AGENDA

10th INTERNATIONAL CONFERENCE ON **TYPHOID** & OTHER INVASIVE SALMONELLOSES

TUESDAY, APRIL 4		
08:30 - 08:35	Welcome Remarks	Bruce Gellin, Sabin Vaccine Institute
08:35 - 08:40	Conference Opening	Denise Garrett, Sabin Vaccine Institute
08:40 - 10:10	Body of Evidence: Updates on Global Disease Burden PLENARY SESSION MODERATED BY: Thomas Cherian (World Health Organization) & Melita Gordon (University of Liverpool)	
08:40 - 08:55	Looking to the Future: Control of Typhoid in the Next Decade	Anita Zaidi, Bill & Melinda Gates Foundation
08:55 - 09:10	Progress in Typhoid Fever Epidemiology	John Crump, University of Otago
09:10 – 09:25	Incidence, Presentation and Outcomes of <i>Salmonella</i> Bacteraemia Among Young Children in Sub-Saharan Africa: MAL055 RTS,S-AS01 <i>Salmonella</i> Ancillary Study	Cal MacLennan on behalf of the MAL055 RTS,S-AS01 <i>Salmonella</i> Ancillary Study
09:25 – 09:40	Enteric Fever Among Outbreaks in Africa: Same Old Foe but Emerging New Challenges in Management	Sam Kariuki, Kenya Medical Research Institute
09:40 – 09:55	Clades of Salmonella Associated with Epidemics of Invasive Salmonella Disease	Nick Feasey, Liverpool School of Tropical Medicine
09:55 - 10:10	QUESTIONS AND DISCUSSION	
10:10 - 10:30	Coffee Break and Posters	
10:30 - 12:30	The Devil you Know: Diagnosing and Detecting Enteric Fever ORAL ABSTRACT SESSION MODERATED BY: Gagandeep Kang (Christian Medical College, Vellore) & Hubert Endtz (Fondation Mérieux)	
10:30 - 10:45	Evaluation of a New Real-Time PCR to Identify S. Typhi, S. Paratyphi A and S. spp. from Patients with Fever in Bangladesh	Stephane Pouzol, Fondation Mérieux
10:45 – 11:00	Identification of a New Serodiagnostic Signature of Acute Typhoid Fever Using <i>Salmonella</i> Proteome Arrays	Thomas Darton, University of Oxford
11:00 - 11:15	Antigen Discovery for Improved Diagnosis of Invasive Salmonellosis by Targeted Proteomics	Sara Saleh, Institute of Tropical Medicine, Antwerp
11:15 – 11:30	Carriage of <i>Salmonella</i> Typhi Among Vendors in Two Kampala Markets	Mark Bumano, Makerere University College of Health Sciences
11:30 – 11:45	Typhoid Outbreak Caused by Drinks Made from Contaminated Underground Water Sources in Kampala, Uganda, January-March, 2015	David Oguttu, Uganda Public Health Fellowship Program
11:45 – 12:00	Salmonella Typhi Bloodstream Infections Among Infants and Children, Korogwe District Hospital, Tanzania	John Lusingu, National Institute for Medical Research
12:00 – 12:15	Typhoid Fever in Santiago, Chile: Modern Insights Where Historical Data Meet Mathematical Modeling	Jillian Gauld, Institute for Disease Modeling
12:15 – 12:30	<i>Salmonella</i> Typhi Bactericidal Antibody Activity is a Correlate of Disease Severity, but Not Protection Against Typhoid Fever	Andrew Pollard, University of Oxford
12:30 – 13:30	Lunch and Posters	

	The Right Shot: Vaccine Session I	
13:30 - 15:00	ORAL ABSTRACT SESSION MODERATED BY: John Clemens (International Centre for Diarrhoeal Disease Research, Bangladesh) & Laura Martin (GSK Vaccines Institute for Global Health)	
13:30 – 13:45	Creating a Sustainable Vaccine Landscape: Overcoming Barriers to Vaccine Development and Speed to Market	Vinita Vishwanarayan, Clinton Health Access Initiative
13:45 – 14:00	Comparison of Strategies and Thresholds for the Vi Conjugate Vaccine Against Typhoid Fever: A Cost-Effectiveness Modeling Study	Nathan Lo, Stanford University
14:00 - 14:15	Development of New Generation Monovalent Typhoid Conjugate Vaccine: Vi-CRM ₁₉₇	Akshay Goel, Biological E
14:15 – 14:30	Live Oral Typhoid Vaccine Ty21a Elicited Cross-Reactive Multifunctional IL-17A Producing T Cell Responses Against <i>Salmonella enterica</i> Serovars In Humans	Rezwanul Wahid, University of Maryland School of Medicine
14:30 - 14:45	Exploring <i>S.</i> Typhi-Specific HLA-E-Restricted Immune Responses in Pediatric and Adult Ty21a Recipients Using Mass Cytometry	Mark Rudolph, University of Maryland School of Medicine
14:45 – 15:00	Whole Genome Sequence Analysis of <i>Salmonella</i> Typhi Isolated in Thailand Before and After the Introduction of a National Immunisation Program	Zoe Dyson, University of Melbourne
15:00 – 15:30	Coffee Break and Posters	
15:30 - 17:45	Spotlight on Africa and Asia: Enteric Fever Surveillance SYMPOSIUM SESSION CHAIRED BY: Rob Breiman (Emory University) & Megan Carey (Bill & Melinda Gates Foundation)	
15:30 - 15:45	Epidemiology and Disease Burden of Typhoid Fever and iNTS Disease in Sub-Saharan Africa	Florian Marks, International Vaccine Institute
15:45 – 16:00	The Severe Typhoid Fever Surveillance in Africa (SETA) Program: An Overview	Justin Im, International Vaccine Institute
16:00 - 16:15	SETA: The First Data from the Six African Sites	Se Eun Park, International Vaccine Institute
16:15 - 16:30	African Risk Factor Prediction Model and Implications for Vaccination Strategies	Jong-Hoon Kim, International Vaccine Institute
16:30 - 16:45	At a Glance: The Surveillance for Enteric Fever in Asia Project (SEAP)	Denise Garrett, Coalition against Typhoid, Sabin Vaccine Institute
16:45 – 17:00	Approaches to Community Surveys for Typhoid Burden Estimation: Experience from SEAP	Alexander Yu, Stanford University
17:00 - 17:15	Salmonella Typhi and Paratyphi in Bangladesh and Their Antimicrobial Resistance	Samir Saha, Child Health Research Foundation
17:15 – 17:30	Looking Back While Moving Forward with Enteric Fever Surveillance in Pakistan	Farah Qamar, Aga Khan University
17:30 - 17:45	A Retrospective Review of Existing Hospital-Based Data on Enteric Fever in India	Dipika Sur, Translational Health Science and Technology Institute
17:45 – 18:00	Break	
18:00 – 19:30	Reception with Featured Remarks from Honorable Dr. Jane Aceng, Minister of Health, Uganda	

WEDNESDAY, APRIL 5		
08:30 - 10:00	Staying One Step Ahead: Prevention and Control PLENARY SESSION MODERATED BY: Jan Jacobs (Institute of Tropical Medicine Antwerp) & Buddha Basnyat (Oxford University Clinical Research Unit-Nepal)	
08:30 - 08:45	Development and Challenges in Developing a Sensitive Diagnostic Test for Typhoid Fever	Firdausi Qadri, International Centre for Diarrhoeal Disease and Research, Bangladesh
08:45 - 09:00	Vaccine and non-Vaccine Measures for Prevention and Control of Typhoid Fever	Eric Mintz, Centers for Disease Control and Prevention
09:00 - 09:15	Gaps in Knowledge in Therapeutics and Treatment	Chris Parry, Liverpool School of Tropical Medicine
09:15 - 09:30	The SaniPath Approach to Fecal Exposure Assessment and Application to Typhoid Transmission	Christine Moe, Emory University
09:30 - 09:45	A Broad-Spectrum Vaccine to Prevent Invasive Salmonella Disease in Sub-Saharan Africa	Myron Levine, University of Maryland School of Medicine
09:45 - 10:00	QUESTIONS AND DISCUSSION	
10:00 - 10:30	Coffee Break and Posters	
10:30 - 12:30	Crush the Resistance: Antimicrobial Resistance ORAL ABSTRACT SESSION MODERATED BY: Ken Simiyu (University of Maryland School of Medicine) & Gordon Dougan (Wellcome Trust Sanger Institute)	Session
10:30 - 10:45	Antibiogram Pattern, Mechanism of Fluoroquinolone Resistance and Seasonality of <i>Salmonella</i> Serotypes in a North Indian Tertiary Care Hospital	Rajni Gaind, Vardhman Mahavir Medical College & Safdarjung Hospital
10:45 – 11:00	The Impact of Antimicrobial Treatment on Pathogen Behavior at the Subpopulation Level During Invasive <i>Salmonella</i> Infections	Pietro Mastroeni, University of Cambridge
11:00 - 11:15	Changing Trends in Antibiograms of <i>Salmonella enterica</i> in Pediatric Population — A Hospital Based Study	Bhaskar Shenoy, Manipal Hospital, Bangalore, India
11:15 - 11:30	Health Outcomes from Multidrug-Resistant Salmonella in High-Income Countries: A Systematic Review	Andrea Parisi, The Australian National University
11:30 - 11:45	Multidrug Resistant Non-Typhoidal <i>Salmonella</i> Hotspots as Targets for Vaccine Use in Management	Sam Kariuki, Kenya Medical Research Institute
11:45 – 12:00	Whole Genome Sequencing for Identification, Drug Resistance, Detection and Epidemiology of <i>Salmonella</i> : A Revolution in Public Health Microbiology	Satheesh Nair, Public Health England
12:00 - 12:15	Emergence of a New <i>Salmonella</i> Typhimurium ST313 Lineage in D.R. Congo with Increased Antibiotic Resistance and Indications for Further Host Adaptation	Sandra Van Puyvelde, Institute of Tropical Medicine Antwerp
12:15 – 12:30	Antimicrobial Pre-Treatment and Blood Culture Positivity Rates for <i>S.</i> Typhi, iNTS and Other Invasive Bacterial Pathogens	Ondari D. Mogeni, International Vaccine Institute
12:30 - 13:30	Lunch and Posters	

	The Right Shot: Vaccine Session II	
13:30 - 15:00	ORAL ABSTRACT SESSION MODERATED BY: Chisomo Msefula (University of Malawi) & Rob Heyderman (University College London)	
13:30 – 13:45	Pre-clinical Immunogenicity of Typhoid (Vi-CRM ₁₉₇), Paratyphoid (O:2- CRM ₁₉₇) and Bivalent (Vi-CRM ₁₉₇ +O:2- CRM ₁₉₇) Conjugate Vaccine	Ravi P.N. Mishra, Biological E
13:45 – 14:00	Development of a Sustainable and Effective Vaccine Against Invasive Non-Typhoidal Salmonellosis (iNTS) in Africa	Gianluca Breghi, Fondazione Achille Sclavo
14:00 – 14:15	Development of a Vaccine Based on GMMA Against Invasive Non-Typhoidal <i>Salmonella</i> Disease in Sub-Saharan Africa	Oliver Koeberling, GSK Vaccines Institute for Global Health
14:15 – 14:30	<i>S.</i> Typhimurium Core-OPS (COPS) Glycoconjugate with the Homologous Serovar Phase 1 Flagellin as a Vaccine to Prevent Invasive <i>S.</i> Typhimurium Infections in Sub-Saharan Africa	Raphael Simon, University of Maryland School of Medicine
14:30 – 14:45	Measurement of LPS Specific IgA and IgG Avidity Maturation in Vivotif Vaccinees and Naturally Infected Typhoid Patients in Bangladesh	Farhana Khanam, International Centre for Diarrhoeal Disease and Research, Bangladesh
14:45 – 15:00	Forecasting Typhoid Conjugate Vaccine Introduction and Demand in Typhoid-Endemic Low- and Middle-Income Countries	Enusa Ramani, International Vaccine Institute
15:00 – 15:30	Coffee Break	
15:30 - 17:30	Salmonella Controlled Human Infection Models – Insights, Opportunities and Challenges SYMPOSIUM SESSION CHAIRED BY: Thomas Darton (University of Sheffield) & Andrew Pollard (University of Oxford)	
		rd (University of Oxford)
15:30 - 15:35		rd (University of Oxford) Andrew Pollard, University of Oxford
15:30 - 15:35 15:35 - 15:50	Thomas Darton (University of Sheffield) & Andrew Polla Salmonella Challenge Studies —	
	Thomas Darton (University of Sheffield) & Andrew PollaSalmonella Challenge Studies —Introduction and Historical PerspectiveAssessment of the Efficacy of a Vi-Tetanus ToxoidConjugate Vaccine Using a Controlled Human	Andrew Pollard, University of Oxford
15:35 – 15:50	 Thomas Darton (University of Sheffield) & Andrew Polla Salmonella Challenge Studies — Introduction and Historical Perspective Assessment of the Efficacy of a Vi-Tetanus Toxoid Conjugate Vaccine Using a Controlled Human Infection Model of Salmonella Typhi Investigating Immunity to Typhoid and Paratyphoid Fever — The Response to Re-Challenge in a Controlled 	Andrew Pollard, University of Oxford Celina Jin, University of Oxford
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15:35 - 15:50 15:50 - 16:05 16:05 - 16:20 16:20 - 16:35 16:35 - 16:50	Thomas Darton (University of Sheffield) & Andrew PollaSalmonella Challenge Studies —Introduction and Historical PerspectiveAssessment of the Efficacy of a Vi-Tetanus ToxoidConjugate Vaccine Using a Controlled HumanInfection Model of Salmonella TyphiInvestigating Immunity to Typhoid and ParatyphoidFever — The Response to Re-Challenge in a ControlledHuman Infection ModelIdentifying Correlates of Protection —Systemic Immune Responses to Salmonella Typhiand Paratyphi A InfectionMucosal Immune Responses to Salmonella Typhiand Paratyphi A InfectionComparative Analysis of Molecular Immune Profilesand Disease Pathogenesis in Typhoidand Paratyphoid FeverRecent Advances in the Identificationof Immunological Correlates of Protection	Andrew Pollard, University of OxfordCelina Jin, University of OxfordMalick Gibani, University of OxfordGiorgio Napolitani, University of OxfordLorena Preciado-Llanes, University of OxfordChristoph Blohmke, University of Oxford & Jennifer Hill, University of OxfordMarcelo Sztein, University of Maryland School
15:35 - 15:50 15:50 - 16:05 16:05 - 16:20 16:20 - 16:35 16:35 - 16:50 16:50 - 17:05	Thomas Darton (University of Sheffield) & Andrew PollaSalmonella Challenge Studies —Introduction and Historical PerspectiveAssessment of the Efficacy of a Vi-Tetanus ToxoidConjugate Vaccine Using a Controlled HumanInfection Model of Salmonella TyphiInvestigating Immunity to Typhoid and ParatyphoidFever — The Response to Re-Challenge in a ControlledHuman Infection ModelIdentifying Correlates of Protection —Systemic Immune Responses to Salmonella Typhiand Paratyphi A InfectionMucosal Immune Responses to Salmonella Typhiand Paratyphi A InfectionComparative Analysis of Molecular Immune Profilesand Disease Pathogenesis in Typhoidand Paratyphoid FeverRecent Advances in the Identificationof Immunological Correlates of Protectionin a Human S. Typhi Challenge Model	Andrew Pollard, University of OxfordCelina Jin, University of OxfordMalick Gibani, University of OxfordGiorgio Napolitani, University of OxfordLorena Preciado-Llanes, University of OxfordChristoph Blohmke, University of Oxford & Jennifer Hill, University of OxfordMarcelo Sztein, University of Maryland School of Medicine

THURSDAY, APRIL 6		
08:30 - 10:45	The Next Generation: Typhoid Conjugate Vaccine PLENARY SESSION MODERATED BY: Joachim Hombach (World Health Organization) & Vittal Mogasale (International Vaccine Institute)	
08:30 - 08:50	Overview on Vaccine Pipeline: Current Status and Future Plans	Sushant Sahastrabuddhe, International Vaccine Institute
08:50 - 09:05	Introduction of Typhoid Conjugate Vaccines: Opportunities and Challenges	Kathy Neuzil, University of Maryland School of Medicine
09:05 – 09:20	Development of a Bivalent <i>Salmonella</i> Typhi and Paratyphi A MAPS Vaccine	Rick Malley, Boston Children's Hospital/ Harvard Medical School
09:20 - 09:35	Cost-Effectiveness of Typhoid Conjugate Vaccine Strategies Across Five Settings in Africa and Asia	Virginia Pitzer, Yale School of Public Health
09:35 – 10:05	TYPBAR-TCV: A Clinical Development Review	Krishna Mohan, Bharat Biotech
10:05 - 10:20	First Planned Public Sector Introduction of a Typhoid Conjugate Vaccine in Navi Mumbai, India	Jason Andrews, Stanford University
10:20 - 10:45	QUESTIONS AND DISCUSSION	
10:45 – 11:15	Coffee Break and Posters	
11:15 – 12:45	Global Trends in Typhoid Fever: Determinants and Implications for Policy SYMPOSIUM SESSION CHAIRED BY: Zulfiqar Bhutta (Aga Khan University) & Kathy Neuzil (University of Maryland School of Medicine)	
11:15 – 11:25	Short Overview and Provenance of the Study	Zulfiqar Bhutta, Aga Khan University
11:25 – 11:40	Global Review and Epidemiology	Daina Als, SickKids Centre for Global Child Health
11:40 - 11:50	Additional Trend Data from Global Burden of Disease Study	Jeff Stanaway, Institute for Health Metrics and Evaluation
11:50 - 12:00	Country Case Study: Chile	Catterina Ferreccio, Escuela de Medicina Pontificia Universidad Católica de Chile
12:00 - 12:10	Country Case Study: Pakistan	Jai K Das, Aga Khan University
12:10 - 12:20	Country Case Study: Thailand	Amruta Radhakrishnan, The Hospital for Sick Children
12:20 - 12:30	Country Case Study: Nigeria	Kabiru Olusegun Akinyemi, Lagos State University
12:30 – 12:45	QUESTIONS AND DISCUSSION	
12:45 – 13:45	Lunch and Posters	

13:45 – 15:45	What's New, Doc? Late Breaker Abstracts MODERATED BY: Isaac Bogoch (University of Toronto) & Richard Strugnell (University of Melbourne)	
13:45 - 14:00	Virulence of Invasive <i>Salmonella</i> Typhimurium ST313 in Animal Infection Models	Ellen Higginson, University of Maryland School of Medicine
14:00 - 14:15	Average Treatment Cost for Typhoid Fever and Average Vaccine Delivery Cost per Dose for Each of the 54 GAVI-Eligible Countries	Joke Bilcke, University of Antwerp
14:15 – 14:30	Outbreak Investigation and Assessment of Risk Factors of Ceftriaxone Resistant <i>S.</i> Typhi from Hyderabad, Pakistan	Tahir Yousufzai, Aga Khan University
14:30 - 14:45	<i>Salmonella enterica</i> Serovars Isolated from Stool of Children Enrolled in the Global Enteric Multicenter Study in Africa	Irene Kasumba, University of Maryland School of Medicine
14:45 – 15:00	Leveraging the WHO-Coordinated IB-VPD Surveillance Platform for Enteric Fever Surveillance: Lessons from Bangladesh	Senjuti Saha, Child Health Research Foundation
15:00 - 15:15	A Case-Control Investigation into the Household Distribution of Invasive <i>Salmonellae</i> in Blantyre, Malawi	Melita Gordon, University of Liverpool
15:15 – 15:30	Knowledge, Attitudes and Practices Related to Typhoid Fever: The Case of Glen View Suburb, City of Harare, 2016	Kudzai Masunda, City of Harare Health Department
15:30 – 15:45	Spatial and Temporal Patterns of Typhoid and Paratyphoid Fever Outbreaks: A Worldwide Systematic Review, 1990-2016	Vittal Mogasale, International Vaccine Institute
15:45 – 16:15	Coffee Break	
16:15 – 17:30	Mission Possible: From Evidence to Action PLENARY SESSION MODERATED BY: Bruce Gellin (Sabin Vaccine Institute) & Narendra K. Arora (International Clinical Epidemiology Network)	
16:15 – 16:30	Global Typhoid Control in the Context of the Sustainable Development Goals: Pragmatism or Utopia?	Zulfiqar Bhutta, Aga Khan University
16:30 - 16:45	Considerations for Revised Global Typhoid Vaccination Policy and Strategies	Adwoa Bentsi-Enchill, World Health Organization
16:45 - 17:00	Breaking Good: Making Science Great Again	Rob Breiman, Emory University
17:00 - 17:20	QUESTIONS AND DISCUSSION	
17:20 - 17:25	Closing Remarks	Bruce Gellin, Sabin Vaccine Institute
17:25 – 17:30	Adjourn	Denise Garrett, Sabin Vaccine Institute