Review of: "[Short Communication] Immunology of a Morbillivirus: Measles 1954 to 2023"

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Potential competing interests: No potential competing interests to declare.

The author presents and discusses current knowledge on measles (MeV). In particular, the author focuses on interactions between measles and the immune system, and factors that could help achieve measles eradication. The author also provides an informative summary of the history of measles infection and immunization. The author cites seminal work on the study of measles infection and the development of vaccines for measles.

The paper is well-written, and I have enjoyed reading it. I strongly recommend this work for publication. I will recommend it to both scientists and non-scientists.

I have provided the following comments which might help the author to improve the quality of this article:

In the introduction,

"The methodology behind this is long known. "

Please make this sentence clearer by replacing "this" with what it actually stands for.

In this sentence: "Given the prior reduction in overall MeV mortality, immunisation against MeV, therefore, has nearly led to the global eradication of the third virus and may still do so. "

please replace "The third" by MeV to make this sentence clearer.

Please provide citations to support this sentence or to show one example: “Longevity and kinetics of antibody production by B cells require T cells to adequately stimulate a recall memory response."

The longevity of antibodies and the duration of the production of antibodies by B cells are still the subject of active research, debates, and controversies.

It is important to mention briefly that studies in animals such as non-human primates have significantly contributed to the understanding of measles pathogenesis and immune responses against MeV [] - please add relevant citations.

It is also important to mention briefly the recent efforts by mathematical modellers to contribute to advancing knowledge on the clearance of measles RNA and infectious viremia by cellular and humoral immune responses [please add relevant citations such as Lin et al., PNAS 2012, Sinead et al., PLOS 2018, Anelone et al., RSOS 2021].

At the end of the section "Structure of the Measles Virus, "

you can mention that experimental studies suggest cell-to-cell infection [please add a reference]. In contrast, mathematical modelling work suggests virus-to-cell infection is predominant in PBMCs[Sinead et al., Plospath2019].

Much remains unknown about how measles traverses cells....

In the history section:

Please briefly mention and cite early work on measles vaccine dose responses in non-human primates and humans.

In the section "Adaptive and Innate Immune Responses during Natural Measles Infection,"

Please briefly mention early work on measles infection dose responses in non-human primates and children [for instance, R S van Binnendijk J Infect Dis . 1994 Aug;170(2):443-8. doi: 10.1093/infdis/170.2.443].

You could also briefly mention the impact of measles virus strains on the immune responses [for instance, de Swart 2007].

After the third paragraph of this section (after the sentence including "perforin"), please include recent results from mathematical modelling studies, such as 1) the clearance of acute infectious viremia in PBMCs by interferon-gamma spot-forming cells, a proxy for MV-specific activated T cells [please add relevant citations such as Lin et al., PNAS 2012, Sinead et al., Plos 2018, Anelone et al., RSOS 2021], 2) cellular immunity against acute MeV infectious viremia operates as a robust control feedback mechanism { Anelone et al., RSOS 2021], 3) the clearance of persistent MeV RNA by measles-specific antibody responses [Lin et al., PNAS 2012.].