### Thursday, April 30th, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>7:00 pm – 9:00 pm</td>
<td>Welcome Reception and Dinner- Summer Garden</td>
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| 7:30 pm – 8:00 pm | **Opening Remarks**  
|                  | Imran Khan, Coalition against Typhoid Secretariat  
|                  | Anita Zaidi, Bill & Melinda Gates Foundation  
|                  | Pretty Multihartina, Director of Central for Biomedical and Basic Technology of Health, NIHRD (tentative) |

### Friday, May 1st, 2015

<table>
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<th>Time</th>
<th>Event</th>
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| 8:00 am – 8:55 am | **Keynote Presentation**  
|                  | Moderator: John Clemens, icddr, b  
|                  | *The current state of Salmonella research: successes, challenges, barriers, research gaps*  
|                  | Gordon Dougan, Wellcome Trust Sanger Institute |
| 9:00 am – 10:00 am | **Symposium**  
|                  | **Epidemiology of Enteric Fever**  
|                  | Moderator: Eric Mintz, US Centers for Disease Control and Prevention  
| 9:00 am – 9:05 am | **Introduction**  
| 9:05 am – 9:25 am | **Typhoid Surveillance in Africa Project: Data Update**  
|                  | Florian Marks, International Vaccine Institute  
| 9:25 am – 9:45 am | **Surveillance for Enteric Fever in Asia Project**  
|                  | Kashmira Date, US Centers for Disease Control and Prevention |
| 9:45 am – 10:00 am | **Epidemiology and risk factors for typhoid fever in Central Division, Fiji, 2014**  
|                  | Namrata Prasad, University of Otago  
| 10:00 am -10:15 am | **Questions**  
| 10:15 am – 10:45 am | **Tea /Coffee**  
|                  | **Poster viewing**  
| 10:45 am – 12:45 pm | **Oral Presentations: Epidemiology and Mathematical Modelling**  
|                  | Moderator: Firdausi Qadri, icddr, b  
| 10:45 am – 10:50 am | **Introduction**

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*Sabin Vaccine Institute*
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<tr>
<th>Time</th>
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| 10:50 am – 11:05 am | Demographic and Clinical Characteristics of Adult Patients with Typhoid Fever in Cipto Mangunkusumo General Hospital Jakarta Indonesia in 2012-2014  
Bonita Effendi, Universitas Indonesia |
| 11:05 am – 11:20 am | Environmental, socio-cultural, and behavioural determinants of typhoid fever in the Central Division, Republic of Fiji: an interdisciplinary investigation at multiple scales  
Aaron Jenkins, Edith Cowan University |
| 11:20 am – 11:35 am | Mathematical modeling reveals the potential consequences of the worldwide emergence of the H58 haplotype of Salmonella Typhi  
Virginia Pitzer, Yale School of Public Health |
| 11:35 am – 11:50 am | Modelling the contributions of malaria, HIV, and malnutrition to a decline in paediatric invasive non-typhoidal Salmonella disease, Malawi  
Nicholas Feasey, Liverpool School of Tropical Medicine |
| 11:50 am – 12:05 pm | Evaluation of a rapid real-time molecular assay to identify S. Typhi, S. ParatyphiA and S. spp from suspected typhoid blood specimen in Bangladesh  
Jean-Noël Telles, Fondation Mérieux |
| 12:05 pm – 12:25 pm | Typhoid fever in Bangladesh: from infection to protection  
Firdausi Qadri, icddr, b |
| 12:25 pm – 12:45 pm | Questions |
| 12:45 pm – 1:45 pm | Buffet Lunch  
Poster viewing |
| 1:45 pm – 3:15 pm | Panel discussion  
Challenges and approaches in measuring typhoid fever disease burden  
Moderator: Rob Breiman, Emory University  
Co-Chair: Anita Zaidi, Bill & Melinda Gates Foundation  
Panelists  
Leon Ochiai, Sanofi Pasteur  
Samir Saha, Child Health Research Foundation  
Jacob John, Christian Medical College, Vellore  
Jeff Stanaway, Institute for Health Metrics and Evaluation |
| 3:15 pm – 3:30 pm | Tea/ Coffee  
Poster Viewing |
| 3:30 pm – 5:00 pm | Symposium  
Water, Sanitation and Hygiene (WASH) interventions for enteric fever control  
Moderator: Steve Luby, Stanford University |
| 3:30 pm – 3:35 pm | Introduction |
| 3:35 pm – 3:50 pm | Linking typhoid transmission to the water distribution system in Katmandu, Nepal  
Stephen Baker, The Hospital for Tropical Diseases |
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| 3:50 pm – 4:05 pm | Reduction in typhoid fever with improvement in water and sanitation infrastructure in Singapore  
Goh Kee Tai, Ministry of Health, Singapore |
| 4:05 pm – 4:20 pm | Impact of a water quality intervention on typhoid incidence in urban India  
Ayse Ercumen, University of California Berkeley |
| 4:20 pm – 4:35 pm | Jason Andrews, Stanford University |
| 4:35 pm – 5:00 pm | Questions |
| 8:00 am – 10:30 am | Symposium: Invasive Salmonelloses: Antimicrobial resistance, hospitalization and economic impact  
Moderator: Samir Saha, Child Health Research Foundation |
| 8:00 am – 8:05 am | Introduction |
| 8:05 am – 8:20 am | Data from Nigeria: hospitalizations and complications  
Stephan Obaro, The University of Nebraska Medical Center |
| 8:20 am – 8:35 am | Epidemiological data from Africa: case fatality and association with drug resistance  
Jan Jacobs, Institute of Tropical Medicine |
| 8:35 am – 8:50 am | Hospitalization and complication data from Karachi  
Sajid Soofi, Aga Khan University |
| 8:50 am – 9:05 am | Data from Malawi: outbreak data and factors related to complications  
Nicholas Feasey, Liverpool School of Tropical Medicine |
| 9:05 am – 9:20 am | Cost of Illness Due to Typhoid Fever in Pemba, Zanzibar, East Africa  
Arthorn Riewpaiboon, Mahidol University |
| 9:20 am – 9:35 am | In-vitro resistance of Salmonella Typhi and Paratyphi A raises concern on the use of older fluoroquinolones as the first line therapy  
Palpasa Kansakar, WHO-Nepal, National Public Health Library |
| 9:35 am – 9:50 am | Clinically and microbiologically derived azithromycin susceptibility breakpoints for Salmonella enterica serovars Typhi and Paratyphi A  
Christopher Parry, London School of Hygiene and Tropical Medicine |
| 9:50 am - 10:05 am | Evolving susceptibility patterns in invasive Salmonella typhi isolates in South Africa during 2003 to 2014  
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 | Symposium: Genomics and host susceptibility to enteric fever and NTS disease  
Moderator: Andy Pollard, Oxford University |
<p>| 11:00 am – 11:05 am | Introduction |</p>
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<tr>
<td>11:05 am – 11:20 am</td>
<td><strong>HLA and resistance to enteric fever</strong>&lt;br&gt;Sarah Dunstan, The University of Melbourne</td>
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<td>11:20 am - 11:35 am</td>
<td><strong>Immunity to invasive Salmonella infections: lessons from animal models and man</strong>&lt;br&gt;Pietro Mastroeni, University of Cambridge</td>
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<td>11:35 am – 11:50 pm</td>
<td><strong>Dissecting the transcriptome during acute enteric fever: Novel insights into human host-responses to infection with Salmonella Typhi</strong>&lt;br&gt;Christoph Blohmke, Oxford Vaccine Group, University of Oxford</td>
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<td>11:50 pm – 12:05 pm</td>
<td><strong>Salmonella Typhi host specificity: new insights from the study of Typhoid toxin</strong>&lt;br&gt;Jorge E. Galán, Yale University School of Medicine</td>
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<td>12:05 pm – 12:30 pm</td>
<td><strong>Questions</strong></td>
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<td>12:30 pm – 1:30 pm</td>
<td><strong>Buffet Lunch</strong></td>
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<td><strong>Poster viewing</strong></td>
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<td>1:30 pm – 3:00 pm</td>
<td><strong>Symposium</strong>&lt;br&gt;&lt;i&gt;The epidemiology, clinical presentation, and outcomes of invasive NTS disease&lt;/i&gt;&lt;br&gt;<strong>Moderator:</strong> Laura Martin, Novartis Vaccine Institute for Global Health</td>
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<td>1:30 pm – 1:35 pm</td>
<td><strong>Introduction</strong></td>
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<td>1:35 pm – 1:50 pm</td>
<td><strong>Understanding NTS transmission</strong>&lt;br&gt;Karen Keddy, National Institute for Communicable Diseases</td>
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<td>1:50 pm – 2:05 pm</td>
<td><strong>iNTS burden in sub-Saharan African children: an African view</strong>&lt;br&gt;Simon Kariuki, KEMRI-CDC</td>
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<td>2:05 pm – 2:20 pm</td>
<td><strong>Dissecting immune responses against iNTS</strong>&lt;br&gt;Tonney Nyirenda, Malawi-Liverpool-Wellcome Trust Clinical Research Programme</td>
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<td>2:20 pm – 2:35 pm</td>
<td><strong>Requirements for tackling NTS disease</strong></td>
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<td>2:35 pm – 3:00 pm</td>
<td><strong>Questions</strong></td>
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<td>3:00 pm – 3:30 pm</td>
<td><strong>Coffee/Tea</strong></td>
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<td>3:30 pm – 5:15 pm</td>
<td><strong>Symposium</strong>&lt;br&gt;&lt;i&gt;Paratyphoid: Epidemiological perspective and path to control&lt;/i&gt;&lt;br&gt;<strong>Moderator:</strong> Stephen Baker, OUCRU VN&lt;br&gt;<strong>Co-Chair:</strong> Sushant Sahastrabuddhe, International Vaccine Institute</td>
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<td>3:30 pm – 3:35 pm</td>
<td><strong>Introduction</strong></td>
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<td>3:35 pm – 3:50 pm</td>
<td><strong>Mark Achtman, University of Warwick</strong></td>
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<td>3:50 pm – 4:05 pm</td>
<td><strong>The growing burden of S. Paratyphi A in Kathmandu: epidemiological observations from a decade of clinical trials</strong>&lt;br&gt;Corinne Thompson, Oxford University Clinical Research Unit</td>
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<td>4:05 pm – 4:20 pm</td>
<td><strong>Hazel Dobinson, Oxford University</strong></td>
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4:20 pm – 4:35 pm  Rodney Carbis, International Vaccine Institute  
*Salmonella enterica serotype Paratyphi A: Common cause of Salmonelloses among patients attending Om Hospital and Research Centre, Kathmandu, Nepal*  
Ram Krishna Shrestha, Om Hospital and Research Center

4:50 pm – 5:15 pm  Questions

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**Sunday, May 3rd, 2015**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter/Institution</th>
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| 8:00 am – 10:00 am | **Symposium**  
*Development of vaccines against typhoid, paratyphoid and NTS*  
**Moderator:** Adwoa Bentsi-Enchill, World Health Organization |
| 8:05 am – 8:20 am | **Typbar-TCV™ - A Vi polysaccharide-Tetanus Toxoid conjugate vaccine: Safety and immunogenicity in healthy infants, children and adults in typhoid endemic areas.**  
Vineeth Varanasi, Bharat Biotech International, Limited |
| 8:20 am – 8:35 am | **Progress in the development of a Vi-DT conjugate vaccine**  
Erman Tritama, Bio Farma |
| 8:35 am – 8:50 am | **Progress in the development of a Vi-CRM197 conjugate vaccine**  
Akshay Goel, Biological E |
| 8:50 am – 9:05 am | **Live attenuated oral vaccine, age and anti-Vi antibody status at baseline significantly affect attack rate in a human Salmonella Typhi challenge model**  
Tom Darton, University of Oxford |
| 9:05 am – 9:20 am | **Bivalent Core and O polysaccharide (COPS)-Flagellin conjugate vaccine against invasive non-typhoidal Salmonella Enteritidis and Typhimurium infections**  
Raphael Simon, University of Maryland School of Medicine |
| 9:20 am – 9:45 am | Questions |
| 10:00 am – 10:30 am | Tea /Coffee  
Poster viewing |
| 10:30 am – 12:00 pm | **Symposium**  
*Past experience from typhoid vaccine implementation: translating global policy to country use*  
**Moderator:** Zulfiqar Bhutta, Aga Khan University |
| 10:30 am – 10:35 am | Introduction |
| 10:35 am – 10:50 am | **Nepal:** YV Pradhan, Society of Public Health Physicians, Nepal (SOPHYN) |
| 10:50 am – 11:05 am | **Pakistan:** Dr. Mazhar Khamisani, Health department SINDH Pakistan |
| 11:05 am – 11:20 am | **Sri Lanka:** Dr. Paba Palihawadana, Ministry of Health |
| 11:20 am – 11:35 am | **Integration of typhoid conjugate vaccine in national immunization schedules: Opportunities and Challenges**  
Krishna Mohan, Bharat Biotech International Limited |
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Michael Friedman, WHO Indonesia |
| 11:50 pm – 12:00 pm | Questions                                                             |
| 12:00 pm – 1:00 pm  | Buffet Lunch                                                          |
|                     | Poster Viewing                                                        |
| 1:00 pm – 2:30 pm   | Panel Discussion                                                      |
|                     | Emerging Considerations for NTS Prevention                            |
|                     | Moderator: John Crump, University of Otago                            |
|                     | Panelists                                                             |
|                     | Karen Keddy, National Institute for Communicable Diseases             |
|                     | Jan Jacobs, Institute of Tropical Medicine                           |
|                     | Antonio Martin, Medical Research Council, the Gambia Unit             |
|                     | Sam Kariuki, KEMRI-Wellcome Trust Sanger Institute                    |
| 2:30 pm – 3:00 pm   | Coffee/Tea                                                            |
|                     | Poster Viewing                                                        |
| 3:00 pm – 4:30 pm   | Panel Discussion                                                      |
|                     | Typhoid conjugate vaccines for public use: overcoming barriers        |
|                     | Moderator: John Clemens, icddr, b                                     |
|                     | Panelists                                                             |
|                     | WHO: Thomas Cherian                                                   |
|                     | Gavi Alliance: Hope Johnson                                           |
|                     | Bill & Melinda Gates Foundation: Duncan Steele                       |
|                     | UNICEF: TBD                                                           |
|                     | Sabin Vaccine Institute: Imran Khan                                   |
| 4:30 pm – 5:00 pm   | Closing Remarks and Conference Highlights                             |
|                     | TBD                                                                   |
**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
- Kashmira 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