ISSN: 2320-5407
International Journal of Advanced Research
Publisher's Name: Jana Publication and Research LLP
www.journalijar.com
ISSN NO. 2320-5407

REVIEWER'S REPORT

Manuscript No.: IJAR- 51529 Date: 12/05/2025

Title: **"Exploring Host Immune Modulation for the Development of Effective Dengue Vaccine"**

Recommendation:
✓ Accept as it is .....
Accept after minor revision.....
Accept after major revision .....
Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance	✓			

Reviewer Name: Dr. S. K. Nath Date: 13/05/2025

Reviewer's Comment for Publication:
This review presents a compelling argument for shifting the paradigm of dengue vaccine development toward host immune modulation. By better understanding the intricate interactions between the virus and the host immune system, researchers could design vaccines that are both safer and more effective across all dengue serotypes. Although promising, this approach needs further experimental validation and careful consideration of its translational challenges. Future efforts should focus on identifying specific immune pathways to modulate and developing targeted strategies that balance immunity and safety effectively.

Reviewer's Comment / Report

Strengths:

1. **Innovative Approach:** The paper emphasizes the concept of host modulation, shifting focus from just targeting the virus to also modulating the host immune response, which could lead to safer and more effective vaccines.
2. **Comprehensive Overview:** It provides a detailed discussion on the complex immune mechanisms involved in dengue infection, including cytokine signaling, T-cell responses, and antibody-dependent enhancement (ADE).
3. **Addressing Challenges:** The manuscript acknowledges the difficulties in dengue vaccine development due to multiple serotypes, ADE, and immune hyperactivation, and proposes host modulation as a promising strategy.
4. **Integration of Modern Techniques:** It highlights the potential role of adjuvants, delivery systems, and systems biology in designing better vaccines.
5. **Focus on Safety:** An emphasis on minimizing adverse immune reactions while achieving broad protection is a notable strength.

Weaknesses:

1. **Lack of Experimental Data:** The paper predominantly reviews existing literature without presenting new experimental or clinical data, limiting the immediate applicability of its proposals.
2. **Limited Discussion on Practical Implementation:** While conceptually sound, the practical challenges of implementing host modulation strategies in vaccine design are not extensively discussed.
3. **Broad Scope:** The review covers many aspects broadly but could benefit from more detailed pathways or specific targets within immune modulation.
4. **Need for Clarification on Translational Aspects:** More emphasis on how these insights can be translated into actual vaccine candidates or clinical trials would strengthen the paper.
5. **Potential Risks of Modulation:** The paper underplays the possible adverse effects or unintended consequences of immune modulation strategies, which require careful consideration.