

Mini Symposium on Tuberculosis Diagnostics and Treatment

Forschungszentrum Borstel, Leibniz Lungenzentrum

Date: 26th September, 2025 14:00 – 16:00

Join us for an afternoon of scientific exchange with a focused symposium bringing together leading experts in the field of tuberculosis research and clinical care.

This event will highlight approaches in TB diagnostics and treatment — from novel insights into host-pathogen interactions to the application of next-generation sequencing in high-burden settings. With distinguished speakers Prof. Jan Rybniker (University of Cologne) and Dr. Debrah Vambe (Baylor College of Medicine, Eswatini), the symposium offers a unique opportunity to learn, discuss, and network with colleagues dedicated to advancing the fight against TB. Highlights include:

- **Prof. Jan Rybniker** (University of Cologne, Germany): *Inflammasomes as dual-hit targets in M. tuberculosis host-pathogen interactions*
- **Dr. Debrah Vambe** (Baylor College of Medicine, Eswatini): *Using targeted Next Generation Sequencing for drug-resistant TB management – lessons from Eswatini*

The event will be followed by coffee and informal networking. Registration is free-of-cost.

Agenda:

13:30 – Come together with soup and snacks (Foyer)

14:00 – 15:00 Introduction Tobias Dallenga (brief description of the cooperation within ERA4TB and DZIF, followed by an introduction of Jan) (15 min)

Jan Rybniker University Cologne, Germany (30 min)

Inflammasomes as dual-hit targets in Mycobacterium tuberculosis host-pathogen interactions

15:00 – 16:00 Introduction Stefan Niemann (brief description of the cooperation within GHPP, followed by an introduction of Debrah) (15 min)

Debrah Vambe Baylor College of Medicine, Eswatini (30 min)

Use of tNGS in the clinical management of drug-resistant tuberculosis: Sharing Eswatini Experience

16:15 – 17:00 Informal networking with coffee and snacks (Foyer)

About the Speakers



Dr. Debrah Vambe is a Public Health Specialist and Assistant Professor of Pediatrics at Baylor College of Medicine in Eswatini. She works closely with the Research Center Borstel and other international partners to advance the clinical application of targeted Next Generation Sequencing (tNGS). In her talk, she will share Eswatini's experience with implementing tNGS for the clinical management of drug-resistant tuberculosis, highlighting practical lessons for high-burden settings.

Prof. Dr. Dr. Jan Rybníček is a W2 Professor of Clinical Infectious Diseases at the Faculty of Medicine and Head of the Laboratory for Infection Research at Cologne University Hospital. In his talk, he will explore how multi-omics approaches can be applied to unravel the immune heterogeneity of tuberculosis — particularly extrapulmonary TB — by identifying distinct immunotypes and signaling pathways that shape disease severity and may inform personalized host-directed therapies.

