

## Review Form 1.7

Journal Name:	<a href="#">Asian Journal of Biochemistry, Genetics and Molecular Biology</a>
Manuscript Number:	Ms_AJBGMB_118721
Title of the Manuscript:	Comparative Effects of ripeness on Monoamine Oxidase (MAO) Inhibition and Anti-oxidative Activity of Amelonado and F3 Amazon Cocoa (Theobroma cacao) Beans In vitro
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:

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

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**PART 1: Review Comments**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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><b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li><b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li><b>Is the abstract of the article comprehensive?</b></li> <li><b>Are subsections and structure of the manuscript appropriate?</b></li> <li><b>Do you think the manuscript is scientifically correct?</b></li> <li><b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<ol style="list-style-type: none"> <li>Yes. The authors conducted a series of tests on the extracts of two species of cocoa for monoamine oxidase inhibition and antioxidant activity. They did so for extracts collected from both ripe and un-ripened beans. Their findings could lead the development of new treatments of a variety of psychological and neurological disorders making the study important. The methods used are sound with a rigorous and proper statistical analysis applied. As noted below revision is required to address the clarity of presentation but the article is sound and would be a valuable contribution to the journal.</li> <li>Overall, yes but the casing is simply awful at least in the version given to the reviewer. It could also be shortened for clarity. I suggest: Effects of Ripening on Monoamine Oxidase Inhibition and Antioxidant Production by Amelonado and F3 Amazon Cocoa Beans</li> <li>Yes, but it is meandering, poorly structured and difficult to follow. Experiments and results are described in the "Background" section. The fact the monoamine oxidase inhibition and antioxidant activity were tested where it was found that ripening reduces these are results and conclusions NOT background. The practical application, like the introduction, focus too much on monoamine oxidase and gives the impression that the study was of the enzyme. It is actually on important properties and finding related to cocoa. A reorganization of the abstract is needed. I suggest:   <b>Background:</b> Keep what is mentioned concerning monoamine oxidase inhibition and remove all discussion of what was done in the study, what was found and concluded. Move the information in the practical application into the background and remove that title. Expand a bit (a sentence or two) as suggested below for the introduction.   <b>Methods:</b> Add this section but oerhaps title as "approach" or something along these lines. State that extracts were collected for both ripe and unripe beans. Then state they were tested for monoamine oxidase inhibition and antioxidant activity esesentially as done already in the background but with minimal abbreviations.   <b>Results and Conclusions:</b> Guve these as done in the current background section.   <b>Implications:</b> Write a sentence or two maximum stating that properties are enhanced on the unripen beans. Pergaos suggest that drug discovery efforts should focus there.</li> <li>For the most part, but the results were difficult to follow making the review a frustrating task. The U. and R. was horribly confusing and gave the impression that two genera of the plant were tested. It was not until the results were read a couple of times that one realizes the authors are just so in love with abbreviations that they did not bother to write "ripe" and "unripe". This confusion was</li> </ol>	

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	<p>compounded by the fact that their use of chemical terminology in the introduction was so loose that one figures they are just equally as sloppy with biological taxonomy.</p> <p>The abbreviations for ripe an unripe are inappropriate, confusing and must be removed throughout.</p> <p>It would also add clarity to provide headings for each paragraph of the results since they describe different experiments. For example, add; "<i>Total Phenol Content</i>" to paragraph one and "<i>Total Flavonoid Content</i>" to paragraph two and so on. The casing is just odd and needs to be corrected. It should be total phenol and not Total phenol or Total flavonoid etc.</p> <p>Other subdivisions such as abstract, introduction etc are great. The study is straightforward presenting valid results to support an important conclusion. Sloppy presentation buried this fact in the current version of the article.</p> <p>5. Absolutely. With the exception of the flaws in clarity mentioned here it was logically presented. The authors also did an excellent job of not over- or understating the importance of their findings.</p> <p>6. Yes. References would be needed for the additional paragraph requested in the introduction (see below).</p> <p>1. I include these points as major because while they do not affect the scientific merit of the article, they made it a tortuous read in several parts. The article desperately needs a proofreading to correct all typographical errors. There were either formatting errors, perhaps from different versions of word processing software. Regardless, these need to be addressed before publication in a professional peer-reviewed journal.</p> <p>The errors are far too numerous to note so only a few will be listed:</p> <p>There is always a space after the number and before the unit. The authors do this often but overlook it in numerous places. Likewise, there should always be a space after the <math>\pm</math> symbol and the numbers (<math>X \pm Y</math>).</p> <p>The genus and species should always be italics. It most often is but not throughout this draft.</p> <p>The casing desperately needs to be checked and edited. Just look at the title reveals how either the editing was sloppy and neglected or there were conversion errors in the draft provided to the reviewer. The first sentence of the results is The <b>T</b>otal phenol... and not the total phenol... the article is littered with these casing errors which distracts from the message and makes it an annoying read.</p> <p>2. The abbreviations are used far too liberally in the article making for a needlessly difficult read for a person not deeply involved with the work. The most egregious and confusing example was given in point four above. There is also no reason for the DPPH, FRAP, ABTS and occasional MAO abbreviations. They made the abstract and results a miserable read because one keeps asking what does this stand for again? While the name of the molecules are too long to state each time the</p>	
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	<p>authors could refer to DDPH simply as radical scavenging activity and clearly delineate the specific radical at the the start of each section. FRAP could simply be referred to as ferric reducing potential (again remind the reader of details at the start of the section). Since it was not introduced (see point 3 below) and I am unfamiliar with the reagents I cannot suggest a way to refer to ABTS. Perhaps radical scavenger I and II could work or a scheme could be provided in the introduction and they simply be refered to as I and II. Monoamine oxidase should not be abbreviated but if the authors insist on the abundant use of abbreviations they need to be consistent. The enzyme was abbreviated sometimes where it was not in others which was just annoying to read.</p> <p>To save space and retain the clarity of the figures the abbreviations could be kept in the figures, but they would need to be described in the legend. The constant use of abbreviation in the abstract and text makes the article needlessly difficult for an outside reader outside to follow.</p> <p>3. The introduction did a good job introducing monoamine oxidase and why it should be inhibited and a reasonable job explaining the production of antioxidants in cocoa, but essentially no information is provided about the antioxidants. Specifically, the radical scavengers used and their significance are not mentioned. The reader is left with the impression that the study is to identify monoamine oxidase inhibitors in the plant and not its overall potential to alleviate oxidative stress.</p> <p>The introduction does not need a complete rewrite just a focusing on the broader themes of the findings and not a narrow focus on monoamine oxidase. A paragraph to expand on the antioxidative properties of the plant, the roles (or reasons for using) the specific antioxidants tested would be clarifying and would greatly improve the article. A few examples of determinantal effects of reactive oxygen species should be mentioned (for example stroke and other ischemic events)</p> <p>4. To be consistent with other parts and for further the authors should state the values and standard deviation for the ferric reducing potential should be mentioned in the text.</p>	
<p><b>Minor</b> REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>Yes. Other than casing, which may have been technical issues during conversion and can be addressed during revision the language is excellent.</p>	
<p><b>Optional/General</b> comments</p>	<p>1. The authors are very loose in their chemical terminology. The introduction was cringeworthy in several places for a bioorganic chemist to read. In the scheme of things this is a minor concern because the audience for the journal may not even notice, but the authors should call the products of monoamine oxidase aldehydes or ketones as commonly done in the enzymology community. The substrates for the enzyme are aromatic heterocycles so generally speaking linear alkyl chains are not found in the organic products. They are therefore not alkanals or alkanones. In any event, generally referring to the products as aldehydes and ketones would be correct and more familiar to enzymologists.</p> <p>The authors should also be careful when discussing reactive oxygen species. Hydrogen peroxide does not have an unpaired electron and is therefore not a free radical as noted in a few places in</p>	

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	<p>the introduction. The molecule was also written as H<sub>2</sub>O<sub>2</sub> in at least one place as opposed to H<sub>2</sub>O<sub>2</sub> stressing the urgent need for careful proofreading.</p> <p>These points are minor and do not distract from the merit of the study in anyway though.</p> <p>2. There are no keywords given after the abstract. Please provide four to eight keywords as the journal requires. This will help with indexing and allows others to find and study your article.</p> <p>3. A persistent source of confusion throughout the review that results from the reviewer being trained in bioorganic and biophysical chemistry is the notion that two <i>species</i> of cocoa were tested. The title only lists one taxonomic identification, namely, <i>Theobroma cacao</i>. The confusion was intensified when the authors use R. and U. as entirely unnecessary abbreviations of ripe and unripe.</p> <p>This confusion is easily avoided by simply removing the name from the title and not relying so heavily upon abbreviations.</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:

Name:	Kevin Francis
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