

SCIENTIFIC PROGRAMME OUTLINE

TUESDAY, 21 MAY 2024	
12:00 – 13:30	Arrival, Check-in, Registration
14:00 - 15:30	Registration – Radisson Blu Convention Centre
16:00 - 18:35	Sunset River Cruise on the Zambezi River 16:30 - 16:45 Opening Welcome by Prof. Kelly Chibale (Director, H3D)
18:35 - 21:00	Welcome Networking Function at the Radisson Blu Hotel

WEDNESDAY, 22 MAY 2024	
8:00 – 9:00	CDD workshop (virtual): "Collaborative Research: Digitalizing Drug Discovery in Africa with CDD Vault" Presenter: Dr. Emilia Hietala (Collaborative Drug Discovery). Chair: Dr. Susan Winks (H3D, University of Cape Town)
9:00 – 9:10	Mini-Break
9:10 - 10:40	Session 1: Tuberculosis drug discovery - consortium approach Chair: Dr. Peter Warner (Bill and Melinda Gates Foundation)
9:10 - 9:40	Dr Steve Berthel (Panorama Global, United States) “The Tuberculosis Drug Accelerator, a model for global health collaborative drug discovery”
9:40 – 10:10	Dr Anna Upton (Evotec, France) “Working within consortia to build translational data for new TB drugs and combinations.”
10:10 – 10:40	Prof. Erick Strauss (Stellenbosch University, South Africa) “An African consortium to address the need for new anti-tuberculosis treatments”
10:40 - 11:10	Refreshment break and poster presentations
11:10 - 12:40	Session 2: Tuberculosis Drug Discovery - Tackling the TB drug resistance. Chair: Prof. Valerie Mizrahi (University of Cape Town)
11:10 - 11:40	Prof. Anil Koul (Global Public Health Discovery & Partnerships at Johnson & Johnson, Belgium) “Innovation in Global Public Health – Impact of Bedaquiline discovery on drug-resistant tuberculosis.”
11:40 - 12:10	Dr. Khisimuzi Mdluli (Gates Medical Research Institute, United States) “TB drug regimen development to eliminate persisters, reduce treatment duration and combat resistance development.”
12:10 - 12:40	Prof. Bree Aldridge (Tufts University, United States) “Design and patterns of optimized drug combinations for TB”

12:40 – 13:10	Flash talks. (Chair: Jessica Akester, H3D, University of Cape Town) <ol style="list-style-type: none"> Baji Baba Shaik (University of KwaZulu Natal, Durban) Novel thiomorpholine tethered isatin hydrazones as potential inhibitors of resistant <i>Mycobacterium tuberculosis</i> Naffie Top (Medical Research Council Unit, The Gambia) Macrophages differentiation and <i>Mycobacterium tuberculosis</i> complex lineages influence the response to tyrosine kinase inhibitor Erlotinib. Leopold Djomkam Tientcheu (MRC Unit, The Gambia at LSHTM) Antibiotics and candidate host-directed therapeutics for tuberculosis differentially restrict growth of <i>Mycobacteria tuberculosis</i> complex lineages. Robi Chacha (Kenya Medical Research Institute) Tackling <i>Mycobacteria tuberculosis</i> resistance: Berberine analogs as potential novel pathogen efflux pump inhibitors (EPIs)
13:10 - 14:10	Lunch
14:10 - 16:10	Session 3: Tuberculosis Drug Discovery - Lead Generation Approaches Chair: Prof. Tanya Parish (Seattle Children Hospital, USA)
14:10 - 14:40	Dr. Robert Bates (GSK, Spain) “Highlights and learnings from a decade of phenotypic screens at GSK”
14:40 - 15:10	Prof. Dirk Schnappinger (Weill Cornell Medicine, United States) “Genetic approaches to help develop new medicines that can treat or prevent Tuberculosis.”
15:10 - 15:40	Prof. Nicole Sampson (Stony Brook University, United States) “Tuberculosis target discovery in secondary metabolic pathways”
15:40 – 16:10	Refreshment break and poster presentations
16:10 – 17:10	Session 3 continued
16:10 – 16:40	Prof. Mary Jackson (Colorado State University, United States) “New approaches to the development of therapeutics targeting nontuberculous mycobacteria”
16:40 – 17:10	Special Talk by Dr. Francesca Cesari, Chief Biological Sciences Editor, Nature at Nature Research (Introduction: Prof. Kelly Chibale, Director, H3D)
17:10 – 18:00	Leisure time
18:00 - 21:00	Speaker's dinner (by invitation) and evening at leisure for other delegates

THURSDAY, 23 MAY 2024	
8:00 – 9:00	Industry Partner Workshop: The use of mass spectrometry in drug discovery Facilitators: Dr. Volker Kruff, Senior Business Development Manager, Co-sponsored by Sciex and Separations (Chair: Dr. Liezl Gibhard, H3D, University of Cape Town)
9:00 – 9:10	Mini-Break

9:10 – 9:40	Dr. Greg Perry (The International Federation of Pharmaceutical Manufacturers & Associations, Geneva, Switzerland) “Keys for powerful locally driven partnerships for health innovation in Africa” (Introduction: Prof. Kelly Chibale, University of Cape Town)
9:40 – 10:10	Flash talks. (Chair: Dr. Candice Soares de Melo, University of Cape Town) <ol style="list-style-type: none"> 1. Neo Malefiso Letia Padi (University of the Witwatersrand) Targeting Glutathione Transferases: A computational approach to discovering antischistosomal porphyrin compounds 2. Dr. Siobhan Brigg (University of Cape Town) Multifaceted target specificity analysis as a tool in antimicrobial Drug development: Type III Pantothenate Kinases as a case study 3. Victorine Lorette Yimgang (University of Yaoundé I, Cameroon) Contribution of isolated compounds from endophytic culture extracts of <i>Fusarium</i> Sp. Amtw3 against biofilms on resistant bacterial pathogens 4. Jaydee Nel (Stellenbosch University) Resistance development toward N7-pantothenamide In <i>Staphylococcus Aureus</i> 5. Prof. Ian Gilbert (University of Dundee, UK). Challenges in antibacterial drug discovery.
10:10 – 10:40	Refreshment break and poster presentations
10:40 – 12:40	Session 4: Antimicrobial Resistance Drug Discovery - Global Health Perspective Chair: (Dr. Greg Basarab, H3D, University of Cape Town)
10:40 – 11:10	Dr. Erin Duffy (CARB-X) “CARB-X: building and sustaining a pipeline of high-impact products to prevent, diagnose and treat bacterial infections.”
11:10 – 11:40	Dr Seamus O’Brien (Global Antibiotic Research & Development Partnership) “Antibiotic development and access to address priority drug-resistant infections: An integrated approach.”
11:40 – 12:10	Prof. Ursula Theuretzbacher (Center for Anti-Infective Agents, Austria) “Antibacterial Drug Resistance - assessing the global health perspective of the clinical Pipeline”
12:10 – 12:40	Dr. Mike Strange (LifeArc, United Kingdom) Addressing translational challenges in AMR
12:40 - 13:40	Lunch
13:40 – 16:30	At leisure to explore all Livingstone has to offer.
16:30 - 19:10	Session 5: Antimicrobial Resistance Drug Discovery Approaches Chair: (Emeritus Prof. Brian Cox, University of Sussex, UK)
16:30 - 17:00	Dr. Nikki Cardoso (H3D, University of Cape Town, South Africa) “The outer membrane of the Gram-negative priority pathogen <i>Acinetobacter baumannii</i> as a rich source of antimicrobial targets”
17:00 - 17:30	Dr. Greg Basarab (H3D, University of Cape Town, South Africa) “Investigations in AMR across the four pillars of drug discovery: Biology, medicinal chemistry, pharmacology and toxicology.”

17:30 - 18:00	Dr. Neil Osheroff (Vanderbilt University School of Medicine, USA) “Gyrase and Topoisomerase IV: Repurposing old targets for new antibacterials”
18:00 – 18:10	Mini-Break
18:10 – 19:10	Session 5 continues
18:10 – 18:40	Prof. Gilles P. van Wezel (Leiden University, Netherlands) “Discovery of new chemistry in actinomycetes: harnessing the power of regulatory networks and open science collaborations”
18:40 – 19:10	Dr Rolf Müller (Helmholtz Institute of Pharmaceuticals Sciences, Germany) “Novel antibiotics from soil bacteria: Unearthing nature’s biosynthetic potential towards clinical application.”
19:10 – 19:30	Leisure time
19:30 - 21:00	Celebration Symposium Dinner

FRIDAY, 24 MAY 2024	
8:00 - 10:00	Industry Partner Workshop: AI tools for antimicrobial drug discovery Facilitators: Dr. Miquel Duran-Frigola, Dr. Gemma Turon (Ersilia Open Source Initiative); Jason Hlozek (H3D) (Chair: Dr. Susan Winks, H3D, University of Cape Town)
10:00 – 10:30	Refreshment break
10:30 - 12:30	Session 6: Technology platforms to support TB and AMR drug discovery. (Chair: Dr. Lauren Coulson, H3D, University of Cape Town)
10:30 – 11:00	Dr. Mwila Mulubwa (H3D, University of Cape Town, South Africa) “Unlocking precision tuberculosis treatment: Leveraging pharmacometrics and AI/ML for the genetically diverse African population.”
11:00 - 11:30	Dr. Miquel Duran-Frigola (Ersilia Open-Source Initiative) “Artificial intelligence approaches to pharmacogenomics in Africa”
11:30 - 12:00	Dr. Monicah Otieno (Gates Medical Research Institute, United States) “Nonclinical safety considerations in selection and development of TB drug candidates for combination therapy.”
12:00 - 12:30	Poster prizes and closing remarks by Prof. Kelly Chibale (Director, H3D)
12:30 - 13:30	Lunch & staggered departures