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Tuberculosis and diabetes: biomarkers and drug candidates from a host perspective

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Stellingen

behorende bij het proefschrift getiteld

“Tuberculosis and diabetes:

Biomarkers and drug candidates from a host perspective”

1. Currently recommended tuberculosis treatment is similar for patients with combined tuberculosis and diabetes compared to those with tuberculosis only. However, this needs to be reconsidered. (*Van Crevel and Critchley. Tropical Medicine and Infectious Disease 2021*)
2. Transcriptional signatures may represent general host responses, which can be shared among different infectious diseases, thereby reducing the disease specificity of host biomarkers. (*this thesis*)
3. Overly rigid application of target product profiles might do a disservice to improvement of the repertoire of diagnostic tests for tuberculosis, because they should be guidelines rather than strict decision points. (*Walzl. The Lancet. Infectious diseases 2021*)
4. Restoration of normal transcriptome profiles, presumably reflecting improved lung lesion resolution, could potentially be achieved by coadministration of host-directed therapy alongside standard treatment in tuberculosis patients with diabetes comorbidity. (*this thesis*)
5. The potential “dual-hit based” synergy of HDT compounds with anti-TB antibiotics might provide a promising tuberculosis treatment strategy, especially in patients with diabetes comorbidity, which respond less efficiently to TB treatment.
6. Fundamental differences in the metabolism of polarized macrophages of murine versus human origin [...] argue for performing studies on the potential of metabolic compounds for HDT in human macrophages. (*this thesis*)
7. Even when using a similar host niche for persistence and proliferation, *Stm* and *Mtb* utilize different host metabolic pathways to balance immunometabolism and supply of host nutrients. (*this thesis*)
8. The off-target kinase pharmacology of chemical compounds deserves serious consideration in the development of HDT against intracellular bacterial infections.
9. It is thought that there exists a natural stochastic population of mostly replicating and some nonreplicating bacteria in the host and that potentially, this ratio is further influenced by the local environmental stresses encountered by the bacteria in macrophages and in granulomas. (*Sala and Hartkoorn. Future microbiology 2011*)
10. Realize that everything connects to everything else; you cannot target a single host target. (*adapted from Leonardo Da Vinci*)
11. Whether you are a pathogen or a patient, if a treatment doesn't kill you, it can make you stronger. (*adapted from Friedrich Nietzsche 1885*)