

# SINGAPORE ANTIMICROBIAL RESISTANCE RESEARCH SYMPOSIUM 2025

Global AMR Experts | Cutting-Edge Insights | Collaborative Action

Join us for the third edition of our symposium dedicated on AMR, bringing together global and local experts who will share their experiences, insights and strategies. This symposium will showcase research, clinical practice and evidence-based policy to tackle one of the most urgent public health threats of our time.



**Prof Ramanan  
Laxminarayan**  
Founder and President,  
One Health Trust



**A/Prof Andrea Kwa  
Lay Hoon**  
Pharmacy Clinician-  
Scientist, Singapore  
General Hospital



**Dr Giri Rajahram**  
Consultant in Infectious  
Diseases and Internal Medicine,  
Queen Elizabeth II Hospital  
(Sabah)



**Dr Mo Yin**  
Deputy Director,  
ADVANCE-ID Clinical  
Trial Network



**Dr Stephen Baker**  
Senior Principal  
Investigator, A\*STAR  
Infectious Diseases Labs



**Prof Cynthia Whitchurch**  
Research Director of the  
Biofilm Biology Cluster,  
SCELS



**Date: 12 - 13 November 2025**



**Time: 9:00 AM to 5:30 PM SGT**



**Location: NTU@ One-North, Executive Centre  
11 Slim Barracks Rise, Singapore 138664**

**Register here!**



CME and CPE  
points will be  
awarded.

**Jointly organised by:**



**Sponsored by:**

**Singapore AMR Research Symposium 2025**  
NTU@ One-North, Executive Centre, Singapore 138664

Day 1: Wednesday, 12<sup>th</sup> November 2025

Time	Session Details	Speakers	Venue
8:30 AM – 9:00 AM	Registration		AUD302
9:00 AM – 9:15 AM	Welcome Address	Prof Hsu Li Yang	
9:15 AM – 10:00 AM	Keynote Lecture 1: Where Do We Go Next With AMR?	Chair: Prof Hsu Li Yang  Speaker: Prof Stephen Baker	
10:00 AM – 10:45 AM	Keynote Lecture 2: Superbugs and Silver Bullets: Global Threats, Local Realities	Chair: Prof Hsu Li Yang  Speaker: A/Prof Giri Shan Rajahram	
10:45 AM – 11:15 AM	Tea Break		Outside AUD302
Breakout Session 1			
11:15 AM – 12:15 PM	The Microbiome & Antimicrobial Resistance 1. Engineering Colonization Resistance and Gut Decolonization of Klebsiella pneumoniae via Microbiome Manipulation 2. Characterization of Gut Microbiome CPE Recovery via Pooled Longitudinal Metagenomics 3. Mapping Out Bacterial and Plasmid Transmissions of ESBL in the Community – A Singaporean Household Cohort Perspective 4. The Impact of Bile Acids Regulation on Hypervirulent Klebsiella pneumoniae/Commensals Crosstalk in the Gut-Liver Axis	Chair: A/Prof Niranjan Nagarajan  Speakers: 1. Mr Cheam Guo Xiang 2. Dr Jean-Sebastien Eric Emmanuel 3. Dr Chung The Hao 4. Dr Teo Teck Hui	LT701
	Challenging Cases in Antimicrobial Resistance	Chair: Prof Hsu Li Yang  Speakers: 1. A/Prof Giri Shan Rajahram 2. A/Prof Abi Manesh 3. Dr Angie Pinto	AUD302
12:15 PM – 1:30 PM	Lunch with Industry Showcase		Outside AUD302

**Singapore AMR Research Symposium 2025**  
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Time	Session Details	Speakers	Venue
1:30 PM – 2:15 PM	<b>Keynote Lecture 3:</b> <i>From Blunderbuss to Sniper Rifle: Advancing a Precision Phage Therapy Platform to Combat Refractory Infections</i>	<b>Chair:</b> Prof Hsu Li Yang  <b>Speaker:</b> A/Prof Andrea Kwa Lay Hoon	AUD302
2:15 PM – 2:30 PM	Intermission & Session Transition		
Breakout Session 2			
2:30 PM – 3:30 PM	<b>Translational – Clinical Genomics &amp; Metagenomics</b> 1. <i>Searching for the Unknown: AI-Powered Tools for Viral Discovery and Real-Time Nanopore Surveillance</i> 2. <i>Your Lunch Table Has a Microbiome: City-Scale Insights from Singapore’s Hawker Centres</i> 3. <i>Building Clinical-Grade Microbial Genomics and Metagenomics: Lessons from Cases to Service Development</i>	<b>Chair:</b> A/Prof Nirranjan Nagarajan  <b>Speakers:</b> 1. Dr Peres Da Silva Rafael 2. Dr Teo Jin Yuan Jonathan 3. Dr Karrie Ko	LT701
	<b>Antimicrobial Stewardship</b> 1. <i>Augmented Intelligence in ASP to Discontinue Antibiotics in Patients With Suspected Lower Respiratory Tract Infections</i> 2. <i>Enabling Early Antibiotic Review for TIMELY Interventions</i> 3. <i>ASP in Primary Care</i>	<b>Chair:</b> A/Prof Andrea Kwa Lay Hoon  <b>Speakers:</b> 1. Mr Lim Jia Le 2. Ms Tan Sock Hoon 3. Dr Sky Koh	AUD302
3:30 PM – 4:00 PM	Tea Break		Outside AUD302
4:00 PM – 4:45 PM	<b>Keynote Lecture 4:</b> <i>Antimicrobial Strategies: Inducing Super-bugs to Shed their Shields</i>	<b>Chair:</b> Prof Hsu Li Yang  <b>Speaker:</b> Prof Cynthia Whitchurch	AUD302
4:45 PM – 5:30 PM	<b>Keynote Lecture 5:</b> <i>AMR Control in Low- and Middle-Income Countries: Experiences From the Humanitarian Setting - Médecins Sans Frontières</i>	<b>Chair:</b> Prof Hsu Li Yang  <b>Speaker:</b> Dr Letizia Ottino	AUD302
5:30 PM	End of Day 1		

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Day 2: Thursday, 13<sup>th</sup> November 2025

Time	Session Details	Speakers	Venue
8:30 AM – 9:00 AM	Registration		AUD302
9:00 AM – 9:15 AM	Welcome Address	A/Prof Ng Oon Tek	
9:15 AM – 10:00 AM	Keynote Lecture 6: Improving Appropriate Access to Effective Antibiotics	Chair: A/Prof Ng Oon Tek Speaker: Prof Ramanan Laxminarayan	
10:00 AM – 10:45 AM	Keynote Lecture 7: WHO's Initiative to Fight Antimicrobial Resistance	Chair: A/Prof Ng Oon Tek Speaker: Dr Takeshi Nishijima	
10:45 AM – 11:15 AM	Tea Break		Outside AUD302
Breakout Session 3			
11:15 AM – 12:15 PM	Infection Prevention and Control Research in Singapore 1. How to Outsmart an Outbreak: The SGH Experience in Surveillance and Contact Tracing 2. Airborne MRSA Transmission Dynamics Studies 3. Genomic Insights to Augment Infection Prevention: Lessons From MRSA and Candida auris	Chair: Dr Kalisvar Marimuthu  Speakers: 1. Dr Jean Sim Xiang Ying 2. Dr Stephanie Sutjipto 3. Dr Karrie Ko	AUD302
	Improving Global Access to Biologics & Antimicrobials (in collaboration with SMART AMR-IRG)	Chair: Prof Jenny Low Guek Hong  Speakers: 1. Prof Ram Sasisekharan 2. Dr Mo Yin 3. Prof Ramanan Laxminarayan	LT701
	One Health Research 1. ESBL E.coli in the Food Chain (TBC) 2. Elucidating Antimicrobial Resistance Signatures in ESBL E. coli Isolated from Urban Wastewater Across Diverse Community Settings 3. Culture Enriched Metagenomics for Genome-Resolved Pathogen Surveillance From Humans to the Environment and Back	Chair: A/Prof Ng Oon Tek  Speakers: 1. Dr Glendon Ong 2. Ms Sharain Abdul Kadir 3. A/Prof Yann Boucher	SR901

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Time	Session Details	Speakers	Venue
12:15 PM – 1:30 PM	Lunch with Industry Showcase		Outside AUD302
Breakout Session 4			
1:30 PM – 2:30 PM	<b>Advancing Large Multi-Centre Clinical Trials – Singapore as a Regional Hub</b>  <b>Session focus:</b> Exploring urgent questions in AMR, best practices in clinical trial design, sustainable stakeholder involvement, the role of health economics in policy, and Singapore’s position as a regional trial leader.	<b>Chair:</b> Dr Mo Yin, Deputy Director  <b>Speakers:</b> 1. Professor David Paterson 2. Dr Barnaby Edward Young 3. Mr Barney McManigal 4. Dr Cai Yiying	LT701
	<b>Translational - New Drugs &amp; Diagnostics</b> 1. <i>Title to be confirmed</i> 2. <i>Levelling Up Our Fight Against Antimicrobial Resistance Through TDM</i> 3. <i>From Bench to Bedside: Personalised Treatment in Resistant Infections</i> 4. <i>Dual-Mechanism Antimicrobials for Bacterial and Fungal Infections</i>	<b>Chair:</b> Dr Lim Tze Peng  <b>Speakers:</b> 1. Dr Yang Yi Yan 2. Dr Nathalie Grace Sy Chua 3. Dr Jocelyn Teo 4. Dr Liu Xianglong	AUD302
	<b>One Health Research</b> 1. <i>Quantifying Indicator Antibiotic Resistant Bacteria in Water</i> 2. <i>Establishing Harmonised Epidemiological Cutoff Values for Vibrio and Aeromonas spp.</i> 3. <i>Antibiotic Use in Companion Animals: The Vet and The Pawrent</i>	<b>Chair:</b> A/Prof Ng Oon Tek  <b>Speakers:</b> 1. Dr Ong Jie Ying 2. Dr Ching Biyun 3. A/Prof Angela Chow	SR901
2:30 PM – 2:45 PM	Intermission & Session Transition		
2:45 PM – 3:30 PM	<b>Keynote Lecture 8: Tackling AMR With an Equitable Lens - Lessons From Clinical Trials and Beyond</b>	<b>Chair:</b> Prof Hsu Li Yang  <b>Speaker:</b> Dr Mo Yin	AUD302
3:30 PM – 4:00 PM	Tea Break		Outside AUD302



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Time	Session Details	Speakers	Venue
<b>Oral Presentation</b>			
4:00 PM – 5:15 PM	<b>Novel Therapeutics against AMR</b> <ol style="list-style-type: none"> <li>1. <i>Phage cocktail development for the treatment of sequence type (ST) 2 Acinetobacter baumannii</i></li> <li>2. Bacteriophage cocktail-Antibiotic combinations as an alternative treatment against Carbapenem-Resistant Pseudomonas Aeruginosa (CRPA) Infections</li> <li>3. Evaluating efficacy of bacteriophage-antibiotics combinations against clinical carbapenem-resistant Klebsiella pneumoniae (CRKP) isolates</li> <li>4. Jumbo Klebsiella bacteriophage demonstrates efficient multidrug-resistant Klebsiella pneumoniae (MDR-KP) killing and significant clinical potential</li> <li>5. Assessing leukocytes of patients prescribed with phage therapy (PT) as salvage treatment</li> <li>6. Expanding treatment options through repurposed antimicrobials for multidrug-resistant Gram-negative bacteria in Singapore: An integrated in vitro and genomic analysis</li> </ol>	<b>Chair:</b> A/Prof Andrea Kwa Lay Hoon  <b>Speakers:</b> <ol style="list-style-type: none"> <li>1. Mr Lalit Mohan</li> <li>2. Ms Teo Yu En</li> <li>3. Ms Tay Hui Xin</li> <li>4. Dr Liu Yang</li> <li>5. Dr Yeo Jia Hao</li> <li>6. Mr Foo Jin Peng Jonathan</li> </ol>	LT701
	<b>Translational AMR Research</b> <ol style="list-style-type: none"> <li>1. <i>Developing rapid home-based diagnostics for bacterial infections</i></li> <li>2. <i>Carbapenem-resistant Acinetobacter baumannii causing the dual-strain persistent infection with significant loss-of-function mutations in virulence factors and the ability to form persists under PMB-MEM combination therapy: an eight-month genetic-based ICU patient monitoring study</i></li> </ol>	<b>Chair:</b> Dr Lim Tze Peng  <b>Speakers:</b> <ol style="list-style-type: none"> <li>1. Dr Lee Wei Lin</li> <li>2. Dr Zhong Yang</li> </ol>	AUD302

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4:00 PM – 5:15 PM	3. <i>Leveraging the gut microbiome to target enteric bacterial infections</i> 4. <i>Barriers to accessing novel antibiotics in Asian countries with high burden of bacterial antimicrobial resistant infections</i> 5. <i>Red blood cell invasion as a new drug target against the malaria parasite Plasmodium falciparum</i> 6. <i>Polymyxin B therapeutic drug monitoring in Singapore: Utility of four-component PB measurement versus two-component PB measurement to determine area-under-the-concentration-time (AUC) curve for accurate PB dose adjustments in patients with XDR-GNB infection</i> 7. <i>From bench to mouse: conjugated oligoelectrolytes potentiate frontline anti-mycobacterial antibiotics against Mycobacterium abscessus</i>	3. Dr Yassine Cherrak 4. Dr Shweta Rajkumar Singh 5. Prof Peter Preiser 6. Dr Kelvin Goh Kau Kiat 7. Ms Jim Jia Min Tania	AUD302
5:15 PM- 5:30 PM	Closing Remarks & Prize Presentation <i>End of Day 2</i>		

## Speaker Directory

Institution	Name	Designation
A*STAR Bioprocess Technology Institute	Dr Yang Yi Yan	Principal Scientist
A*STAR Genome Institute of Singapore	Dr Jean-Sebastien Eric Emmanuel	Senior Scientist
A*STAR Genome Institute of Singapore	Dr Peres Da Silva Rafael	Scientist
A*STAR Genome Institute of Singapore	Dr Teo Jin Yuan Jonathan	Senior Scientist
A*STAR Infectious Diseases Labs	Dr Teo Teck Hui	Research Scientist
A*STAR Infectious Diseases Labs	Professor Stephen Baker	Senior Principal Investigator
A*STAR Infectious Diseases Labs and NUS Yong Loo Lin School of Medicine	Mr Lalit Mohan	PhD Student
Clinical and Translational Sciences PhD Program, Duke-NUS Medical School; Pharmacy, Singapore General Hospital	Dr Liu Yang	PhD Student
Duke NUS Medical School	Dr Cai Yiyang	Health Economics Expert and Assistant Professor
Duke NUS Medical School and Singapore General Hospital	Prof Jenny Low Guek Hong	Professor and Senior Consultant
Infectious Disease Translational Research Programme	Dr Yassine Cherrak	Assistant Professor, Department of Microbiology and Immunology
Massachusetts Institute of Technology	Professor Ram Sasisekharan	Professor, Department of Biological Engineering
Médecins Sans Frontières	Dr Letizia Ottino	Infectious Diseases Specialist
Nanyang Technological University, School of Biological Sciences	Prof Peter Preiser	President's Chair in Biological Sciences
National Centre for Infectious Diseases	Dr Barnaby Edward Young	Clinical Trial Expert and Head of the Singapore Infectious Diseases Clinical Research Network
National Centre for Infectious Diseases	A/Prof Ng Oon Tek	Head of Antimicrobial Resistance Coordinating Office
National Centre for Infectious Diseases	Dr Stephanie Sutjipto	Consultant of Infectious Diseases
National Centre for Infectious Diseases and Tan Tock Seng Hospital	Mr Foo Jin Peng Jonathan	Senior Pharmacist



Institution	Name	Designation
National Centre for Infectious Diseases and Tan Tock Seng Hospital	Dr Kalisvar Marimuthu	Senior Consultant
National Parks Board	Dr Ching Biyun	Senior Scientist
National University Polyclinic	Dr Sky Koh	Associate Consultant
Ngee Ann Polytechnic	Ms Teo Yu En	Internship Student
NUS Chemical and Biomolecular Engineering	Dr Liu Xianglong	Postdoctoral Research Associate
NUS Saw Swee Hock School of Public Health	Professor Hsu Li Yang	Professor
NUS Saw Swee Hock School of Public Health	A/Prof Abi Manesh	Visiting Associate Professor
NUS Saw Swee Hock School of Public Health	Dr Mo Yin	Deputy Director, ADVANCE-ID Clinical Trial Network
NUS Saw Swee Hock School of Public Health	Dr Chung The Hao	Visiting Senior Research Fellow
NUS Saw Swee Hock School of Public Health	Professor David Paterson	Clinical Trial Expert, Director, ADVANCE ID Network
NUS Saw Swee Hock School of Public Health	A/Prof Yann Boucher	Associate Professor
NUS Saw Swee Hock School of Public Health	Dr Shweta Rajkumar Singh	Research Fellow
NUS Yong Loo Lin School of Medicine	Mr Cheam Guo Xiang	PhD Student
NUS Yong Loo Lin School of Medicine	A/Prof Niranjan Nagarajan	Associate Director and Group Leader at Genome Institute of Singapore & Associate Professor
NUS, Department of Chemistry, Bazan Group	Ms Jim Jia Min Tania	PhD Student
One Health Trust	Prof Ramanan Laxminarayan	Founder & President
PUB	Dr Ong Jie Ying	Senior Specialist
Queen Elizabeth II Hospital (Sabah)	A/Prof Giri Shan Rajahram	Consultant in Infectious Diseases and Internal Medicine, and Head of Department of Medicine
Singapore Centre for Environmental Life Sciences Engineering	Prof Cynthia Whitchurch	Research Director of the Biofilm Biology Cluster
Singapore Food Agency	Dr Glendon Ong	Scientist
Singapore General Hospital	Dr Lim Tze Peng	Senior Principal Pharmacist Researcher
Singapore General Hospital	Dr Jean Sim Xiang Ying	Senior Consultant, Department of Infectious Diseases, Department of Infection Prevention and Epidemiology
Singapore General Hospital	Dr Karrie Ko	Consultant, Department of Microbiology

Institution	Name	Designation
Singapore General Hospital	Dr Nathalie Grace Sy Chua	Specialist Pharmacist in Infectious Disease
Singapore General Hospital	Dr Jocelyn Teo	Senior Principal Pharmacist, Researcher and Specialist Pharmacist in Infectious Disease
Singapore General Hospital	A/Prof Andrea Kwa Lay Hoon	Pharmacy Clinician-Scientist
Singapore General Hospital	Mr Lim Jia Le	Senior Pharmacist
Singapore General Hospital	Ms Tay Hui Xin	Research Officer
Singapore General Hospital	Dr Yeo Jia Hao	Research Fellow
Singapore General Hospital	Dr Zhong Yang	Research Fellow
Singapore General Hospital	Dr Kelvin Goh Kau Kiat	Principal Medical Laboratory Scientist
Singapore-MIT Alliance for Research and Technology (SMART)	Dr Lee Wei Lin	Principal Scientist
Tan Tock Seng Hospital	Ms Tan Sock Hoon	Principal Pharmacist
Tan Tock Seng Hospital	A/Prof Angela Chow	Clinical Director, Office of Clinical Epidemiology, Analytics, and Knowledge [OCEAN]
The National Environment Agency	Ms Sharain Abdul Kadir	Senior Research Officer
University of Oxford	Mr Barney McManigal	Strategic Projects & Stakeholder Engagement
WHO Regional Office for the Western Pacific	Dr Takeshi Nishijima	Technical Officer
Woodlands Health	Dr Angie Pinto	Consultant in Infectious Diseases

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DATE: 12-13 NOVEMBER 2025

TIME: 9:00 AM - 5:30 PM SGT

VENUE: NTU@ ONE-NORTH, SINGAPORE 138664



## MEET OUR KEY SPEAKERS

GLOBAL AMR EXPERTS, CUTTING-EDGE INSIGHTS, COLLABORATIVE ACTION



### DR STEPHEN BAKER

SENIOR PRINCIPAL INVESTIGATOR,  
A\*STAR INFECTIOUS DISEASES LABS

Dr Baker is a leading microbiologist whose research focuses on antimicrobial resistance in enteric functions. With extensive experience in Vietnam and global initiatives like TyVAC and the Global Typhoid Genomics Consortium, he integrates genomics and real-world surveillance to inform impactful AMR intervention.



### PROF RAMANAN LAXMINARAYAN

FOUNDER & PRESIDENT, ONE HEALTH TRUST

An internationally recognised economist and epidemiologist Prof Laxminarayan has played a pivotal role in framing AMR as a global development challenge. His work has influenced international policy and catalysed cross-sectoral AMR solutions through advocacy, research and innovation.



### DR GIRI SHAN RAJAHRAM

CONSULTANT IN INFECTIOUS DISEASES & INTERNAL  
MEDICINE, QUEEN ELIZABETH II HOSPITAL, SABAH

Dr Rajahram is a clinician-scientist whose work focuses on emerging infectious diseases and antimicrobial resistance in Southeast Asia. Based in Sabah, Malaysia, he leads research on zoonotic malaria, dengue, TB, and AMR, and contributes to regional and global health policy. He holds academic appointments with NUS and Monash University.



## JOIN THE CONVERSATION

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### DR MO YIN

DEPUTY DIRECTOR, ADVANCING CLINICAL EVIDENCE IN INFECTIOUS DISEASES (ADVANCE-ID) CLINICAL TRIAL NETWORK

Dr Mo Yin is a clinician-scientist in infectious diseases and antimicrobial resistance. She leads regional studies across Asia to optimise antibiotic use and improve outcomes, and has shaped key stewardship policies. She holds a DPhil in Clinical Medicine from the University of Oxford.



### A/PROF ANDREA KWA LAY HOON

PHARMACY CLINICIAN-SCIENTIST, SGH

Assoc Prof Andrea Kwa is a pharmacist-clinician scientist at SGH, specialising in infectious diseases and antimicrobial resistance. She leads research on antimicrobial PK/PD, diagnostics, and innovative strategies like phage therapy and AI-driven stewardship. Her work has shaped key clinical interventions and earned national recognition for advancing practice and mentoring.



### PROF CYNTHIA WHITCHURCH

RESEARCH DIRECTOR, BIOFILM BIOLOGY CLUSTER, SCELSE, NTU

Prof Whitchurch is a leading microbiologist known for discovering the role of extracellular DNA in biofilm formation. Her research focuses on bacterial biofilms, antibiotic tolerance, and host colonization. She is a Fellow of the Australian Academy of Science and a recipient of the David Syme Prize.



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