: Original Research Article

**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:

(http://www.sciencedomain.org/page.php?id=sdigeneral-editorial-policy#Peer-Review-Guideline)
### Compulsory REVISION comments

The present manuscript describes the beneficial effect of curcumin administration on the diabetes induced cognitive dysfunction. There are several articles already published in the literature on curcumin and diabetes and the authors must make sure that all the important publications are not missed. The present work is aimed to study the effect of curcumin on blood glucose and neurobehavioural response in diabetic mice.

The specific comments are listed below:

1. **Page No 3, Line No-54:** Chemicals and drugs - The chemical purity of curcumin should be mentioned.

2. **Page No 3, Line No-54:** Experimental animals - The animals used in the experiment compromised both male and female mice. However it is not clear whether male and female mice were distributed equally in to the individual group prepared for the experiment. It is well established fact that diabetic response varies between the sexes. Therefore it would have been ideal to use the mice of same sex.

3. **Page No 3, Line No-76:** Group II, Diabetic control received olive oil 1ml/kg. Does this mean that curcumin was dissolved in olive oil for supplementation? If it is so please indicate in the method section.

4. **Page nos 4 & 6:** There is discrepancy with respect to kits used to detect the level of antioxidants enzymes and the results described in the manuscript. For
example kits mentioned in the method sections are used to monitor the protein expression level of antioxidant enzymes. However the result section including the figure 2 described antioxidant enzymes in terms of activity. How is it possible?

5) Page no - 6, Legend Figure 1: There is error in representing the statistical significance between the groups. Authors should clearly mention the groups compared.

6) Page no – 8, Legend Figure 3: The figure should represent MDA level instead of antioxidant enzymes in the description. Further the legend describes the superscript “b” as a symbol of significance. However this superscript is missing in the figure. Please check the data sheet.

7) Throughout the manuscript, authors have indicated that both CAT and SOD were significantly induced by curcumin administration. However the fig 2 indicated the significance only for the CAT. Authors need to recheck their data set and accordingly correct the figure 2 as well as the text.

8) Page no – 10, line no – 179: “The increase in antioxidant enzyme activities in the curcumin treated groups may be due to increase generation of ROS” This sentence is self contradictory considering the fact that curcumin reduces ROS level.

9) The authors should include the measurement on blood glucose levels in the result section to support the induction of diabetes in the mice.

10) Although authors have measured the MDA level in
serum, it would have been ideal to corroborate this with serum ROS level. Therefore, it is recommended to measure ROS level as a function of time in the curcumin fed diabetic mice.

<table>
<thead>
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<th>Minor REVISION comments</th>
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<tr>
<td>1) Page 6, line number 126-129: The sentence is not clear.</td>
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<td>2) Page no 147 -150: The sentence is not clear.</td>
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<th>Optional/General comments</th>
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<td>Although the paper is interesting, the results and discussion sections need through language editing and significant improvement. Several experimental results need to be verified again.</td>
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**Reviewer Details:**

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