This is a one-day workshop on pharmacometric approaches to optimising existing anti-TB regimens, combining new molecules with existing drugs to build better regimens, and using prior information to design more informative clinical trials to test those regimens. The workshop will provide an overview of PK/PD sciences role in chemotherapeutics, optimisation of traditional regimens, and development of new regimens for the treatment of TB.

1. Clinicians and trialists
2. Scientists
3. Policy-makers

Objectives
1. Provide principles of the PK/PD of anti-TB drugs, including dose selection, therapeutic targets & role of public-private partnerships in TB therapeutics
2. Delineate principles of therapeutic drug monitoring in TB
3. Identify knowledge gaps in PK/PD sciences and the need to design more informative clinical trials
4. Build a plan of action for workshop participants to contribute to filling gaps and strengthen programmes

Expected outcome
1) Participants will finish the workshop with appreciation of the role of pharmacokinetics and pharmacodynamics (PK/PD) science for the TB programme. 2) A consensus document on use of drug concentrations in optimising clinical outcomes that will be published.

Pharmacokinetics and pharmacodynamics (PK/PD); therapeutic drug monitoring; TB drug development

Coordinator(s)
Jotam Pasipanodya (USA), Beki Magazi (South Africa)

Chair(s)
Helen Mcilleron (South Africa), Tawanda Gumbo (USA)

Presentations
1. PK/PD, drug development & the role of public-private partnerships
   Debra Hanna (USA)
2. PK/PD basics: models, therapeutic targets etc
   Eric Nuermberger (USA)
3. Pathogen factors: stupid MIC! MIC, stupid!
   Beki Magazi (South Africa)
4. Principles of pharmacokinetic variability of anti-TB agents
   Helen Mcilleron (South Africa)
5. Non-linear analytical tools to design better clinical trials and optimise patients' outcomes
   Jotam Pasipanodya (USA)
6. How to implement PK monitoring in TB programmes: a practical approach
   Jan-Willem Alffenaar (Netherlands)
7. Monitoring drug concentrations in patients with drug-resistant tuberculosis
   Scott Heysell (USA)
8. Latest treatment regimens for adults' and children with/out drug-resistant TB
   Soumya Swaminathan (India)
9. The future is now! Bayesian adaptive dosing in TB programmes
   Tawanda Gumbo (USA)
10. DISCUSSION: Towards a consensus on clinical standards for minimal inhibitory concentrations (MIC) and pharmacokinetic monitoring in treatment of TB
    Helen Mcilleron (South Africa), Tawanda Gumbo (USA)