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Journal Name:	International Journal of Biochemistry Research & Review
Manuscript Number:	2014_IJBcRR_8986
Title of the Manuscript:	PARTIAL PURIFICATION AND CHARACTERIZATION OF EXTRACELLULAR PROTEASE OF <i>Shigella dysenteriae</i> AND ITS INHIBITION BY THE VOLATILE OIL OF <i>Thaumatococcus danielli</i>
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=sdi-general-editorial-policy#Peer-Review-Guideline>)



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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	✚ Relative lack of novelty ✚ The language written in this research manuscript should be reviewed and revised carefully. ✚ Title of this research article does not accurately reflect the content, therefore I preferred a change of address as follows: Assessment of Antibacterial Activity of Essential Oil Extracted From Leaves of <i>Thaumatococcus daniellii</i> (Benn.) Benth. In Light of its Inhibitory Impact on Extracellular Proteolytic Enzymes of <i>Shigella dysenteriae</i> ✚ Authors did not mention the scientific name right	Novelty is not achieved at a go. It is a gradual event. We just started this area of research and we intent to carry out exhaustive work on it. . The manuscript has been reviewed and revised Appraised and considered Noted and corrected



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	<i>Thaumatooccus daniellii</i> (Benn.) Benth. It was noticed that the scientific names must be written in italics. ✚ It has been mentioned only the scientific name of the plant without generic names in English or vernacular names generally used in the countries of the world, especially in Nigeria, such as the Miraculous Berry Sweet Brayer Plant (Yoruba) ✚ No better mention the word, characterization of the enzyme, protease in the title of this study due to the lack and absence of accurate scientific characterization methods such as gel electrophoresis or gel permeation chromatography and therefore proteolytic enzymes should be replaced by the enzyme protease or review of previous studies confirm that the proteolytic enzymes produced outside bacterial cell- type of <i>Shigella dysenteriae</i> be of proteases only under the extraction method mentioned in this research. ✚ Design of the study mentioned in the abstract can be considered keywords, more than being design of the experiments, therefore it must be re-written. ✚ The review of literature must include additional information about the relationship of enzymatic	We are not Botanists by profession but Biochemists. Nevertheless, we considered this suggestion and effected it in the manuscript. We are unable to carry out these techniques in our present study. Meanwhile, we considered it and the manuscript have been appropriately reviewed as suggested. Done Done
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	inhibitors, especially for proteolytic ones with the inhibition of the growth of microbes that produce them and the ability to cause disease or infection. ✚ The method concerning assessing antibacterial activity of extracted essential oil has been named in this manuscript by sensitivity test. I prefer to be named; - Assessment of Antibacterial Activity ✚ The text concerning partial purification of proteolytic enzymes existing in crude extract through dialysis and gel filtration must be integrated together (entitled Partial Purification) and followed immediately by the extraction processes. Afterwards, the method to estimate total protein and enzymatic activity can be mentioned. - Extraction of Extracellular Bacterial Proteolytic Enzymes - Partial Purification of Extracellular Bacterial Proteolytic Enzymes 1 Dialysis 2 Gel Filtration	Noted and considered Noted and corrected
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	- Determination of Total Protein - Determination of Enzyme Activity ✚ Change the title of the method applied to determine the ability of the extracted oil to inhibit proteolytic enzymes as follow: Assessment of Inhibitory Effect of Extracted Essential Oil on Extracellular Proteolytic Enzymes. ✚ Authors must estimate the activity of extracellular microbial proteolytic enzymes producing during different stages of bacterial growth. ✚ Page 8 and 9 of the first line # 353 to line # 389 should have been remembered after the results so that little part of the line 353 to 366 under the results of the evaluation antibacterial activity and part of the line 367 to the line 389 under the results to determine the inhibitory ability of oil against proteolytic enzymes . ✚ The inhibitory effect of the components of essential	Corrected This is a good insight, which was not done in the present work but we shall incorporate this into our subsequent research design. This will enable us, among other things, to know the growth stage and/or time at which the activity is optimum. Re-arranged with corrections This is another dimension of this
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	oil extracted from sweet brayer plant on the proteolytic enzymes produced outside the bacterial cell should be more thoroughly explained being due to the interaction with enzymatic molecules (active sites) or interactions with protein as a substrate. ✚ In general, section of results and discussion was not good enough in terms of the absence of good presentation for the results and compare them in a logical manner consistent with the objective of the	work, which will be welcomed in our subsequent evaluation but in this work, components analysis of the essential was not carried out. It is very necessary to know whether the active component(s) of the oil is affecting the enzyme or the substrate. Our premonition was that since the oil was able to inhibit the growth of the targeted pathogen then it would have either been succeeded to inhibit one of the key extracellular enzyme(s) necessary for extracellular digestion of the protein or attached to protein as ligand-protein substrate thereby making it unavailable for the extracellular protease of the pathogen. Our hypothesis is literally based on the assumption that the oil has ability to inhibit the extracellular protease of this pathogen and what we had as results might not have been far from it. This section has been thoroughly revised and necessary amendments have been made.
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	research. In addition, to rely on many assumptions, which were not supported by the experiments and still in a need for scientific justifications. Therefore, this section needs more preciseness and revision.	
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		