

Review Form 3

Journal Name:	Asian Journal of Biotechnology and Genetic Engineering
Manuscript Number:	Ms_AJBGE_126981
Title of the Manuscript:	Anti-Diabetic Potential of Anacardium Occidentale Leaf Extract in Alloxan-Induced Diabetic Albino Rats
Type of the Article	

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	The article explores the anti-diabetic effects of the aqueous leaf extract of <i>Anacardium occidentale</i> (cashew) on alloxan-induced diabetic albino rats. This study aims to evaluate the efficacy of this plant-based remedy in managing diabetes by examining changes in blood glucose, lipid profiles, liver function markers, and antioxidant levels. The findings suggest that the extract positively impacts these parameters, potentially through mechanisms involving antioxidant activity and glucose metabolism modulation. Given the limitations of conventional diabetic treatments, the study addresses an essential area of research by focusing on plant-based remedies for diabetes management.	
Is the title of the article suitable? (If not please suggest an alternative title)	Yes	
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	Abstract can be rewritten precisely. Keywords must be revised and more words can be added.	
Are subsections and structure of the manuscript appropriate?	Yes	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.	The methodology is well-structured, with clear descriptions of the sample collection, extract preparation, and treatment regimens, enhancing the reproducibility of the research. The study includes various biochemical assays (e.g., liver function, lipid profile, glucose levels) and histopathological assessments, which add depth to the findings. The use of ANOVA for statistical analysis provides a solid foundation for evaluating the significance of the results.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =	Ensure all references are correctly cited, relevant, and up-to-date. Verify each reference's completeness and consistency with in-text citations, and consider adding recent studies on plant-based anti-diabetic agents. If available, adding a few recent studies (from the last 5–10 years) that examine plant-based anti-diabetic treatments or specifically <i>Anacardium occidentale</i> would make the reference list more current and relevant. Number of recent references of similar works must be included.	

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<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>Can be revised with modern tools.</p>	
<p><u>Optional/General</u> comments</p>	<p>Few limitations are noticed as follows:</p> <ul style="list-style-type: none"> • While GC-MS analysis of the extract was conducted, the article lacks a thorough discussion of how specific compounds might contribute to the observed therapeutic effects. A focused analysis of individual phytochemicals within <i>A. occidentale</i> extract could clarify which compounds are primarily responsible for the anti-diabetic effects observed. This could involve fractionation of the extract and testing each fraction individually. Further biochemical or in-vitro studies on individual compounds would strengthen the claims. • The study does not account for potential confounding factors like dietary intake, which can influence glucose levels and lipid profiles. A brief justification for the dosages used for <i>A. occidentale</i> and glibenclamide is recommended. • The article mentions antioxidant properties as a potential mechanism but does not delve into specific pathways or cellular interactions. More mechanistic studies, such as evaluating insulin sensitivity or beta-cell regeneration, would provide insight into how the extract functions at a molecular level. • Incorporating bar charts for glucose levels, lipid profiles, liver and renal function would improve data clarity. A bar chart could visually represent changes in glucose levels across groups (control, diabetic, treated, and reference drug) over the 28-day period, making it easy to identify trends and differences in treatment effectiveness. • Including histopathological images and analyses is highly valuable for studies like this one, especially since it focuses on the anti-diabetic effects of <i>Anacardium occidentale</i> extract on organ health. Histopathology would offer direct visual evidence of any cellular or tissue-level changes in critical organs affected by diabetes, such as the pancreas, liver, and kidneys. • To improve the translational potential, a brief discussion on the possible side effects, toxicity, and required dosage for humans based on animal model findings would be beneficial. Additionally, long-term toxicity studies could ensure the safety of the extract. • Ensure that terminology, group labels, and units are consistent throughout the document. Double-check that statistical symbols (e.g., $p < 0.05$) are formatted uniformly. <p>Hence, I recommend a major revision and resubmission of this article.</p>	<p>Okay noted and these will be taken into consideration in our next article</p> <p>All the results have been presented in tabular form, therefore bar charts were not included.</p> <p>Terminology related corrections have been made.</p>

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PART 2:

	Reviewer's comment	Author's comment <i>(if agreed with the reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in detail)</i>	

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