|  |
| --- |
|  |
| Journal Name: | [**Journal of Experimental Agriculture International**](https://journaljeai.com/index.php/JEAI) |
| Manuscript Number: | **Ms\_JEAI\_140926** |
| Title of the Manuscript:  | **Development and Characterization of transgenic pigeon pea (Cajanus cajan [L.] Millsp.) plants overexpressing OsLecRLK using Agrobacterium meditated genetic transformation** |
| Type of the Article | Original Research Article |

|  |
| --- |
| PART 1: Comments |
|  | Reviewer’s comment**Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (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.** | The manuscript mentions the Agrobacterium-mediated transformation strategy in understanding the nutritional impact of legume pigeon pea. By overexpression of the gene OsLecRLK, the author mentions enhancing the stress-response mechanism. The use of PCR, Southern blot, lays a path for future evaluation of salinity or drought tolerance. These can benefit the plant breeder or biotechnologists in understanding the stress-responses in legumes.; also add the closing statement mentioning about the stress-tolerance assays |  |
| **Is the title of the article suitable?****(If not please suggest an alternative title)** | Title is accurate; The possible alternative could be ‘Agrobacterium-Mediated Transformation and Molecular Characterization of Pigeon Pea through Overexpression of the Gene OsLecRLK.’ |  |
| 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 is comprehensive; Stating about copy number range; mention of single or double integration of gene in genome, to help reader understand about what being measured and how been measured |  |
| Is the manuscript scientifically, correct? Please write here. | The manuscript’s basic approach is sound; the mention of pCAMBIA1301 in Lba4404, hygromycin and kanamyscin, GUS screening and molecular confirmation makes it scientifically correct; the T1 ratios could make reader understand more about the behaviour of the transgenes; include transformation efficiency numbers |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Few references are dated beyond the timeline of 10 years such as “Ahmad, S., A. Wahid, E. Rasul and A. Wahid: Comparative morphological and physiological responses of green gram genotypes to salinity applied at different growth stages. *Bot. Bull. Acad. Sin.,* **46**, 135-142 (2005).”; “Flowers, T.J.: Improving crop salt tolerance. *Journal of Experimental botany*, **55(396)**, 307-319 (2004).”; “Komari, T., Y. Ishida and Y. Hiei: Plant Transformation Technology: *Agrobacterium* – mediated transformation. In: Handbook of Plant Biotechnology (Eds.: P Christou and H Klee). John Wiley & Sons, Ltd Chichester, UK. (2004).”; “Munns, R., Salinity, growth and phytohormones. In: Salinity: environment-plants-molecules (Eds.: A. Läuchli and U. Lüttge). Kluwer Academic Publishers, Dordrecht, The Netherlands, pp. 271-290 (2002).”; “Zhu, J.K.: Genetic analysis of plant salt tolerance using Arabidopsis. *Plant physiology*, **124(3)**, 941-948 (2000).” ; Try to keep the references between 2020 - 2024; Example “Wang, Y., Zheng, R., Xu, R., Wang, C., Liu, W., Li, W., Nan, Z., Dai, H., Zhang, Y., & Zhang, L. (2025). The L-type lectin receptor-like kinase GmLecRK-IX negatively regulates drought stress responses in soybean seedlings. *Plant Physiology and Biochemistry*, *227*, 110134. https://doi.org/10.1016/j.plaphy.2025.110134” |  |
| Is the language/English quality of the article suitable for scholarly communications? | The manuscript is well; few corrections such as maintain same style through the paper“Agrobacterium-mediated”; Italicize “OsLecRLK” |  |
| Optional/General comments | Higher resolution Southern blots and clear molecular weight markers; include standard errors for transformation efficiency; qRT-PCR fold changes |  |

|  |
| --- |
| **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?**  | *(If yes, Kindly please write down the ethical issues here in details)* |  |

**Reviewer details:**

**Vishnu Sri Suma Pagolu, India**