**Peer Review Template (Comments to Authors)**

The objective is to ensure accuracy and clarity for future readers and to help the authors identify gaps or issues that might prevent its accessibility.

* Never make personal comments, only critique the science.
* Do not write whether you think the manuscript be accepted/rejected anywhere in these comments.
* Do not give away your name or any identifiers.

**Summary:** (Demonstrates to the authors that you read and understood their manuscript)

* What was the hypothesis/purpose of the study?
* Does it address a major knowledge gap in the field?
* What were the main messages from this work?
* What was good about the study?

(Read the scope of the journal and write here if the manuscript does not meet the criteria or scientific rigor standards. If it’s outstanding work, do not be afraid to recommend acceptance as is.)

**Major Comments:** (What must the authors ABSOLUTELY address for this manuscript to be accepted for publication? Number and list them.)

1. Provide evidence by referring to specific figure or line numbers (Line 562 the authors claim..)
2. Cite previous literature to counter claims. Findings in this study were already demonstrated in Jain et al., 202X)

**Minor Comments:**

*Title:* Does the title accurately represent the main finding in the manuscript?

*Abstract:*

Are all the claims in the abstract substantially supported by data provided in the manuscript?

Abstracts do not typically have references.

*Introduction:*

Are most of the cited manuscripts the original work or reviews?

Do the authors include past work without omitting references to closely related research?

Is the information sufficient to understand the following body of work?

*Results:*

Are the experiments well designed? Sample size, controls, statistics?

Were the experiments necessary?

Are there any potential sources of bias?

Are the claims overexaggerated?

*Methods:*

Do authors provide details of the methods, or do they keep referring to past publications?

Check details of all experiments performed are included.

Are the methods sound?

Have the plasmids been deposited to any repository?

Authors may include links to detailed protocols published elsewhere if open access with DOIs – protocols.io, gigascience etc.

*Discussion:*

Are the conclusions supported by the results?

Are the big-picture implications discussed?

Were the authors able to put their findings in context of available literature?

*Figures:*

Are any figure panels duplicated from earlier studies, even if the same group?

Does the figure legend provide sufficient detail to understand the panels? Sample size, statistical tests, error bars, scale bar information, key legend?

Do the charts make the data transparent and easy to interpret?

*Tables:*

Is the table necessary for the manuscript? Could this be in the supplementary section?

Does the legend clearly summarize what is in the table?

Are there missing factors (rows/columns) that would be needed to understand the data provided?

*Supplementary Data:*

Are all data made publicly available (seq data on NCBI, github etc)?

Primer sequences provided, key gene names?

*References:*

Formatting is usually a responsibility of the journal copywriters, so only comment if insufficient information is included.

If references are missing, can comment on that.

Are most of the references from the last decade? Citing original manuscripts even if older is correct but omitting recent research indicates a lack of thorough research.

*Misc:* (grammar, spelling mistakes)

Gene names should be provided.

NOTES: Make sure to create an OrCID ID <https://orcid.org/> and a Web Of Science Publons account to receive credit for your work.

**Confidential comments to the Editor**

Dear Editor or [name],

Thank you for the opportunity to review this manuscript, I enjoyed reading it.

This manuscript will be ready for acceptance once the authors address the major comments. (Highlight what the authors must absolutely address).

Given the scope of the journal is novelty and interest to a broad audience, this manuscript meets the criteria for publication in your journal. (It is only here that you must write whether you recommend the manuscript be rejected, accepted, accepted with minor/major revisions).

Over time, I believe this manuscript will be highly cited and of interest to a broad audience.

Should you need me to look over the revised version, I will be happy to assist.

Thank you,

[Your Name]