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| Book Name: | [**Research Perspective on Biological Science**](https://www.bookpi.org/bookstore/product/research-perspective-on-biological-science-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_4933** |
| Title of the Manuscript:  | **IDENTIFICATION OF THE SPECIFIC GENES OF ISOCITRATE LYASE FROM PLANT AMARANTHUS CAUDATUS L** |
| Type of the Article | **Book Chapter** |

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journal.**

**Plant Archives, 19(1): 1067-1070, 2019.**

**Available:** [**https://www.plantarchives.org/List%2019-1.html**](https://www.plantarchives.org/List%2019-1.html)

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| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | 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. A minimum of 3-4 sentences may be required for this part.** | This manuscript presents significant findings on the identification of Isocitrate Lyase (ICL) genes that are crucial for the understanding of plant metabolism. The study contributes to a broader field of plant biochemistry by the development of specific primers for these genes to advance research in plant growth, nutrition, and stress response. Furthermore, it enhances our understanding of evolutionary conservation and gene expression by the comparison of genetic sequences of ICL genes in Amaranthus with those in Arabidopsis thaliana. These insights could have practical applications in agriculture and biotechnology to improve crop yields and resilience. |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | The title "Identification of the Specific Genes of Isocitrate Lyase from Plant Amaranthus caudatus L." is suitable. A precise alternative could be:" Identification and Characterization of the Specific Genes of Isocitrate Lyase from Plant Amaranthus caudatus L." |  |
| 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. | The abstract provides a basic overview of the study. Here are a few suggestions for improvement:1. The objective should mention the purpose of the study in terms of its broader significance. For example, the role of Isocitrate Lyase (ICL) in plant metabolism or its agricultural relevance.
2. The abstract mentions the use of PCR and primers but should briefly include the experimental design or the importance of the specific genes studied.
3. The results section could be clearer regarding the findings, such as the implications of the discovery the two ICL genes in *Amaranthus caudatus* and their homology with *Arabidopsis thaliana*.
4. The conclusion should mention the applications of the findings in practical fields such as plant biotechnology or crop improvement.
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| **Is the manuscript scientifically, correct? Please write here.**  | The manuscript presents scientifically valid concepts regarding the identification and characterization of Isocitrate Lyase (ICL) genes. The use of PCR and primer design for gene identification aligns with standard molecular biology techniques. However, there are a few areas that could be improved:1. The manuscript mentioned a 36% homology between the ICL2 gene of *Amaranthus* and the ICL1 gene of *Arabidopsis thaliana*. This figure is presented without context of its biological importance or its comparison to other plants.
2. While PCR and RNA extraction methods were described, the manuscript could benefit from an explanation of the controls used in the experiments for the validation of results. For example, the mentioning of the use of negative or positive controls in PCR assays.
3. The manuscript stated that the gene expression fluctuates over time, but the interpretation of this data could be clearer. More emphasis could be placed on the significance of these fluctuations for the understanding of *Amaranthus* growth and metabolism.
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| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.****-** | The references in the manuscript appear to be adequate in number. But, there is a lack of recent studies cited, and most references being from the 2000s or earlier. |  |
| Is the language/English quality of the article suitable for scholarly communications? | The language quality of the article is generally understandable but several areas require attention:1. Some sentences are difficult to follow. The overall structure could be more coherent. For example, certain sections, like the "Results and Discussion," had mixed the experimental findings with interpretations in a way that makes it hard to distinguish between them.
2. There are many grammatical issues, such as the used of incorrect words, missing articles, and awkward phrasing. For example, terms like "Isocitrat lyase" should be consistently spelled as "Isocitrate lyase," and "primates" should be corrected to "primers."
3. Some technical terms are not used correctly. For example, terms related to molecular biology, such as "PCR, primers, and gene expression," need to be presented with more precision.
4. The transitions between sections should be smoother and some parts were found disjointed. Improvement of the logical flow of the text would make it more readable and professional.
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| Optional/General comments | To increase its impact and readability, the following improvements (including above) are recommended:1. The figures, especially with PCR results should be accompanied by a more detailed caption.
2. Provision of a broader context in the introduction about the plant's significance in agriculture or biotechnology would make the research more engaging and relevant.
3. The manuscript would benefit from a thorough language revision to eliminate grammatical errors, improve clarity, and to ensure consistency in terminology.
4. Expansion of the discussion section on the implications of gene expression data could help emphasize the significance of the findings and encourage further research in the area.
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| **PART 2:**  |
|  | Reviewer’s comment | Author’s comment *(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)* |
| **Are there ethical issues in this manuscript?**  | *(If yes, Kindly please write down the ethical issues here in detail)*.  |  |

**Reviewers:**

**Hafiz Aftab Ahmed, University of Agriculture Faisalabad, Pakistan**