

Review of: "The Changing Trajectory of Covid-19 and How Immunity is Evolving with It"

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Potential competing interests: No potential competing interests to declare.

General Comments:

The manuscript provides a comprehensive examination of the evolving trajectory of the Covid-19 pandemic and the role of immunity in shaping its progression. The paper covers various aspects, including the emergence of SARS-CoV-2 variants, the evolution of host immunity, the impact of host genetics, and the role of vaccines and boosters. The content is rich in scientific detail and offers valuable insights into the current understanding of Covid-19. The structure and grammar are generally satisfactory, although there are some instances of unclear phrasing and grammatical errors that require revision.

Specific Comments:

Introduction

The introduction provides a clear overview of the paper's focus and its importance.

The statement "the Covid virus can soon become endemic" lacks clarity and precision. It would be helpful to specify the concept of endemicity and its implications.

"RNA virus will mutate" should be revised to "RNA viruses mutate."

The term "media coverage of Covid-19 has dwindled" could be more accurately phrased to reflect the changing media attention.

In the sentence "Moreover, this disease continues to do marked damage to at-risk populations," it would be helpful to clarify the specific disease being referred to (Covid-19).

The sentence "the fight is still far from over" might benefit from further elaboration or context regarding the ongoing challenges posed by the pandemic.

The Emergence of SARS-CoV-2 Variants:

The section provides a comprehensive overview of the emergence of SARS-CoV-2 variants and their implications for immunity.

Figure 1A is referred to multiple times, but its content is not provided in the text. Including a description or caption for the figure in the main text would enhance clarity.

The section effectively discusses the significance of various subvariants, but some sentences are quite lengthy and could benefit from restructuring for readability.

How Host Immunity is Evolving with SARS-COV-2:

The section provides a detailed exploration of the evolving host immune response to SARS-CoV-2.

The transition between paragraphs could be improved for smoother flow.

The sentence "However, it is not robust enough to induce protection against reinfection which has implications on studies seeking to measure vaccine-induced immune memory" is somewhat convoluted. Consider revising for clarity.

Host Genetics and Susceptibility to SARS-CoV-2:

The section discusses the role of host genetics in susceptibility to Covid-19 and offers valuable insights.

The sentence discussing the relationship between ACE2 and genetic variants could be more concise and focused.

Further clarification may be needed regarding the role of ACE2 polymorphisms in affecting susceptibility and infection outcomes.

The connection between ACE2 polymorphisms and ethnic/geographical differences could be elaborated upon.

Vaccines and the Role of Boosters:

The section provides an in-depth analysis of vaccine effectiveness and the role of boosters.

The paragraph discussing the efficacy of yearly boosters could be clarified and possibly expanded upon to address potential challenges and considerations.

Some sentences are quite lengthy and could benefit from restructuring for readability.

The paragraph discussing the recent vaccination of children is insightful but could be more focused and organized.

Conclusion:

The conclusion effectively summarizes the main points discussed in the article.

Consider expanding on the implications of the paper's findings and potential directions for future research.

Grammar and Style:

The paper contains several instances of unclear phrasing, awkward sentence structures, and grammatical errors. Careful proofreading and revision are recommended to enhance clarity and readability.

Ensure consistent use of terminology and avoid unnecessary repetition.

Overall, the article provides a thorough exploration of the evolving trajectory of Covid-19 and the interplay between the virus and host immunity. Addressing the aforementioned comments will help enhance the clarity, structure, and readability of the paper. The scientific content is valuable and contributes to the understanding of Covid-19 dynamics.