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## Quantitative pharmacology approaches to inform treatment strategies against tuberculosis

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## Stellingen behorende bij het proefschrift

# Quantitative Pharmacology Approaches to Inform Treatment Strategies Against Tuberculosis

1. Quantification of target site drug exposures is essential to employ precision dosing to ensure optimal anti-tuberculosis treatment outcome. *This thesis*
2. Model-based frameworks are ideal to compile the findings from various data sources into a decision-making framework. *This thesis*
3. Quantitative systems pharmacology approaches can help guide design and development of host-directed therapies against tuberculosis. *This thesis*
4. To eradicate TB in the future, treatment approaches should consider not only treatment of drug-resistant TB but also prevention of resistance development. *This thesis*
5. Advanced in vitro experimental models, such as hollow-fiber infection models, microphysiological systems, and organ-on-chip, combined with quantitative systems pharmacology models are valuable tools for predictions of efficacy and safety of new therapeutics. *Low et al., 2021, Nat Rev Drug Discov 20, 345–361*
6. Quantitative disease platforms can shift currently reactive drug development process to proactive. *Stern et al., 2016, SLAS Discovery, volume 21, issue 6, 521–534.*
7. The sustainable resolution of multifaceted diseases such as tuberculosis necessitates collaborative efforts among multiple institutions and stakeholders. *Uplekar et al., 2015, Lancet, 2015, 385 (9979), p1799-1801*
8. The potential of harnessing the host immune response for treating tuberculosis is yet under-explored, representing a promising avenue for further exploration. *Wallis et al., Nat Rev Immunol, 2015, 255–263*
9. “Live and let live, be one with all” can help attain a serene and sustainable world. *Jainism philosophy*
10. “Intellectual learning starts at birth and only cease at death”- this is not only relevant for professional growth but also for personal growth. *Adapted from Albert Einstein*