The immune divide: factors influencing immune variation and differences in vaccine responses

Pyuza, J.J.

Stellingen behorende bij het proefschrift:

The Immune Divide

Factors influencing immune variation and differences in vaccine responses

1. It is not where one lives, but how one lives that defines the architecture of the immune system (This thesis).
2. Yellow fever vaccine immunogenicity is better explained by microbiota clustering than by urban or rural residence in Tanzanian adults (This thesis).
3. Baseline frequency of classical monocytes predicts antibody responsiveness to yellow fever vaccine in Tanzanian adults (This thesis).
4. The assumption that rural populations are universally hypo-responsive to vaccines does not hold (This thesis).
5. Modulating the microbiome presents a promising therapeutic strategy to enhance vaccine immunogenicity (Adapted from Lynn et al., *Nat Rev Immunol*,2022).
6. Assessing baseline immune characteristics before vaccination could improve vaccine efficacy by tailoring immunization approaches to individual immune profiles (Adapted from Tsang et al., Cell,2014).
7. Helminth infections are associated with altered vaccine responses through the promotion of gut inflammation and microbial translocation (Adapted from Nassuuna et al., npj|vaccines,2025).
8. The clinical response to tumor immunotherapy, including treatment with immune checkpoint inhibitors, is not uniform across populations; patients in low- and middle-income countries are likely to exhibit outcomes different from what is seen in patients from high-income countries (adapted from Li et al., *Transl Cancer Res*,2021).
9. Community engagement should never be an afterthought in clinical research.
10. Scientific knowledge loses its value when it ceases to be questioned.
11. Global health solutions fail without local relevance; involving local researchers ensures meaningful translation of findings.
12. Socio-economic divide is an immune divide.

Jeremia J. Pyuza