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Journal Name:	Asian Journal of Biochemistry, Genetics and Molecular Biology
Manuscript Number:	Ms_AJBGMB_99372
Title of the Manuscript:	Evaluation of glycemic index, hypolipidemic and hypoglycemic activities of “osu une” on Alloxan induced diabetic rats.
Type of the 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:

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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)
<p>Compulsory REVISION comments</p> <ol style="list-style-type: none"> Is the manuscript important for scientific community? (Please write few sentences on this manuscript) Is the title of the article suitable? (If not please suggest an alternative title) Is the abstract of the article comprehensive? Are subsections and structure of the manuscript appropriate? Do you think the manuscript is scientifically correct? Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> Yes. As the authors claim, there is no scientific evidence on the 'osu une', based on a quick search on the internet. However, this dish may have an alternative name or alternative spelling. If yes, please indicate the alternatives. The arrangement of the study design does not reflect the title. Based on the design, the more appropriate title would be "Evaluation of hypoglycemic and hypolipidemic activities of "osu une" in alloxan-induced diabetic rats". Although the glycemic index of "osu une" was determined in the study, the inclusion of this part in the title will disturb the overall balance. The abstract can be more concise and direct. The description of the methods is too long, and the authors had to sacrifice the more essential points: discussion and conclusion. Please also include the determination of the glycemic index of osu une in the objective. The abstract indicated that the dose of osu une used in the study was 400 mg/kg body weight. However, in the manuscript, the dosage used was 500 mg/kg. Please carefully check and correct any inconsistency, not just for this parameter, but for others too. The subsections and structure of the manuscript need revision. Please refer to previously published articles with similar study designs to help the authors during the revision. The manuscript is scientifically correct and very interesting. However, the delivery of the research outcome is fragile. References styles are inconsistent, and there are some missing references. Please cross-check to ensure all cited references are in the list and all references are actually cited in the text. The latest reference cited was published in 2020. Suggest the authors to find more latest references. 	
<p>Minor REVISION comments</p> <ol style="list-style-type: none"> Is language/English quality of the article suitable for scholarly communications? 	<p>No, the manuscript needs extensive revision for language and grammar.</p>	
<p>Optional/General comments</p>	<p>Method:</p> <ol style="list-style-type: none"> 1.2.1 Test food and processing The banana was authenticated at the herbarium for the purpose of this study. However, according to the authors, 'osu une' is a mixture of food that consists of not just banana, but red oil, crayfish, spices, onions and water. Please specify each ingredient's exact portion (weight or percentage). Explain the need to use a pressure cooker to prepare the mixture. 1.2.2 Chemicals and drugs Use metformin as the intervention drug because Glucophage is a brand. Specify all brands and origins of the materials used in the study. 1.2.3 Preparation of methanolic extract 	

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	<p>The reason why the authors used the methanolic extract of 'osu une' is not specified. If the authors would like to evaluate the effect of this food, it should be assessed as a whole, not as an extract. Using methanol will extract only the polar compounds from the food sample. Since this is a traditional food, the sample should mimic the conventional preparation. Was methanol removed from the extract before the supplementation?</p> <p>1.2.5 Induction of diabetes</p> <p>Justify why the 42 mg/kg alloxan dose and 500mg/kg extract of "osu une" were chosen.</p> <p>Please specify the dosage of metformin used in Group 3.</p> <p>"Only animals with clinical signs of severe diabetes and fasting glucose \geq 126 mg/dL in two successive determinations were considered diabetic and used for the study." Please specify when the determination took place and how.</p> <p>"Clinical parameters were obtained using individual metabolic cages." What is the meaning of this sentence?</p> <p>evolve glucometer – Specify the brand and manufacturer.</p> <p>"Fasting blood glucose levels of the animals were evaluated on days 7, 14 and 28 of the experiment." – The study duration mentioned here, was it from the induction of diabetes by alloxan, or confirmation of the presence of diabetic condition? The Results and Discussion section mentioned that Day 7 was the day after the 7-days acclimatization period and Day 14 was 'after' the induction of diabetes. Day 1 of the experiment should be the first day of the dietary/treatment intervention.</p> <p>1.2.6 Blood collection</p> <p>The subheading should be changed to "the determination of blood lipid profile"</p> <p>Why was the blood collected from the ocular vein?</p> <p>For each kit used, please specify the catalogue number.</p> <p>1.2.7 Proximate analysis</p> <p>Please describe in detail the methods used for each nutrient.</p> <p>Fifty grammes (50g) of available carbohydrate for the test food sample was calculated from the results of the proximate analysis and the measured portion of the food was served to the subjects. – The meaning of this sentence is unclear. Based on Table 8, 50 g carbohydrate referred here is the amount of crude fibre itself, based on the total weight of the food sample. The result for this should be included in the method. Describing it the Result may be too late for the reader to understand. And this sentence should be in a different subheading because it is not part of the proximate analysis.</p> <p>1.2.8 Subject</p> <p>A suggestion to the authors to change the subheading to Determination of the glycemic index of 'osu une'.</p> <p>Please describe the study design in detail e.g. BMI of the subjects, the inclusion and exclusion criteria (define 'clinically normal'), time of the supplementation. The difference in the study design between Day 1 and Day 2 is unclear. Please clarify that Day 1 is for the control, and Day 2 is for the test. How did the osu une serve to the subjects? Was it a solid or a drink? Is it comparable to the glucose drink, considering the different absorption rates by the GIT between solid food and liquid</p>	
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	<p>food? It is a well-known fact that carbohydrates, in this case, pure glucose, in liquid form consumed by themselves are absorbed more quickly than those in solid food. Perhaps white bread is a better reference food for GI determination in this study.</p> <p>The reference for Wolever & Jenkins, 1986 is missing from the reference list.</p> <p>Please add "Any area below the baseline fasting value was ignored" to the calculation of GI.</p> <p>1.2.10 Statistical analysis</p> <p>Please add 'Duncan's' to the new multiple range test and the statistical software used for the analysis.</p> <p>1.2 Result</p> <p>Please indicate Group 1- 4 in Table 1-Table 6, since the authors used these labels in the description of the Methods. In each relevant column, please clearly indicate that Groups 2 to 4 are the diabetic groups.</p> <p>Please revise the title of each table. All titles have units indicated at the end of them. What does this mean?</p> <p>Laboratory analysis mentioned that the level of hemoglobin was analysed. However, there is no result for the analysis.</p> <p>Tables 1-6 can be combined into one. The results can also be presented in a series of graphs, to facilitate visual comparisons.</p> <p>Indicate the units/labels for the x- and y-axis.</p> <p>Please clarify whether Day 7 in the results is actually referring to the day after the 7-days acclimatization period or Day 7 following the induction (or confirmation of diabetes to the rats).</p> <p>Tables 1-6, please indicate what the superscripts mean.</p> <p>Tables 7-9: What was the n for each sample?</p> <p>1.3 Results and Discussion</p> <p>Overall, it is tough to understand the language used in this section.</p> <p>Body weight: On day 14 after induction of diabetes, the mean weight of the rats was between 110.70- 155.24g. – These values are ranges, not means.</p> <p>Fasting blood glucose: In this section, the authors clarify that Day 7 was the first day after acclimatization, and day 14 was the day diabetes was confirmed. The dietary/treatment intervention started after this for 14 days, which is supposed to be considered as Day 1, until Day 28 post-acclimatization, which is supposed to be Day 14 of treatment/intervention. This information was not clearly stated in the Methods. Please revise accordingly.</p> <p>Lipid profile: TC, TG, VLDL, LDL, and a decrease in HDL – Some of these abbreviations were used for the first time in this text. Please spell them in full. Only use an abbreviation if it will be used for more than three times throughout the text.</p> <p>The presented results are in means. The authors described the results in ranges instead. It makes</p>	
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	<p>it very difficult to comprehend and compare.</p> <p>The <i>L. edulis</i> administered to diabetic positive control – Please spell <i>L. edulis</i> fully.</p> <p>Glycemic index:</p> <p>(Omega and Omega, 2018) - (Omage and Omage, 2018)</p> <p>The low glycemic index of 9.59 of the meal could be attributed to the blood glycemic and the lipidemic response of the rats fed “osu une” after inducing diabetes. – The low glycemic index should be attributed to the ‘osu une’ components. The authors should discuss the effect based on the possible active compounds or ingredients in the meal that are able to lower the blood glucose and lipid profiles.</p>	
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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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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