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| Journal Name: | [**Journal of Advances in Microbiology**](https://journaljamb.com/index.php/JAMB) |
| Manuscript Number: | **Ms\_JAMB\_140021** |
| Title of the Manuscript: | **Exploring cereal by-products as a medium for microorganisms and human health: A comprehensive review** |
| Type of the Article | **Review Article** |

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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** (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 presents a sustainable biotechnological approach to valorize cereal by-products, addressing food security and circular bioeconomy in alignment with UN SDGs.**  **It evaluates herb–probiotic synergy through in vitro assays, compatibility tests, and clinical insights to assess antimicrobial efficacy, probiotic viability, and health benefits.** | 1.This review highlights the nutritional and functional value of cereal by-products and their potential as cost-effective substrates for microbial cultivation. 2. It underscores their role in promoting sustainable biotechnological innovations across food, agriculture, and pharmaceutical sectors. 3. By addressing waste valorization, the review supports circular economy practices and emphasizes future research directions for enhanced fermentation and formulation strategies. |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | Yes, the title is appropriate and clearly reflects the study objectives. | Corrected by removing: A comprehensive reviewCereal by-products, a potential medium for microorganisms and human health |
| 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 informative but :**  **Highlight future research priorities such as fermentation optimization.** | Correction done |
| Is the manuscript scientifically, correct? Please write here. | **The research is generally robust, but requires enhancements in the following areas:**   1. **Reorganization of Section 2**    * Add a missing subsection (2.4: *Oat By‑Products*).    * Expand underdeveloped subsections 2.2 (*Wheat*) and 2.5 (*Barley*) for greater depth. 2. **Strengthen Critical Analysis**    * Discuss variability in by‑product composition, risks of contamination, and barriers to industrial scale‑up.    * Include quantitative comparisons of microbial growth in these by‑products versus conventional culture media. 3. **Enhance Data Presentation**    * Incorporate summary tables detailing nutritional composition and microbial efficacy data, where feasible. 4. A linguistic review is required. | All corrections are done |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | Yes, the references are generally appropriate. |  |
| Is the language/English quality of the article suitable for scholarly communications? | Overall acceptable, but requires a thorough linguistic review to correct grammatical. |  |
| Optional/General comments |  |  |

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| **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)* |  |