

Peer-Review Report

Peer Review of “Relationship Between Seed Coat Color and Cytokinin Concentration in Efficiently Regenerating Leaf Lettuce Shoots: In Vitro Experimental Study”

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Related Articles:

Preprint (bioRxiv): <https://www.biorxiv.org/content/10.1101/2024.12.10.627673v1>

Authors' Response to Peer-Review Reports: <https://bio.jmirx.org/2026/1/e89391>

Published Article: <https://bio.jmirx.org/2026/1/e70496>

JMIRx Bio 2026;4:e89401; doi: [10.2196/89401](https://doi.org/10.2196/89401)

Keywords: leaf lettuce; shoot regeneration efficiency; 6-benzylaminopurine; seed coat color; CIELAB color scale; flavonoid; BAP

This is the peer-review report for “Relationship Between Seed Coat Color and Cytokinin Concentration in Efficiently Regenerating Leaf Lettuce Shoots: In Vitro Experimental Study.”

Round 1 Review

General Comments

Major Comments

- The presented work [1] brings new information.
- At the beginning of your abstract, you should write a paragraph about the problem you want to solve.
- The abstract mentions statistical significance but does not provide any details about how these were assessed or the significance level (eg, P value). Details on the statistical analysis methods used (eg, “significant at $P<.05$ ”) should be added.
- The Introduction contains well-documented data that are widely known. Hormonal information has been extensively reported and reviewed. Against this background, authors have to point out how this work is different from the earlier reported work; what are the innovative findings reported here? A strong and convincing justification is required.
- Introduction: While references are important, the paragraph reads as somewhat overloaded with citations. Many sentences contain a high number of citations, which can disrupt the readability of the text. Try to reduce the frequency of citations by grouping them more effectively and summarizing the findings rather than listing individual sources for every claim. This will help make the text more fluid.
- The Methods section in its current form is not acceptable because it requires more details, such as the latitude and longitude of the culture area. Write a simple paragraph describing the climate of the area and date of study.
- It is necessary to mention the active ingredient of commercial chlorine bleach.
- Tween-20 is used with disinfectants to reduce surface tension, thus increasing the disinfectant's effectiveness.
- State the manufacturer of the MS medium and the quantity used to prepare it half-strength.
- How were the hormone solutions prepared and dissolved?
- KOH and HCl are used in the pH adjustment process.
- It is necessary to mention the lighting intensity during the incubation period of the cultures.
- The statistical analysis mentions EZR software, but there is no explanation of why this particular software was chosen.
- In the Discussion, authors have explained various biochemical interactions and mechanisms that are widely known and reported. Authors should give their own reflections of the work. It is essential to include the advantages and shortcomings of the work; what are the limitations of this technology and its shortfalls? Authors' own scrutiny of the data clarifications is decisive for the impending research on this subject. This work is field-oriented, the cost-benefit ratio is very significant, and micropropagation will increase the cost, but this has not been commented on in the text. Scale-up of the tissue culture plant is not an easy task and would be challenging work.
- Conclusion: What does this infer for lettuce production? Need a little more work to show the significance of your work.
- References: It is advised to refer only to recent work and not old citations.

Round 2 Review

Therefore, the manuscript meets the requirements for publication.

General Comments

After reviewing the manuscript, I found substantial improvements, which positively impacted its scientific value.

Conflicts of Interest

None declared.

References

1. Kimura M, Yoshizumi T. Relationship between seed coat color and cytokinin concentration in efficiently regenerating leaf lettuce shoots: in vitro experimental study. JMIRx Bio. 2026;4:e70496. [doi: [10.2196/70496](https://doi.org/10.2196/70496)]

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