

Review Form 1.7

Journal Name:	Journal of Advances in Biology & Biotechnology
Manuscript Number:	Ms_JABB_113192
Title of the Manuscript:	The role of modern biotechnology in the fight against the current and the coming climate change
Type of the Article	Review Article

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PART 1: Review Comments

	Reviewer's comment	Author's comment <i>(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)</i>
<p><u>Compulsory</u> REVISION comments</p> <ol style="list-style-type: none"> 1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript) 2. Is the title of the article suitable? (If not please suggest an alternative title) 3. Is the abstract of the article comprehensive? 4. Are subsections and structure of the manuscript appropriate? 5. Do you think the manuscript is scientifically correct? 6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form. <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>The review article on "The Role of Modern Biotechnology in the Fight Against the Current and the Coming Climate Change" provides an extensive overview of how biotechnological advances, especially in genetic engineering and gene editing, can be leveraged to address the challenges posed by climate change. The paper comprehensively discusses the impact of climate change on biodiversity, agriculture, and the environment, and explores biotechnological strategies for adaptation and mitigation, focusing on crop improvement, microbial interventions, carbon sequestration, and synthetic biology approaches.</p> <p>Strengths:</p> <p>Comprehensive Coverage: The article thoroughly covers various aspects of biotechnology's role in combating climate change, from genetic diversity and agricultural adaptation to the utilization of microbes and synthetic biology. This broad scope provides readers with a holistic view of potential biotechnological solutions to climate-related challenges.</p> <p>Depth of Information: The review includes detailed explanations of the mechanisms by which biotechnology can be used to enhance plant and microbial traits for better resilience and productivity under changing climatic conditions. The sections on gene editing technologies and their applications in developing climate-resilient crops are particularly informative.</p> <p>Relevance: Given the pressing issue of climate change, the review's focus on modern biotechnological approaches is highly relevant. It highlights the potential of CRISPR/Cas systems, cyanobacteria, and other biotechnological innovations in addressing some of the most critical challenges facing the world today.</p> <p>Use of Examples: The article effectively uses specific examples, such as the application of CRISPR/Cas9 in improving maize grain yield under drought conditions, to illustrate the practical implications of the discussed biotechnological advances.</p> <p>Areas for Improvement:</p> <p>Clarity and Organization: While the article is rich in information, its organization could be improved for better readability. The vast amount of detail might overwhelm readers, suggesting a need for clearer section headings, bullet points for key ideas, and a concise summary of main points at the end of each section.</p> <p>Critical Analysis: The review could benefit from a more critical analysis of the limitations and potential risks associated with the biotechnological interventions discussed. For instance, ethical considerations, biosafety issues, and the long-term impacts of genetically modified organisms on ecosystems could be addressed more thoroughly.</p> <p>Up-to-date References: While the review includes a comprehensive list of references, ensuring that the latest research findings and technological advancements are incorporated would enhance its relevance and accuracy.</p> <p>Case Studies: Including more case studies of successful implementations of biotechnological solutions in real-world settings could provide readers with practical insights into the effectiveness and scalability of these interventions.</p> <p>Accessibility: To reach a broader audience, including policymakers, practitioners, and the</p>	

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	<p>general public, the article could present complex scientific concepts in a more accessible language, possibly through the use of infographics or summaries for non-specialists.</p> <p>Unify the font type and size throughout the document.</p> <p>Overall, this review article makes a significant contribution to the literature on climate change mitigation and adaptation through biotechnology. By addressing the noted areas for improvement, the article could further enhance its utility as a comprehensive resource for researchers, decision-makers, and stakeholders involved in climate change and agricultural sustainability.</p>	
Minor REVISION comments		
1. Is language/English quality of the article suitable for scholarly communications?		
Optional/General comments		

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?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

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