

Diagnostics for Low and Middle-Income Countries

Conference Programme 2025

The Diagnostics for Low and Middle-Income Countries (DxLMICs) Conference at Reuben College is now in its third year.

Every year, it brings together graduate students from Oxford and UCL who are passionate about developing diagnostic tools to improve the healthcare of underserved populations to hear from and interact with experts who share this passion.

This year, the technologies covered will range from novel sensors (with a keynote talk from [Professor Dame Molly Stevens](#)) to the use of machine learning to enhance diagnoses. The first Professor of Global Health in Oxford, [Professor Alan Bernstein](#), will also address the Conference. The diagnostic applications to be covered are broad, from neurology to cardiology, in addition to the usual focus on infectious diseases.

What we can learn from scientists, engineers and clinicians on the ground is a recurring theme of this meeting and the 2025 Conference will hear from speakers working in Africa, India and Vietnam.

Day 0, Monday 30 June

14:00 to 18:00	Online Data Science Workshop (in collaboration with PhysioNet Challenges)* Explore how to work with real clinical data to build and properly validate machine learning models to diagnose Chagas disease. Learn about the challenges, biases, and limitations in clinical data science. Featuring keynote talks from experts at Emory University, Stanford University, and the Federal University of Minas Gerais (UFMG). *This online workshop is affiliated with the DMICs conference but requires separate registration. You are welcome to attend whether or not you're registered for the main conference.
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Day 1, Tuesday 1 July

09:00	Registration and arrival; tea and coffee served in Reuben College Dining Hall
09:45	Welcome and introduction by Professor Lord Tarassenko , President of Reuben College
10:00 to 12:45	MORNING SESSION CHAIR: Professor Lord Tarassenko
10:00	Dr Joshua Kibera (AfOx Innovation Fellow, <i>University of Oxford</i>) Title: Infrastructure as the Missing Link: TPN - a Lab Diagnostic Management System, and Its Role in Scaling Diagnostics in Low Resource Settings
10:30	Professor Gari Clifford , (Professor and Chair, Department of Biomedical Informatics, <i>Emory University School of Medicine</i>) Title: Reflections of an out of place engineer
11:00	Refreshment break and discussion
11:30	Dr Benjamin Miller (Research Fellow, Dept of Biochemical Engineering, and Proleptic Lecturer, Medical Physics and Biomedical Engineering, <i>UCL</i> ; Sir Henry Wellcome Research Fellow, <i>Harvard University</i>) Title: Quantum sensing for in vitro diagnostics
12:00	KEYNOTE: Professor Arjune Sen (Director of the Centre for Global Epilepsy, <i>University of Oxford</i>) Title: Securing diagnostic equity in an inequitable world
12:45 to 14:00	LUNCH & POSTERS



14:00 to 17:00

AFTERNOON SESSION

CHAIR: Dr Philip Fowler

14:00 [Dr Joseph KB Matovu](#) (AfOx Fellow, *University of Oxford*)
Title: FISH4MEN: Optimizing HIV Self-Testing Uptake and Linkage to HIV Care or Prevention among Highly Mobile Men in the Lake Victoria Basin, Uganda

14:30 [James Anibal](#) (DPhil Student in Engineering Science, *Reuben College, University of Oxford*)
Title: From code to clinic: deploying AI models in the Vietnamese healthcare system

15:00 Afternoon tea and discussion

CHAIR: Professor Lord Tarassenko

15:30 [Dr Lesong Conteh](#) (Associate Professor in Economics of Diagnostics, *LSE*)
Title: The Economics of Point of Care Tests

16:00 KEYNOTE: [Sonny Michael Assennato](#) (VP of Research and Development, *Diagnostics for the Real World Ltd (DRW)*)
Title: Advance STI diagnosis in resource-limited settings

16:45

DAY ONE SESSIONS END

19:00 Pre-dinner drinks in the Dining Hall

19:30

CONFERENCE DINNER

Post-dinner speech by [Dr Vivian Lee](#) (Executive Fellow, *Harvard Business School* & Senior Lecturer, *Harvard Medical School*)
Title: Health Technology: Opportunities for a Learning at a Global Scale



Day 2, Wednesday 2 July

09:00	Reuben College Dining Hall open for posters and discussion
09:20	Introduction to Day 2
09:30 to 12:45	MORNING SESSION: INFECTIOUS DISEASES CHAIR: Dr Philip Fowler
09:30	<u>Dr Andrew Singer</u> (Principal Scientist, <i>UK Centre for Ecology & Hydrology</i>) Title: The diagnostics gap for wastewater surveillance in LMICs
10:00	<u>Professor Maryam Shahmanesh</u> (NIHR Professor of Global Health Research, <i>UCL</i> & Director of Implementation Science, <i>Africa Health Research Institute</i>) Title: HIV self-testing for long-acting HIV pre-exposure prophylaxis.
10:30	<u>Prof Philip Bejon</u> (Director of Modernising Medical Microbiology, <i>University of Oxford</i>) Title: Malaria diagnostic kits: lateral flow and lateral thinking
11:00	Refreshment break and discussion CHAIR: Professor Lord Tarassenko
11:30	REMOTE: <u>Dr Jenny Molloy</u> (Co-Chair of the Engineering Biology Interdisciplinary Research Centre, <i>University of Cambridge</i>) Title: Local manufacturing to drive diagnostic innovation and access in LMICs
12:00	KEYNOTE: <u>Professor Dame Molly Stevens</u> (John Black Professor of Bionanoscience, Institute of Biomedical Engineering, , <i>University of Oxford</i> ; Deputy Director, Kavli Institute for Nanoscience Discovery, <i>University of Oxford</i> ; Chair in Emerging Technologies, RAE) Title: Designing and translating new bioengineering platforms for ultrasensitive diagnostics



12:45 to 14:00

LUNCH & POSTERS

14:00 to 17:00

**AFTERNOON SESSION:
ARTIFICIAL INTELLIGENCE & MACHINE LEARNING**

CHAIR: Dr Gari Clifford

14:00 [Dr Fu Siong Ng](#) (Clinical Senior Lecturer in Cardiac Electrophysiology & Executive Director of the ElectroCardio Maths Programme, *Imperial College London*)
Title: AI for ECG analysis - lessons from 2 million Brazilians

14:30 [Professor Bamba Gaye](#) (Executive Director, *Alliance for Medical Research in Africa (AMedRA)* & Adjunct Associate Professor of Biomedical Informatics, *Emory School of Medicine*)
Title: Crowdsourcing to Scale Cardiac Diagnostics with AI. From Foundation models to Scalable Telemedicine

15:00 Afternoon tea and discussion

CHAIR: Dr Watu Wamae

15:30 [Dr Aparna Hegde](#) (Founder, *ARMMAN* & Founder and Director, *The Center for Urogynecology and Pelvic Health, Delhi*)
Title: An AI-powered Chatbot system for supporting Maternal Health in India

16:00 CLOSING KEYNOTE: [Professor Alan Bernstein](#)
(Director of Global Health & Visiting Professor of Global Health, *University of Oxford*)
Title: Oxford Global Health: The Challenges and the Opportunities

16:45 Closing Session led by [Dr Watu Wamae](#) (Official Fellow of Reuben College & Head of Innovation at AfOx, *University of Oxford*)

17:30

CONFERENCE CLOSE