Diagnostics for LMICs 2024

Conference Programme

DAY 1

TUESDAY 2 JULY 2024 - Diagnostics for AMR and joint session with International Pandemic Sciences Conference

09:00	Registration and arrival, tea and coffee served in Reuben College Dining Hall
09:45	Welcome & Introduction: Lionel Tarassenko, President of Reuben College

This session will focus on African researchers working on diagnostics to tackle **infectious diseases and the growing challenge of antimicrobial resistance (AMR) in Africa**

Chairs: Rachel McKendry, (UCL), Maryam Shahmenesh (AHRI, UCL) and Noah Fongwen (LSHTM and Africa CDC)

10:00	Sergio Carmona (Acting CEO and Chief Medical Officer of the Foundation for Innovative New Diagnostics (FIND), Geneva) – Talk title TBC
10:25	Noah Fongwen (LSHTM, Africa CDC) – Diagnostic access for priority epidemic prone diseases for Africa and AMR
10:50	Brenda Kwambana (Malawi Liverpool Wellcome Programme and UCL) – Diagnostics for AMR and respiratory pathogens
11:!5	Refreshment break
11:45	Maryam Shahmanesh (Africa Health Research Institute and UCL) – Diagnostics for AMR: the importance of co-development and rigorous evaluation lessons from HIV diagnostics
12:10	Panel Discussion led by the session chairs
13:00	Lunch served in the Reuben College Dining Hall

14:15 - 15:45 Joint Session with the International Pandemic Sciences Conference 2024. This session will be taking place in the Examination Schools which is a short walk from Reuben College.

(Address is 75-81 The High Street, Oxford, OX1 4BG and more details on location can be found here)

Chair: Emily Adams, Liverpool School of Tropical Medicine

This session will present advances and challenges in developing and evaluating diagnostic tests for emerging infectious diseases, especially those that can be used in community settings. The session will explore how these tests can be used to contribute to global health initiatives

Two participants from RCD4xLMICs24 (Rachel McKendry, UCL and James Anibal, Oxford) will be giving oral presentations during this session; a third Ester Sabino (Sao Paolo) will have a poster.

There will be six additional posters to view from delegates attending the International Pandemic Sciences Conference 2024.

Cheikh Diagne (Senegal) - Invited speaker

Rachel McKendry (UCL) – Engineering the future of lateral flow tests (lead oral)

Akwelle Ngwese Roland (Cameroon) – In-silico Design and Preliminary Serological Validation of Multiepitope Antigens for Human Monkeypox Virus Serosurveillance

Ana Cubas Atienzar (Liverpool) – A novel lateral flow test for diagnosis of Crimean-Congo Haemorrhagic Fever Virus

Diana Borrero (Columbia) – Continuous loop R&D model for medical digital diagnostic algorithms

James Anibal (Oxford) – Tell me about your health: scalable voice AI for pandemic settings in Vietnam

Rob Simpson (NPL) – Accuracy of non-contact thermometers as temperature screening tools – are they ready for a pandemic?

The final session of the day will be taking place at Reuben College Dining Hall

16:30 Early-career Researcher Lecture – Tabasom Haghigi (Imperial and Oxford): Simplifying Sensitive Diagnostic Devices: Enhancing Accessibility and Affordability

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17:30 Close of Conference Day 1

Following the Conference there will be a walk in University Parks which will be taking place between 17:30 - 18:30 or pre-dinner drinks in College Bar

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CONFERENCE DINNER

19:00 - 22:00

Diagnostics for LMICs 2024 Conference Dinner sponsored by Oxford Nanopore, will be taking place in the Reuben College Dining Hall

After-dinner speaker: Kevin Marsh, Professor of Tropical Medicine, Director Africa Oxford Initiative

DAY 2

WEDNESDAY 3 JULY 2024 - Diagnostics for Tuberculosis

08:30	Arrival refreshments tea and coffee served in Reuben College Dining Hall
08:50	Introduction to Day 2 Chair: Philip Fowler (Nuffield Department of Medicine, University of Oxford)

TB is a disease that mainly afflicts LMICs (and kills more people each year than HIV and malaria combined).

	Philip Fowler – Why is tuberculosis the poster child for translating genetics into clinical microbiology and what have we learnt so far?
09:30	Kumeren Govender (CSO, GPAS) – Exploring the utility of a rapid cloud-based analysis platform for Mycobacterial samples
10:00	Cathy Moore (University of Westminster) – Quick and affordable diagnosis of tuberculosis from sputum samples: utilising microfluidic dielectrophoresis in prototype point of care device.
10:30	Justin O'Grady (Oxford Nanopore Technologies) – AmPORE, a targeted next-generation sequencing assay for tuberculosis
11:00	Refreshment break

Data Science and AI for Diagnostics Part I

	Chair: Hamish Fraser (Brown University)
11:30	Hamish Fraser (Brown) – Use of supervised machine learning models to predict loss to follow up of HIV patients in Kenya
12:00	Michelle Heys (UCL) – Neonatal sepsis diagnosis in LMICs
12:30	Update from Gordon Sanghera (Oxford Nanopore CEO)
13:00	Lunch served in the Reuben College Dining Hall

Data Science and AI for Diagnostics Part II

	Chair: Gari Clifford (Emory University)
14:00	Gari Clifford (Emory) – Introduction to Data Science & AI for diagnostics in LMICs
14:30	Ester Sabino (University of Sao Paolo) – AI in ECG analysis for Chagas Disease
15:00	Ben Miled Slimane (Institut Pasteur, Tunis) and Dorra Louati (Mediterranean Institute of Technology, Tunis) – Pandemic modelling and the evolution of COVID transmission across Africa
15:30	Afternoon tea break
16:00	Panel Discussion to be chaired by Anne Makena and Kevin Marsh (Africa Oxford)
17:00	Close of the conference

Please note timings of the conference may vary and programme is subject to change