Review Form 1.7

Journal Name:	**Asian Journal of Biochemistry, Genetics and Molecular Biology**
Manuscript Number:	**Ms_AJBGMB_95970**
Title of the Manuscript:	**Influence of antidiabetic drug Biguanide against Alzheimer's induced rats**
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.
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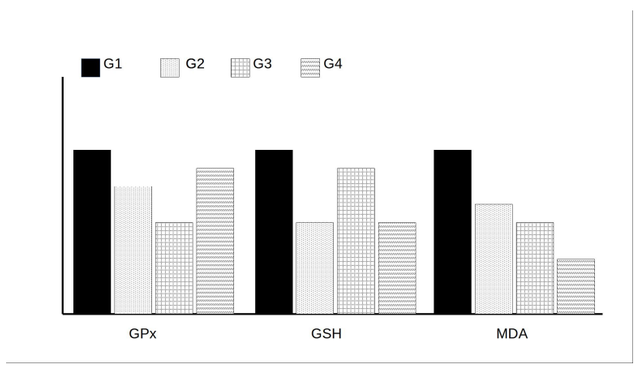
PART 1: Review Comments

	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)*
Compulsory REVISION comments 1. **Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) 2. **Is the title of the article suitable?** (If not please suggest an alternative title) 3. **Is the abstract of the article comprehensive?** 4. **Are subsections and structure of the manuscript appropriate?** 5. **Do you think the manuscript is scientifically correct?** 6. **Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1. Yes,** due to an alarming estimated global prevalence of AD in the future. **2. No.** Because there is no specification of what the biguanide is, as Biguanide and Metformin are not synonymous. Metformin is an oral antidiabetic drug of the biguanide class. I suggest changing to **"The Use of Metformin as a Potential Treatment for Alzheimer's Disease."** **3. No.** The authors said "The obtained data indicated an increase in the arrival time of the AD rat group (G2) compared to the control group (G1)." The data obtained indicated a longer period of latency for the onset of symptoms in the group of AD rats (G2) in relation to the control group (G1). And they informed "In addition, the AD rat group showed an elevation in glucose level, oxidative stress, liver, and kidney function. Importantly, metformin was able to enhance these unpleasant outcomes in G3." If there was a worsening of the mentioned outcomes, it is indicative that metformin is not a good drug in the treatment of AD. Finally, the conclusion is very general. In fact, they might conclude that metformin can delay the symptomatology of AD. **4. No.** The Introduction is very short. The first paragraph could tell you more about Alzheimer's disease; the second, on the AD` treatment known; another paragraph about the animals in this type of research; and finally the justification for the research. In Material and Methods. I always suggest using Metformin in place of the Biguanide. In *Chemicals*, they did not inform what are the "All other chemicals obtained in highly pure grade." what they were referring to, nor where they came from. Please, inform the meaning of the abbreviations ALT and AST. In *serum biochemical evaluation*, when and where were samples collected? In the statistical analysis, which p-value was considered statistically significant? It is not described how the memory of the animals was evaluated. In Results. The authors said "Further, the liver function including (ALT and AST) and Kidney parameters as creatinine and urea were remarkedly elevated in G2 which ameliorated after Biguanide administration in G3." but there is no data from G3 before and after metformin administration. In Table 1, there is no group 4, nor p-values. In Figure 1, there is no group 4, it does not have the p-values, and in group 3 the GSH and MDA bars do not appear. Please, inform the meaning of the abbreviations GPx, GSh, and MDA. I suggest placing the bars grouped by dosages and not by groups as follows the example below:  	

	In Figures 2 and 3, there is no group 4. In the Discussion the authors stated that "The data collected revealed that the arrival time of AD rats was 3.48 times longer than that of control rats.", but the methodology does not say how this was measured. In the Discussion and Conclusion, there is reference to the improvement of the parameters studied in the animals after the administration of metformin, but in the methodology, and neither in the tables or figures, a comparison of the animals over time was shown. **5. The manuscript does not allow assessing whether the data are scientifically correct.** **6.** Suggested references: **-** Ali SK, Ali RH (2022) Effects of antidiabetic agents on Alzheimer's disease biomarkers in experimentally induced hyperglycemic rat model by streptozocin. PLoS ONE 17(7): e0271138. https://doi.org/10.1371/ journal.pone.0271138 - Modeling Alzheimer's disease with non-transgenic rat models. Lecanu and Papadopoulos Alzheimer's Research & Therapy 2013, 5:17 http://alzres.com/content/5/3/17	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	**No.** I had difficulties understanding what was being said.	
Optional/General comments		

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)*	

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