In search of biomarkers for leprosy diagnosis : in silico identification, screening & field application

Aboma, K.B.

Stellingen

1. Early detection of *Mycobacterium leprae* infection can contribute to interruption of leprosy transmission (*this thesis*).
2. IFN-γ release assays (IGRA) based on immunogenic *Mycobacterium leprae* unique proteins are relevant new tools for early detection of infection and risk of developing leprosy (*this thesis*).
3. Pools of *Mycobacterium leprae*-derived peptides can be used to identify *Mycobacterium leprae* exposure in genetically different human populations (*this thesis*).
4. Assessment of multiple host biomarkers surveying the immune status of the host can identify host immune signatures of risk of developing leprosy (*this thesis*).
5. Longitudinal assessment of the ratios of selected pro-inflammatory cytokines versus IL-10 can be used for early diagnosis of Type 1 reactions (*this thesis*).
6. Measurements of cytokines/chemokines concentrations using Up Converting Phosphor-Lateral Flow (UCP-LF) assays are as sensitive as ELISAs (*this thesis*).
7. It is unlikely for a single cytokine or chemokine to linearly correlate to protection or disease since immunopathogenesis of leprosy involves complex interaction between a variety of cells expressing different effector and regulatory molecules (*Geluk. 2013.Expert Opin. Med. Diagn.*).
8. Combined cellular- and humoral immunity based diagnosis can be more efficient than diagnosis based on a single marker in leprosy.
9. "We can endure losing fingers and toes, eyes and nose, but what we cannot endure is to be rejected by those nearest and dearest" (*a leprosy victim from Nepal Rafferty J. Curing the stigma of leprosy. Lepr.Rev. 2005; 76:119-26).*
10. "Don't do unto others what you don't want others to do unto you" (*Confucius*).