

9th International Conference on
**TYPHOID AND INVASIVE
 ENTERIC DISEASE** 4/30–5/3, 2015

Thursday, April 30th, 2015

6:00 pm – 7:00 pm	Conference check-in and welcome reception
7:00 pm – 7:05 pm	Overview of conference agenda and meeting objectives Imran Khan, Coalition against Typhoid Secretariat
7:05 pm – 7:10 pm	<i>Opening statements</i> Anita Zaidi, Bill & Melinda Gates Foundation
7:10 pm – 7:15 pm	<i>Welcome address</i> Mohammad Subuh, MPPM, Director General CDC
7:15 pm – 7:30 pm	<i>Salmonellosis: an Indonesian perspective</i> Pretty Multihartina, Director of Center for Biomedical and Basic Technology of Health, NIHRD
7:30 pm – 8:30 pm	Buffet dinner

Friday, May 1st, 2015

8:00 am – 9:30 am	Symposium <i>Epidemiology of Enteric Fever</i> <u>Moderator:</u> Eric Mintz, US Centers for Disease Control and Prevention
8:00 am – 8:05 am	<i>Introduction</i>
8:05 am – 8:20 am	<i>Typhoid Surveillance in Africa Project: Data Update</i> Florian Marks, International Vaccine Institute
8:20 am – 8:35 am	<i>Surveillance for Enteric Fever in Asia Project</i> Kashmira Date, US Centers for Disease Control and Prevention
8:35 am – 8:50 am	<i>Epidemiology and risk factors for typhoid fever in Central Division, Fiji, 2014</i> Namrata Prasad, University of Otago
8:50 am – 9:05 am	<i>Environmental, socio-cultural, and behavioral determinants of typhoid fever in the Central Division, Republic of Fiji: an interdisciplinary investigation at multiple scales</i> Aaron Jenkins, Edith Cowan University
9:05 am – 9:30 am	<i>Questions</i>
9:30 am – 10:00 am	Tea /Coffee Poster viewing
10:00 am – 11:45 pm	Oral Presentations: Epidemiology and Mathematical Modelling

10:00 am – 10:05 am	<u>Moderator:</u> Firdausi Qadri, icddr,b <i>Introduction</i>
10:05 am – 10:20 am	<i>Demographic and Clinical Characteristics of Adult Patients with Typhoid Fever in Cipto Mangunkusumo General Hospital Jakarta Indonesia in 2012-2014</i> Bonita Effendi, Universitas Indonesia
10:20 am – 10:35 am	<i>Mathematical modeling reveals the potential consequences of the worldwide emergence of the H58 haplotype of Salmonella Typhi</i> Virginia Pitzer, Yale School of Public Health
10:35 am – 10:50 am	<i>Modelling the contributions of malaria, HIV, and malnutrition to a decline in paediatric invasive non-typhoidal Salmonella disease, Malawi</i> Nicholas Feasey, Liverpool School of Tropical Medicine
10:50 am – 11:05 am	<i>Evaluation of a rapid real-time molecular assay to identify S. Typhi, S. Paratyphi A and S. spp from suspected typhoid blood specimen in Bangladesh</i> Jean-Noël Telles, Fondation Mérieux
11:05 am – 11:20 pm	<i>Typhoid fever in Bangladesh: from infection to protection</i> Firdausi Qadri, icddr,b
11:20 pm – 11:45 pm	<i>Questions</i>
11:45 pm – 1:45 pm	Buffet Lunch
1:45 pm – 3:15 pm	Panel discussion <i>Challenges and approaches in measuring typhoid fever disease burden</i> <u>Moderator:</u> Rob Breiman, Emory University <u>Co-Chair:</u> Anita Zaidi, Bill & Melinda Gates Foundation <i>Panelists</i> <i>Leon Ochiai, Sanofi Pasteur</i> <i>Samir Saha, Child Health Research Foundation</i> <i>Jacob John, Christian Medical College, Vellore</i> <i>Jeff Stanaway, Institute for Health Metrics and Evaluation</i> <i>Shousun Szu, Fogarty International Center, National Institutes of Health</i>
3:15 pm – 3:30 pm	Tea/ Coffee Poster Viewing
3:30 pm – 5:00 pm	Symposium <i>Water, Sanitation and Hygiene (WASH) interventions for enteric fever control</i> <u>Moderator:</u> Steve Luby, Stanford University
3:30 pm – 3:35 pm	<i>Introduction</i>
3:35 pm – 3:50 pm	<i>High rates of enteric fever diagnosis and low burden of disease in rural Nepal</i> Jason Andrews, Stanford University

3:50 pm – 4:05 pm	<i>Linking typhoid transmission to the water distribution system in Katmandu, Nepal</i> Stephen Baker, The Hospital for Tropical Diseases
4:05 pm – 4:20 pm	<i>Reduction in typhoid fever with improvement in water and sanitation infrastructure in Singapore</i> Goh Kee Tai, Ministry of Health, Singapore
4:20 pm – 4:35 pm	<i>Impact of a water quality intervention on typhoid incidence in urban India</i> Ayse Ercumen, University of California Berkeley
4:35 pm – 5:00 pm	Questions
5:00 pm – 6:00 pm	Keynote Presentation <u>Introduction:</u> TBD <i>The current state of Salmonella research: successes, challenges, barriers, research gaps</i> Gordon Dougan, Wellcome Trust Sanger Institute
Saturday, May 2nd, 2015	
8:00 am – 10:30 am	Symposium <i>Invasive Salmonellosis: Antimicrobial resistance, hospitalization and economic impact</i> <u>Moderator:</u> Samir Saha, Child Health Research Foundation
8:00 am – 8:05 am	<i>Introduction</i>
8:05 am – 8:20 am	<i>Data from Nigeria: hospitalizations and complications</i> Stephan Obaro, The University of Nebraska Medical Center
8:20 am – 8:35 am	<i>Epidemiological data from Africa: case fatality and association with drug resistance</i> Jan Jacobs, Institute of Tropical Medicine
8:35 am – 8:50 am	<i>Hospitalization and complication data from Karachi</i> Sajid Soofi, Aga Khan University
8:50 am – 9:05 am	<i>Data from Malawi: outbreak data and factors related to complications</i> Nicholas Feasey, Liverpool School of Tropical Medicine
9:05 am – 9:20 am	<i>Cost of Illness Due to Typhoid Fever in Pemba, Zanzibar, East Africa</i> Arthorn Riewpaiboon, Mahidol University
9:20 am – 9:35 am	<i>In-vitro resistance of Salmonella Typhi and Paratyphi A raises concern on the use of older fluoroquinolones as the first line therapy</i> Palpasa Kansakar, WHO-Nepal, National Public Health Library
9:35 am – 9:50 am	<i>Clinically and microbiologically derived azithromycin susceptibility breakpoints for Salmonella enterica serovars Typhi and Paratyphi A</i> Christopher Parry, London School of Hygiene and Tropical Medicine
9:50 am - 10:05 am	<i>Evolving susceptibility patterns in invasive Salmonella typhi isolates in South Africa during 2003 to 2014</i> Arvinda Sooka, National Institute for Communicable Diseases
10:05 am – 10:30 am	Questions
10:30 am – 11:00 am	Tea/Coffee Poster viewing

11:00 am – 12:40 pm	<p>Symposium <i>Genomics and host susceptibility to enteric fever and NTS disease</i></p> <p><u>Moderator:</u> Andy Pollard, Oxford University</p>
11:00 am – 11:05 am	<i>Introduction</i>
11:05 am – 11:20 am	<i>HLA and resistance to enteric fever</i> Sarah Dunstan, The University of Melbourne
11:20 am - 11:35 am	<i>Immunity to invasive Salmonella infections: lessons from animal models and man</i> Pietro Mastroeni, University of Cambridge
11:35 am – 11:50 pm	<i>Dissecting the transcriptome during acute enteric fever: Novel insights into human host-responses to infection with Salmonella Typhi</i> Christoph Blohmke, Oxford Vaccine Group, University of Oxford
11:50 pm – 12:05 pm	<i>Salmonella Typhi host specificity: new insights from the study of Typhoid toxin</i> Jorge E. Galán, Yale University School of Medicine
12:05 pm – 12:30 pm	<i>Questions</i>
12:30 pm – 1:30 pm	Buffet Lunch
1:30 pm – 3:00 pm	<p>Symposium <i>The epidemiology, clinical presentation, and outcomes of invasive NTS disease</i></p> <p><u>Moderator:</u> Laura Martin, Vaccines Institute for Global Health, A GSK company</p>
1:30 pm – 1:35 pm	<i>Introduction</i>
1:35 pm – 1:50 pm	<i>Understanding NTS transmission</i> Karen Keddy, National Institute for Communicable Diseases
1:50 pm – 2:05 pm	<i>iNTS burden in sub-Saharan African children: an African view</i> Simon Kariuki, KEMRI-CDC
2:05 pm – 2:20 pm	<i>Dissecting immune responses against iNTS</i> Tonney Nyirenda, Malawi-Liverpool-Wellcome Trust Clinical Research Programme
2:20 pm – 2:35 pm	<i>Requirements for tackling NTS disease</i> Allan Saul, Vaccines Institute for Global Health, A GSK company
2:35 pm – 3:00 pm	<i>Questions</i>
3:00 pm – 3:30 pm	<p>Coffee/Tea Poster Viewing</p>
3:30 pm – 5:15 pm	<p>Symposium <i>Paratyphoid: Epidemiological perspective and path to control</i></p> <p><u>Moderator:</u> Stephen Baker, OUCRU VN</p> <p><u>Co-Chair:</u> Sushant Sahastrabudde, International Vaccine Institute</p>
3:30 pm – 3:35 pm	<i>Introduction</i>
3:35 pm – 3:50 pm	<i>Evolutionary history of serovar Paratyphi A</i> Mark Achtman, University of Warwick

3:50 pm – 4:05 pm	<i>The growing burden of S. Paratyphi A in Kathmandu: epidemiological observations from a decade of clinical trials</i> Corinne Thompson, Oxford University Clinical Research Unit
4:05 pm – 4:20 pm	<i>Development of a Human Model of Salmonella enterica serovar Paratyphi A challenge in Healthy Adult Volunteers.</i> Hazel Dobinson, Oxford University
4:20 pm – 4:35 pm	<i>The current status of vaccine development for control of Salmonella Paratyphi A</i> Rodney Carbis, International Vaccine Institute
4:35 pm – 4:50 pm	<i>Salmonella enterica serotype Paratyphi A: Common cause of Salmonellosis among patients attending Om Hospital and Research Centre, Kathmandu, Nepal</i> Ram Krishna Shrestha, Om Hospital and Research Center
4:50 pm – 5:15 pm	Questions
Sunday, May 3rd, 2015	
8:00 am – 9:45 am	Symposium <i>Past experience from typhoid vaccine implementation: translating global policy to country use</i> <u>Moderator:</u> Kim Mulholland, London School of Hygiene and Tropical Medicine
8:00 am – 8:05 am	<i>Introduction</i>
8:05 am – 8:20 am	<i>Nepal:</i> YV Pradhan, Society of Public Health Physicians, Nepal (SOPHYN)
8:20 am – 8:35 am	<i>Pakistan:</i> Dr. Mazhar Khamisani, Health department SINDH Pakistan
8:35 am – 8:50 am	<i>Sri Lanka:</i> Dr. Paba Palihawadana, Ministry of Health
8:50 am – 9:05 am	<i>Integration of typhoid conjugate vaccine in national immunization schedules: Opportunities and Challenges</i> Krishna Mohan, Bharat Biotech International Limited
9:05 am – 9:20 am	<i>New Vaccine Introduction Decision Making: Principles, Practices, and Realities</i> Michael Friedman, WHO Indonesia
9:20 am – 9:45 am	Questions
9:45 am – 10:15 am	Tea /Coffee Poster viewing
10:15 am – 12:00 pm	Symposium <i>Development of vaccines against typhoid, paratyphoid and NTS</i> <u>Moderator:</u> Adwoa Bentsi-Enchill, World Health Organization
10:15 am – 10:20 am	<i>Introduction</i>
10:20 am – 10:40 am	<i>Typbar-TCV™ - A Vi polysaccharide-Tetanus Toxoid conjugate vaccine: Safety and immunogenicity in healthy infants, children and adults in typhoid endemic areas.</i> Vineeth Varanasi, Bharat Biotech International, Limited
10:40 am – 10:55 am	<i>Progress in the development of a Vi-DT conjugate vaccine</i> Erman Tritama, Bio Farma

10:55 am – 11:10 am	<i>Progress in the development of a Vi-CRM₁₉₇ conjugate vaccine</i> Akshay Goel, Biological E
11:10 am – 11:25 am	<i>Live attenuated oral vaccine, age and anti-Vi antibody status at baseline significantly affect attack rate in a human Salmonella Typhi challenge model</i> Tom Darton, University of Oxford
11:25 am – 11:40 am	<i>Bivalent Core and O polysaccharide (COPS)-Flagellin conjugate vaccine against invasive non-typhoidal Salmonella Enteritidis and Typhimurium infections</i> Raphael Simon, University of Maryland School of Medicine
11:35 am – 12:00 am	<i>Questions</i>
12:00 pm – 1:00 pm	Buffet Lunch
1:00 pm – 2:30 pm	Panel Discussion <i>Emerging considerations for invasive non-typhoidal Salmonella disease prevention</i> <u>Moderator:</u> John Crump, University of Otago <i>Panelists</i> <i>Karen Keddy, National Institute for Communicable Diseases</i> <i>Jan Jacobs, Institute of Tropical Medicine</i> <i>Antonio Martin, Medical Research Council, the Gambia Unit</i> <i>Sam Kariuki, KEMRI-Wellcome Trust Sanger Institute</i>
2:30 pm – 3:00 pm	Coffee/Tea Poster Viewing
3:00 pm -- 4:30 pm	Panel Discussion <i>Typhoid conjugate vaccines for public use: overcoming barriers</i> <u>Moderator:</u> Zulfiqar Bhutta, University of Toronto <i>Panelists</i> <i>WHO: Thomas Cherian</i> <i>Gavi Alliance: Hope Johnson</i> <i>Bill & Melinda Gates Foundation: Duncan Steele</i> <i>Developing Countries Vaccine Manufacturers Network: Mahendra Suhardono</i>
4:30 pm – 5:00 pm	Closing Remarks and Conference Highlights Zulfiqar Bhutta, University of Toronto

Scientific and Organizing Committee

- Abraham Aseffa: Armauer Hansen Research Institute
- Abdramane Soura: Ouagadougou Health and Demographic Surveillance System
- Adwoa Bentsi-Enchill: World Health Organization
- Andrew Pollard: Oxford University
- Brad Gessner: Agence de Médecine Préventive
- Charles Wiysonge: University of Cape Town Institute of Infectious Disease and Molecular Medicine
- Deepak Bajracharya: Group for Technical Assistance
- Duncan Steele: Bill & Melinda Gates Foundation
- G. Balakrish Nair: Translational Health Science and Technology Institute
- Imelda Emelia: Bio Farma
- Imran Khan: Sabin Vaccine Institute
- John Clemens: icddr, b
- John Crump: University of Otago
- Kashmiri Date: US Centers for Disease Control and Prevention
- Laura Martin: Novartis Vaccines Institute for Global Health
- Rob Breiman: Emory University
- Samir Saha: Child Health Research Foundation
- Stephen Baker: Oxford University Clinical Research Unit, Vietnam
- Steve Luby: Stanford University
- Sushant Sahastrabuddhe: International Vaccine Institute
- Zulfiqar Bhutta: University of Toronto