Field-deployable immunodiagnostics for poverty-associated infectious diseases: development and use cases in public health

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Stellingen behorende bij het proefschrift getiteld Field-deployable immunodiagnostics for poverty-associated infectious diseases: development and use cases in public health

1. Disease elimination is defined not only by reduced incidence but also by sustained interruption of transmission *(modified from WHO leprosy elimination framework)*.
2. Quantitative anti-PGL-I serology holds promise as a screening test to assess *M. leprae* infection and may be applied as a proxy for transmission when measured in young children (*this thesis*).
3. The PGL-I QURapid meets the WHO target product profile criteria and is a field-ready tool applicable for multiple public health use cases, including diagnosis, treatment monitoring, transmission surveillance, evaluation of interventions, and One Health applications (*this thesis*).
4. Serosurveillance in children can reveal hidden *M. leprae* transmission hotspots that remain undetected by routine case detection and offers a promising tool for targeted prophylaxis guidance (*this thesis*).
5. The impact of leprosy control interventions may become apparent earlier through serological trends than through clinical incidence data (*this thesis*).
6. Host biomarker-based diagnostics provide a promising adjunct diagnostic tool for tuberculosis triage (*this thesis*).
7. Many infectious diseases, including neglected tropical diseases such as leprosy, are deeply rooted in structural determinants such as poverty, inadequate sanitation and overcrowded living conditions.
8. The UCP-LFA platform provides a robust foundation for integrated disease diagnostics across multiple infectious diseases in resource-limited settings.
9. The pursuit of perfect diagnostics should not delay the implementation of effective field-ready tools in public health practice.
10. Effective leprosy control requires not only technological innovation and treatment access, but also attention to stigma, mental wellbeing, implementation, and sustained commitment from local healthcare workers and governments.
11. The most valuable lessons in global health are often learned outside the laboratory and the office.
12. In global health, alone we can do so little, together we can do so much (*modified from Helen Keller*).