|  |  |
| --- | --- |
|  | |
| Journal Name: | [**Journal of Advances in Biology & Biotechnology**](https://journaljabb.com/index.php/JABB) |
| Manuscript Number: | **Ms\_JABB\_132646** |
| Title of the Manuscript: | **CRISPR-Cas9 Mediated Anthocyanin Biofortification in Tomato (Solanum lycopersicum): A Precision Genome Editing Approach** |
| Type of the Article | **Short 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 *(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.** | **CRISPR-Cas9 is a revoulutioary tool for genome-editing in a precious way for horticultural crop specially in tomato. Tomato is an important crop that is harvested globally and lack of anthocyanin biosynthesis, improving their nutritional and antioxidant properties. Anthocyanins are flavonoid pigments with health benefits like anticancer properties. By targeting key regulatory genes involved in anthocyanin biosynthesis by CRISPR-Cas9 HDR mediated gene replacement of SlAN2like with ScAN2like from Solanum chilense, offering a sustainable anthocyanin biofortification strategy.**  **This approach ensures precise genetic modifications without introducing foreign DNA, making it a promising strategy for developing nutrient-rich tomatoes with enhanced health benefits and commercial value.** |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes title is appropriate** |  |
| 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. | **Yes abstract is comprehensive** |  |
| Is the manuscript scientifically, correct? Please write here. | This is a proper scientific manuscript with diagram |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes references are proper and recent |  |
| Is the language/English quality of the article suitable for scholarly communications? | Language is suitable |  |
| Optional/General comments |  |  |

|  |  |  |
| --- | --- | --- |
| **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)* |  |

**Reviewer details:**

**Arnab Mandal, Vidyasagar University, India**