### VED 2017

**FINAL ORAL & POSTER PROGRAMME**

**SCIENTIFIC ADVISORY PANEL**

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution, Location</th>
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<tbody>
<tr>
<td>Duncan Steele</td>
<td>Bill &amp; Melinda Gates Foundation, USA</td>
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<tr>
<td>Timo Vesikari</td>
<td>University of Tampere, Finland</td>
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<td>Carol O. Tacket</td>
<td>University of Maryland, USA</td>
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<td>Mary Estes</td>
<td>Baylor College of Medicine, USA</td>
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<td>Myron M. Levine</td>
<td>University of Maryland, USA</td>
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<td>John D. Clemens</td>
<td>ICDDR, Dhaka, Bangladesh</td>
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<td>Kevin Killeen</td>
<td>Matrivax Corporation, Boston, USA</td>
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<td>Ann-Mari Svennerholm</td>
<td>Göteborg University, Sweden</td>
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<td>Linda J. Sall</td>
<td>Ohio State University, USA</td>
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<td>Roger I. Glass</td>
<td>Fogarty Center, NIH, Bethesda, USA</td>
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<td>Harry B. Greenberg</td>
<td>Stanford University, USA</td>
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<td>John D. Clements</td>
<td>Tulane University, USA</td>
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<td>Umesh Parashar</td>
<td>CDC, Atlanta, USA</td>
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<td>David Sack</td>
<td>Johns Hopkins University, Baltimore, Maryland, USA</td>
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<td>Mark Riddle</td>
<td>NMRC, Bethesda, Maryland, USA</td>
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<td>Armelle Phalipon</td>
<td>Pasteur Institute, Paris, France</td>
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<td>Robert Hall</td>
<td>NIAID/NIH, Bethesda, Maryland, USA</td>
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<td>Serge Debrus</td>
<td>GSK Biologicals, Wavre, Belgium</td>
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<td>Ladaporn Bothidatta</td>
<td>AFRIMS, Bangkok, Thailand</td>
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<td>Bernd Benninghoff</td>
<td>GSK Biologicals, Wavre, Belgium</td>
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<td>Daniel Cohen</td>
<td>Tel Aviv University, Tel Aviv, Israel</td>
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<td>Martin Mengel</td>
<td>Agence de Médecine Préventive, Paris, France</td>
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<td>Robert F. Bargatze</td>
<td>Takeda Vaccines Inc., Bozeman, Montana, USA</td>
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<td>Hugues Bogaerts</td>
<td>Consultant, Takeda Vaccines, Belgium</td>
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<td>Richard Walker</td>
<td>PATH, Washington DC, USA</td>
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<td>Fred Cassels</td>
<td>PATH, Washington DC, USA</td>
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<td>Shahida Baqar</td>
<td>NIAID/NIH, Bethesda, Maryland, USA</td>
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**View future events at www.meetingsmanagement.com**
SESSION 1: BURDEN OF DISEASE

Moderator: Richard Walker
(PATH, Washington DC, USA)
09.00-09.30
‘Changing the diarrheal disease narrative, now’
Eileen Quinn
(PATH, Washington DC, USA)

09.30-10.00
‘Vaccine impact on diarrhea in Africa (VIDA) study of the incidence, etiology and adverse clinical consequences of moderate-to-severe diarrhea (MSD) in Sub-Saharan Africa following introduction of rotavirus vaccine’
Karen L. Kotloff
(Center for Vaccine Development, Institute for Global Health, University of Maryland School of Medicine, Baltimore, Maryland, USA)

10.00-10.30
‘The global burden of diarrheal diseases: Results from the global burden of disease study 2016’
Christopher Troeger, Ibrahim Khalil, Puja Rao, Manny Garcia, Shijun Cao, Ali H. Mokdad, Simon Hay and Robert Reiner
(Institute for Health Metrics and Evaluation, University of Washington, Seattle, Washington, USA)
10.30-10.50
‘Etiology of diarrhea in hospitalized patients at the International Centre for Diarrhoeal Disease Research, Bangladesh from 2014-2016 using quantitative PCR’
Mami Taniuchi1, James Platts-Mills1, Abu Sayeed1, Farhana Khanam2, Ashraful Islam Khan2, Jie Liu1, Eric Houpt1 and Firdausi Qadri2
(1 Division of Infectious Diseases and International Health, University of Virginia, Charlottesville, USA; 2 Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh)
10.50-11.20
Coffee Break & Poster Session A Set-Up

SESSION 2: ETEC VACCINES I

Moderators: John Clements1 and Lou Bourgeois2
(1 Tulane University, New Orleans, Louisiana, USA; 2 PATH, Washington DC, USA)
11.20-11.40
‘Development of a recombinant CS6 based ETEC vaccine’
Michael Prouty1, Steven Poole1, Milton Maciel1, Yang Liu1, Amritha Ramakrishnan1, Annette McVeigh1, April Fordyce1, Nate Reynolds1, Mark Simons2, David Poncet1, Premkumar Dinadayala2, Sabrina Joseph2, Mark Riddle2, Jon Heinrichs1, Geneviève Renaud-Mongénie3 and Stephen Savarino1,3
(¹ Naval Medical Research Center, Silver Spring, Maryland, USA; ² Naval Medical Research Unit Number Six, Lima, Peru; ³ Sanofi-Pasteur, Marcy l’Etoile, France and Swiftwater, Pennsylvania, USA)
11.40-12.00
‘Prevalence and molecular conservation of novel candidate antigens in a diverse population of Enterotoxigenic Escherichia coli isolates’
F. Matthew Kuhlmann1, Jie Ning1, Madeline Pashos1, John Martin1, Makedonka Mitreval1, Tracy H. Hazen2, David A. Rasko2, Felipe Del Canto3, Roberto Vidal4, Elizabeth Cebelinski3, Dave Boxrud4, Firdausi Qadri6 and James M. Fleckenstein1,7
(1 Department of Medicine, Division of Infectious Diseases, and the 2 McDonnell Genome Institute, Washington University, St. Louis, Missouri, USA; 3 The Department of Microbiology & Immunology, Institute for Genome Sciences, University of Maryland School of Medicine, Baltimore, Maryland, USA; 4 Universidad de Chile, Santiago, Chile; 5 Minnesota Department of Health, Molecular Epidemiology, Infectious Disease Laboratory, St. Paul, Minnesota, USA; 6 International Centre for Diarrhoeal Disease Research, Bangladesh, ICDDR,B, Dhaka, Bangladesh; 7 Medicine Service, Veterans Affairs Medical Center, St. Louis, Missouri, USA)
12.00-12.20
‘Heat-stable enterotoxin (ST) cloaks ETEC from the host immune system and binds iron’
Mallory C. Kiefer, Carli C. Thompson, David L. Bauer, Elizabeth B. Norton, John D. Clements and Jacob P. Bitoun
(Department of Microbiology and Immunology, Tulane University School of Medicine, New Orleans, Louisiana, USA)
12.20-12.40
‘Passive immunity leads to enhanced priming of the immune system upon oral immunization with F4 fimbriae’
Ut V. Nguyen1, Bert Devriendt1, Bruno M. Goddeeris1 and Eric Cox2
(¹ Faculty of Veterinary Medicine, Ghent University, Merebeke, Belgium; ² Faculty of Bioscience Engineering, KU Leuven, Leuven, Belgium)
12.40-13.00
‘Novel structure-based MEFA (multiepitope fusion antigen) vaccinology for a vaccine candidate inducing antibodies against 15 adhesins of enterotoxigenic Escherichia coli (ETEC)’
Qiangde Duan1, Rahul Nandre1, Xiaosai Ruan1, David A. Sack2 and Weiping Zhang1
(1 Department of Diagnostic Medicine/Pathobiology, Kansas State University College of Veterinary Medicine, Manhattan, Kansas, USA; 2 Department of International Health, Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland, USA)
13.00-14.00
Lunch Break & Poster Session A
SESSION 3: ETEC VACCINES II

Moderators: Ann-Mari Svennerholm¹ and Richard Walker²

¹University of Gothenburg, Gothenburg, Sweden; ²PATH, Washington DC, USA

14.00-14.10
‘ETEC and Shigella vaccine development: A priority for WHO’s Initiative for Vaccine Research’
Birgitte K. Giersing and Martin Friede (Initiative for Vaccine Research, Dept. of Immunization, Vaccines and Biologicals, World Health Organization, Geneva, Switzerland)

14.10-14.30
‘Re-establishment and use of the ETEC B7A CHIM to assess the efficacy of orally administered bovine serum antibodies against CS6 or whole cell B7A’
Kawser Talaat¹, A. Louis Bourgeois¹, Christopher Duplessis², Chad K. Porter³, Milton Maciel Jr.², Ramiro Gutierrez², Barbara DeNearing⁴, Brittany Adjoondani¹, Rachel Adkinson¹, Kayla Jaep¹, Brittany Feijoo¹, Jessica Brubaker¹, Aleksandra Beselman¹, Subhra Chakraborty¹, David Sack¹, Jane Halpern¹, Stefanie Tropl¹, Mark Riddle², Sabrina Joseph³, Steven Poole³ and Michael Prouty²

¹Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA; ²Naval Medical Research Center, Silver Spring, Maryland, USA; ³Tulane University, New Orleans, Louisiana, USA; ⁴Johns Hopkins Bayview Medical Center, Baltimore, MD)

14.30-14.50
‘Optimising LT antibody analyses to predict protection from oral H10407’
Milton Maciel Jr.¹, Robin Baudier², Eduardo Valli², Clarissa D. Mulloy², Chad Porter¹, Ramiro Gutierrez¹, John Clements² and Elizabeth Norton¹

¹Naval Medical Research Center, Silver Spring, Maryland, USA; ²Tulane University, Atlanta, Georgia, USA; ³Oak Ridge Institute for Science and Education, Oak Ridge, Tennessee, USA; ⁴Baylor College of Medicine, Houston, Texas, USA

15.10-15.30
‘A Phase II/Ii trial of the oral inactivated ETEC Vaccine (ETVAX; OEV 122) in descending age groups in Bangladesh’
Firdausi Cadri, Mohiul Islam Chowdhury¹, Taufiqur Rahman Bhuiyan¹, Farhana Khanam¹, Tasnuva Ahmed¹, Marjaan Akhtar¹, Anna Lundgren³, Richard Walker³, Lou Bourgeois³, Alan Fix³, Tom Wierzba³ and Ann-Mari Svennerholm²

¹ICDDR,B, Dhaka, Bangladesh; ²University of Gothenburg, Gothenburg, Sweden; ³PATH, Washington DC, USA

15.30-15.50
‘OEV-123 – a clinical trial on ETVAX, an oral vaccine against enterotoxigenic escherichia coli diarrhea’
Anu Kantele
(University of Helsinki and Helsinki University Hospital, Helsinki, Finland)

15.50-16.10
Tea Break & Poster Session A

SESSION 4: NOROVIRUS VACCINES

Moderator: Robert Bargatzke
(Takeda Vaccines Inc., Bozeman, Montana, USA)

16.10-16.40
‘Progress towards a norovirus vaccine’
Tim Vesikari (University of Tampere, Tampere, Finland)

16.40-17.00
‘A phase 1 randomized, placebo controlled trial for the prevention of norovirus illness using an oral recombinant adenoviral based vaccine’
Leesun Kim, Karen Lin, Kassandra Kasparek, Keith Gottlieb, Dave Liebowitz and Sean Tucker (Vaxart Inc., South San Francisco, California, USA)

17.00-17.20
‘Updated estimates of the global burden of norovirus disease’
Aron J. Hall¹, Sara M. Pires², Brecht Devleeschauwer³, Anita Kambhampati³, Kayoko Shioda¹, Sharia M. Ahmed³, Anne Robinson², Linda Verhoef⁴, Umesh Parashar⁵, Ben Lopman⁴ and Marion Koopmans²,⁵

¹Centers for Disease Control and Prevention, Atlanta, Georgia, USA; ²Emory University, Atlanta, Georgia, USA; ³Danish Technical University, Lyngby, Denmark; ⁴University of Ghent, Ghent, Belgium; ⁵Oak Ridge Institute for Science and Education, Oak Ridge, Tennessee, USA; ⁶National Institute for Public Health and the Environment, Bilthoven, The Netherlands; ⁷Viroscience Department, ErasmusMC, Rotterdam, Netherlands

17.20-17.40
‘Immunotypes: A genomics approach to understand norovirus immunity’
Gabriel I. Parra (Division of Viral Products, CBER, FDA, Silver Spring, Maryland, USA)

17.40-18.00
‘The burden of medically attended acute gastro-enteritis due to norovirus in Japan: Results from a database analysis’
C. Chang¹, M. Sakaguchi¹, T. Verstraeten² and J. Weil³
(Takeda Pharmaceutical Company, Osaka, Japan; ²P95 Pharmacovigilance and Epidemiology Services, Leuven, Belgium; ³Takeda Vaccines Inc., Bozeman, Illinois, USA)

18.00-18.20
‘Replication of human norovirus in human intestinal enteroids’
Jan Vinjé¹, Esther K. Morantz ², Hannah Browne³, Khalil Ettayebi⁴, Xi-Lei Zeng⁴, Anu Kantele⁴, Tea Break & Poster Session A

³Takeda Vaccines Inc., Bozeman, Montana, USA

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¹Centers for Disease Control and Prevention, Atlanta, Georgia, USA; ²Emory University, Atlanta, Georgia, USA; ³Danish Technical University, Lyngby, Denmark; ⁴University of Ghent, Ghent, Belgium; ⁵Oak Ridge Institute for Science and Education, Oak Ridge, Tennessee, USA; ⁶National Institute for Public Health and the Environment, Bilthoven, The Netherlands; ⁷Viroscience Department, ErasmusMC, Rotterdam, Netherlands

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³Takeda Vaccines Inc., Bozeman, Montana, USA

18.20-19.30
VED 2017 Welcome Drinks Reception & VED 2017 Poster Session A
SESSION 5: SHIGELLA VACCINES I

Moderators: Armelle Phalipon¹ and Daniel Cohen²

(¹ Pasteur Institute, Paris, France; ² Tel Aviv University, Tel Aviv, Israel)

08.30-08.50
‘Development of a S. sonnei controlled human infection model using a lyophilized GMP lot of strain 53G’
Robert W French, Michelle Dickey, Akamol E. Suvarnapunya, Lakshmi Chandrasekarani, Robert Kaminski, Monica McNeal, Amanda Lyreen, Susan Parker, Amy Hooper, Sachin Mani, Chad Porter and Malabi Venkatesan
(Cincinnati Children’s Hospital Medical Center, Cincinnati Ohio, USA; 2 US Army Bacterial Diseases Branch, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA; 3 Infectious Diseases, Naval Medical Research Center, Silver Spring Maryland, USA; 4 PATH, Seattle, Washington, USA)

08.50-09.10
‘A phase I study of two live oral Shigella sonnei vaccine candidates WRSs2 and WRSs3’
Robert W. French, Michelle Dickey, Robert Kaminski, Akamol E. Suvarnapunya, Shoshana Barnyo, Monica McNeal, Jill El-Khorazaty, Holly Baughman, Amy Hooper, Chad Porter and Malabi Venkatesan
(Cincinnati Children’s Hospital Medical Center, Cincinnati Ohio, USA; 2 US Army Bacterial Diseases Branch, Walter Reed Army Institute of Research, Silver Spring Maryland, USA; 3 Emmes Corporation, Rockville, Maryland, USA; 4 Infectious Diseases, Naval Medical Research Center, Silver Spring Maryland, USA)

09.10-09.30
‘Flexyn2a, a candidate bioconjugate vaccine against Shigella flexneri 2a induces protective immune response in a controlled human infection model’
Kawar R. Talaat, Cristina Alaimo, A. Lou Bourgeois, Robert W. Kaminski, Anita Dreyer, Chad K. Porter, Subhra Chakraborty, Kristen A. Clarkson, Jessica Brubaker, Daniel Elwood, Sushan Harutyunyan, Irene Neuhauser, Valeria Szijarto, Petra Girardi, Shushan Harutyunyan, Irene Neuhauser, Valeria Szijarto, Petra Girardi, Shushan Harutyunyan, Irene Neuhauser, Valeria Szijarto, Petra Girardi, Shushan Harutyunyan, Irene Neuhauser, Valeria Szijarto
(1 Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA; 2 Ummatech Biologies AG, Schlieren, Switzerland; 3 Walter Reed Army Institute of Research, Silver Spring, Maryland, USA; 4 Naval Medical Research Center, Silver Spring, Maryland, USA)

09.30-09.50
‘A phase I dose escalation study to assess the safety and immunogenicity of the SF2a-TT15 conjugate vaccine against S. flexneri 2a in healthy adult volunteers (Preliminary Results)’
D. Cohen1, J. Atsmon1,2, C. Artaud1, S. Meron-Sudai1, M-L. Gougeon1, A. Bialik1, S. Goren1, V. Asato1, O. Ariel-Cohen1, A. Reisz1, A. Dorman1, I. Volokhov1, D. Shaiveich1, C.W.G. Holtink2, J. Westdijk2, S. Ashkenazi3, P. Sansonetti3, L.A. Mulard3 and A. Phalipon3
(1 School of Public Health, Tel Aviv University, Israel; 2 Clinical Research Center, Tel Aviv Sourasky Medical Center, Israel; 3 Institut Pasteur, 4 INSERM U1202, 5 UMRS25-CNRS, Paris, France; 6 Intravac, Bilthoven, The Netherlands; 7 Schneider Children’s Hospital & Tel Aviv University, Israel)

09.50-10.20
Coffee Break & Poster Session A Breakdown
(Poster Session A authors must remove their posters at this coffee break)

SESSION 6: SHIGELLA VACCINES II

Moderators: Armelle Phalipon¹ and Daniel Cohen²

(¹ Pasteur Institute, Paris, France; ² Tel Aviv University, Tel Aviv, Israel)

10.20-10.40
‘Progress toward a bivalent Shigella flexneri synthetic carbohydrate-based vaccine candidate’
Zhaoyu Hu, Johan Cornill, Catherine Guerreiro, Françoise Thouron, Caroline Ligeour, Sylviane Hoos, Patrick England, Armelle Phalipon and Laurence A. Mulard
(1 Institut Pasteur, Chemistry of Biomolecules, Paris, France; 2 CNRS UMR 3523, Institut Pasteur, Paris, France; 3 Institut Pasteur, Molecular Microbial Pathogenesis, Paris, France; 4 INSERM U1202, Institut Pasteur, Paris, France; 5 Institut Pasteur, CITECH, Molecular Biophysics, Paris, France; 6 CNRS UMR 3528, Institut Pasteur, Paris, France)

10.40-11.00
‘Protective vaccine against shigellosis composed of a Shigella IpaB-IpaD fusion protein (DBF) in combination with the adjuvant dmlT’
Chad Roy, John D. Clements, Wendy Picking and Lucy C. Freytag
(1 Department of Microbiology and Immunology, Tulane University, New Orleans, Louisiana, USA; 2 National Primate Research Center, Tulane University, Covington, Louisiana, USA; 3 Department of Pharmaceutical Chemistry, The University of Kansas, Lawrence, Kansas, USA)

11.00-11.20
‘A phase 1 open-label, dose escalating study of Shigella flexneri 2a artificial invaplex administered intranasally to healthy, adult volunteers’
(1 Subunit Enteric Vaccines and Immunology, Bacterial Diseases Branch, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA; 2 Enteric Disease Department, Infectious Disease Directorate, Naval Medical Research Center, Silver Spring, Maryland, USA; 3 Clinical Trial Center, Regulated Activities Branch, Walter Reed Army Institute of Research, Silver Spring, Maryland, USA)

11.20-11.40
‘Generation and development of 4-valent GMMA-based Shigella vaccine’
Francesco Citiluto, Anna Maria Colucci, Carlo Giannelli, Luigi Sollai, Ivan Pisoni, Danilo Gomes Morel, Francesca Mancini, Maria Grazia Aruta, Simona Rondini, Clarissa Pozzi, Allan Saul, Vito Di Cioccio and Laura Bartle Martin
(GSK Vaccines Institute for Global Health (GVGH), Siena, Italy)

11.40-12.00
‘Burden, risk factors and patterns of Shigella sonnei transmission in hyperendemic communities in a high-income country’
Dani Cohen, Adi Behar1,2, Kate S. Baker3,4, Hadar Korin1, Ravit Bassabi, Michal P. Markovich1, Sophy Gorin1, Nick R. Thompson1 and Khitam Muhsen1
(1 School of Public Health, Sackler Faculty of Medicine, Tel Aviv University; Tel Aviv, Israel; 2 Kimron Veterinary Institute, Division of Parasitology, Beit-Dagan, Israel; 3 The Wellcome Trust Sanger Institute, Wellcome Trust Genome Campus, Hinxton, Cambridge, UK; 4 University of Liverpool, Liverpool, UK; 5 Israel Center for Disease Control, Ministry of Health, Israel)

12.00-12.20
‘Pre-clinical findings with ShigETEC, a combined Shigella and ETEC vaccine that represents paradigm shifts in Shigella vaccine approaches’
Petr Girardi, Shushan Harutyunyan, Irene Neuhauser, Valeria Szijarto, Gabor Nagy, Eszter Nagy and Tamas Henics
(EuVire Biotechnologies GmbH, Vienna, Austria)

12.20-14.00
Lunch Break & Poster Session B Set-Up
SESSION 7: ROTAVIRUS VACCINES I

Moderator: Timo Vesikari1 and Fred Cassels2
(1 University of Tampere, Tampere, Finland; 2 PATH, Washington DC, USA)

14.00-14.20
‘Post-vaccination oral rotavirus vaccine shedding is not associated with vaccine immunogenicity or efficacy among infants in Bangladesh’
Benjamin Lee1, Abdul Kader2, Sean A. Diehl3, E. Ross Colgate4, Marya Carmoli5, Muhammad Ikhteer Uddin6, Salma Sharmin7, Shahidul Islam8, Taufiqur Rahman Bhuiyan9, Dorothy M. Dickson10, Mami Taniuchi11, William A. Petri12, Firdausi Qadri12, Rashidul Haque9 and Beth D. Kirkpatrick3
(1 University of Vermont; Burlington, Vermont, USA; 2 Global Rotavirus Surveillance Network, World Health Organization, Geneva, Switzerland; 3 National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; 4 Faculty of Infectious and Tropical Diseases Department, London School of Hygiene and Tropical Medicine, London, UK; 5 Health Services Research and Policy, London School of Hygiene and Tropical Medicine, London, UK)

14.20-14.40
‘The global burden of rotavirus in very young children: Opportunity for a neonatal vaccine’
Chandresh Ladva1, Jacqueline Tate3, Umesh Parashar5, Matt Haso-Agopowicz2,4, Andrew Clark2, Ben Lopman1 and the Global Rotavirus Surveillance Network
(1 Epidemiology, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA; 2 Global Rotavirus Surveillance Network, World Health Organization, Geneva, Switzerland; 3 National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; 4 Faculty of Infectious and Tropical Diseases Department, London School of Hygiene and Tropical Medicine, London, UK; 5 Health Services Research and Policy, London School of Hygiene and Tropical Medicine, London, UK)

14.40-15.00
‘Safety and immunogenicity of a parenteral P2-VP8 subunit rotavirus vaccine’
Michelle J. Groome1,2, Anthonet Koen2,3, Alan Fix3, Lee Fairlie4, Julie Morrison5, Nicola Page6,7, Lisa Jose2,3, Shahib A. Madhi2,7, Monica McNea5, Len Dally8, Iksung Cho9, Maureen Power9, Jorge Flores10 and Stanley Crzyz
(1 Medical Research Council, Respiratory and Meningal Pathogens Research Unit, University of the Witwatersrand, South Africa; 2 Department of Science and Technology/National Research Foundation, Vaccine Preventable Diseases, University of the Witwatersrand, South Africa; 3 PATH, Seattle, Washington, USA; 4 Wits Reproductive Health and HIV Institute, University of the Witwatersrand, South Africa; 5 Family Clinical Research Unit, Stellenbosch University, South Africa; 6 National Institute for Communicable Diseases, National Health Laboratory Service, South Africa; 7 Department of Medical Virology, Faculty of Health Sciences, University of Pretoria, Pretoria, South Africa; 8 Division of Infectious Diseases, Cincinnati Children’s Hospital Medical Center, Cincinnati, USA; 9 The Emens Corporation, Rockville, USA)

15.00-15.20
‘A randomized Phase II/II study to evaluate safety and reactogenicity of a single dose of lyophilized live attenuated pentavalent (G1-G4 and P1[8]) heat-stable rotavirus vaccine (HSRV), in healthy adult volunteers; followed by evaluation of the safety, reactogenicity and immunogenicity of a 3-dose series in infants age 6 to 8 weeks’
K. Zaman1, Aijt pal Singh2, W.A. Khan3, M. Karim3, Vibhu Kanchani4, Asma Aziz5, Warda Haque6, Syed Khalid Ali7, Michelle Goveia8, Susan Kaplan9, Davinder Gill10 and John D. Clemens11
(1 icddr, Dhaka, Bangladesh; 2 MSD Wellcome Trust Hilleman Laboratories Pvt. Ltd., New Delhi, India; 3 Merck & Co. Inc., Kenilworth New Jersey, USA)

15.20-15.50
Tea Break & Poster Session B

SESSION 8: ROTAVIRUS VACCINES II

Moderator: K. Zaman
(icddr, Dhaka, Bangladesh)

15.50-16.10
‘Longer-term direct and indirect effects of infant rotavirus vaccination across all ages in the US; 2000 – 2013: Analysis of a large hospital discharge dataset’
Julia M. Baker1, Jacqueline E. Tate2, Claudia A. Steiner3, Umesh D. Parashar2 and Benjamin A. Lopman4
(1 Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA; 2 Division of Viral Diseases, National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; 3 Healthcare Cost and Utilization Project, Agency for Healthcare Research and Quality, Rockville, Maryland, USA)

16.10-16.30
‘Quantifying the impact of natural immunity on rotavirus vaccine efficacy estimates: A re-analysis of a clinical trial of monovalent rotavirus vaccine in Dhaka, Bangladesh (PROVIDE) and a simulation study’
(University of Virginia, Charlottesville Virginia, USA)

16:30-16:50
‘Association of rotavirus vaccines and intussusception in early introducing African countries using monovalent rotavirus vaccine: Progress of the African Intussusception Surveillance Network’
Jackie Tate and the African Intussusception Surveillance Network
(CDC, Atlanta, Georgia, USA)

16.50-17.10
‘Strategies to improve rotavirus vaccine impact and effectiveness during the second year of life in Blantyre, Malawi: A mathematical modeling study’
Virginia E. Pitzer1, Aisleen Bennett2,3, Naor Bar-Zeev2,3, Benjamin A. Lopman4, Umesh D. Parashar5 and Nigel A. Cuniffe6
(1 Department of Epidemiology of Microbial Diseases, Yale School of Public Health, Yale University, New Haven, Connecticut, USA; 2 Malawi-Liverpool-Wellcome Trust Clinical Research Programme, College of Medicine, University of Malawi, Blantyre, Malawi; 3 Centre for Global Vaccine Research, Institute of Infection and Global Health, University of Liverpool, Liverpool, UK; 4 Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, Georgia, USA; 5 Epidemiology Branch, Division of Viral Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA)

17.10-17.30
‘The changing epidemiology of rotavirus diarrhea: Results from the Global Burden of Disease study 2016’
Christopher Troeger, Ibrahim Khalil, Puja Rao, Manny Garcia, Shijun Cao, Simon Hay and Robert Reiner
(Institute for Health Metrics and Evaluation, University of Washington, Seattle, Washington, USA)

17.30-17.50
‘Skin vaccination using microneedle patches induces mucosal immunity to inactivated rotavirus in mice’
Sung-Sil Moon1, Theresa K. Resch1, Yuhuan Wang2, Jessica Joyce3, Song Li3, Mark Prausnitz2 and Baoming Jiang1
(1 Division of Viral Diseases, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA; 2 School of Chemical & Biomolecular Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA)
SESSION 9: SALMONELLA VACCINES

Moderator: Myron M. Levine
(University of Maryland, Baltimore, Maryland, USA)

08.30-08.45 ‘A multivalent vaccine to prevent invasive salmonella disease in Sub-Saharan Africa?’
Myron M. Levine
(University of Maryland, Baltimore, Maryland, USA)

08.45-09.10 ‘Epidemiology of Salmonella Typhi and INTS disease in sub-Saharan Africa and implications for vaccination programs (TSAP and SETA programs)’
Justin Im1,2, Gi Deok Pak1, Peter Aaby2,3, Yaw Adu-Sarkodie1,3, Muna Ahmed El Tayeb4, Mohammad Ali5,6, Abraham Aseffa7, Stephen Baker8,9, Holm Biggs10,11, Morten Bjergaard-Andersen12, Robert F. Breiman13,14, James I. Campbell15, Yun Chon16, Leonard Cosmas17, John A. Crump18,19,20, Ligia Maria Cruz Espinoza21,22, Denise Nyiramukundwize23,24, Barry Field25, Flaggha Gsmel26,27, Anne-Sophie Heroves28,29, Julian T. Hertz30,31, Nguyen Van Minh Hoang32, Jan Jacobs33,4, Lyon Jin Jeon5, Anna Jaeger1,6, Leon Parfait Kabore6,7, Vera von Kalckreuth8, Lisette Kalonji20, Karen H. Keddy9,20,21, Sandra Valborg Løfberg32,33, Octavie Lunguya22, Jürgen May1,2,3,4,5, Jonathan M. Jackson1, Minglin Li1,2,3,5, Hye Jin Seo1, Arvinda Sooka23,24, Abdramane Soura Bassiahi33, Myron M. Levine35,36, Muna Ahmed El Tayeb6, Mohammad Ali7, Abraham Aseffa8, Stephen Baker9,9, Stephen Brune10,11,12, Robert F. Breiman13,14, Myron M. Levine36,37, Myron M. Levine38,39, Madushini Dharmasena, Samantha Johnson and Scott Stibitz

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09.10-09.30 ‘Identification of mutations in Salmonella Typhi vaccine strain Ty21a that are responsible for an acid sensitive phenotype’
Madushini Dharmasena, Samantha Johnson and Scott Stibitz
(US FDA-Center for Biologics Evaluation and Research, Silver Spring, Maryland, USA)

09.30-09.50 ‘Development and characterization of Salmonella enterica serovar typhi Ty21a vaccine platform: the promise and insight for vaccines against shigellosis, ETEC diarrhea, typhoid fever, and non-typhoid salmonellosis’
Yun Wu1,2, Tint Tint Wai1, Jonathan M. Jackson1, Minglin Li1,2,3,5, Sumana Chakravarty3,4, Eric R. James5, Henry Huang5, Victoria Laney6, Weiping Zhang7, David Sack8, Stephen L. Hoffman9,10 and Kim Lee Sim11
1: (Protein Potential, LLC and 2 Sanaria, Inc., Rockville, Maryland, USA; 3 Kansas State University, Manhattan, Kansas; 4 Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA)

09.50-10.10 ‘Assessment of the efficacy of a Vi-tetanus toxoid conjugate vaccine using a controlled human infection model of Salmonella typhi’
Celina Jin1,2, James Meiring1, Malick M. Gibani1, Maria Moore1, Helene B. Juel1, Elizabeth Jones1, Anna Nebiykova1, Victoria Harris2, Simon Kerridge1, Ly-Mee Yu1, Brian Angus3 and Andrew J. Pollard1
1: (Oxford Vaccine Group, Department of Paediatrics, University of Oxford and the NIHR Oxford Biomedical Research Centre, Oxford, UK; 2 Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, UK; 3 Nuffield Department of Clinical Science, University of Oxford, Oxford, UK)

10.10-10.30 ‘A phase 1, randomized, double-blind, ascending-dose trial to assess the safety and immunogenicity of Typhax, a typhoid fever protein capsular matrix vaccine, in healthy adult subjects’
Kevin P. Killeen, Thomas J. Griffin IV, Ann Thanawastien, Anthony Helstosky and Robert T. Cartee
(Matrix Res & Development Corporation, Boston, Massachusetts, USA)

10.30-10.45 ‘Incidence of salmonella bacteremia among young children in Sub-Saharan Africa: MAL055 RTS,S/AS01 Salmonella ancillary study’
Calman A. MacLennan1,2, Ryan Wiegand3,4, Nelli Westercamp5,6, Simon Kariuki7,8 and the Clinical Trials Partnership Committee Investigators
1: (Jenner Institute, Nuffield Department of Medicine, University of Oxford, UK; 2 Division of Parasitic Diseases and Malaria, Centers for Disease Control and Prevention, Atlanta, Georgia, USA; 3 Kenya Medical Research Institute, Kisumu, Kenya)

10.45-11.00 Coffee Break & Poster Session B

Coffee Break & Poster Session B

Coffee Break & Poster Session B
SESSION 10: CHOLERA VACCINES

Moderator: Martin Mengeli
( Agence de Médecine Préventive, Paris, France)

11.00-11.20
"Cholera vaccine use in endemic settings to prevent repeated outbreaks?"
David Sack
(Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA)

11.20-11.40
"Who is at risk of cholera in Africa? Quantifying potential vaccine demand and impact at policy-relevant spatial levels"
Sean M. Moore1,2, Andrew S. Azman1, Heather S. McKay2 and Justin Lessler3
(1 Department of Biological Sciences, University of Notre Dame, Notre Dame, Indiana, USA; 2 Eck Institute of Global Health, University of Notre Dame, Notre Dame, Indiana, USA; 3 Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA)

11.40-12.00
"Cross-sectional serology as an epidemiologic tool for measuring the impact of cholera control programs"
Andrew S. Azman1, Francisco J. Luqueiro1,2, Justin Lessler1, Ashrafual Islam Khan1, Taufiqur Rahman Bhuiyann, Fahima Chowdhurni1, Alamgir Kabir1, Stephen B. Calderwood1,2,5, Edward T. Ryan1,4,6, Firdausi Qadri1 and Daniel Leung1
(1 Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA; 2 Epicentre; 3 icddr,b, Dhaka, Bangladesh; 4 Massachusetts General Hospital, Boston, Massachusetts, USA; 5 Harvard Medical School; 6 Harvard School of Public Health, Boston, Massachusetts, USA; 7 University of Utah School of Medicine, Utah, USA)

12.00-12.20
"Development of oral cholera & LT-ETEC vaccine tablets containing single strain Hikojima and low cost recombinant cholera toxin B"
Tarun Sharma1, Neeraj Joshi1, Vibhu Kanchan1, Deepa Sikriwal1, Aijit Pal Singh1, Khalid Ali Syed2, Stefan Karlsson3, Michael Lebens2, Manuela Terrinoni2, Madeleine Löfstrand3, Annelie Ekman2, Jan Holmgren2 and Davinder Gill1
(1 MSD Wellcome Trust Hilleman Laboratories Pvt. Ltd., New Delhi, India; 2 Gotovax, University of Gothenburg, Gothenburg, Sweden; 3 Division of Immunology and Infectious Disease, Graduate School of Veterinary Science, Graduate School of Medicine, Kobe, Japan)

12.20-12.40
"Study to evaluate safety, tolerability and immunogenicity of two formulations of novel inactivated (Hikojima serotype) oral cholera vaccine, HIllochn™"
Fahima Chowdhurni1, Syed Khalid Ali1, Aijit Pal Singh1, Afroza Akther1, Taufiqur Rahman1, Vibhu Kanchan1, Tarun Sharm2, UG Michael Lebens2, Jan Holmgren2, Davinder Gill1, John D. Clemens1 and Firdausi Qadri1
(1 MSD Wellcome Trust Hilleman Laboratories Pvt. Ltd., New Delhi, India; 2 Gotovax, University of Gothenburg, Gothenburg, Sweden; 3 MSD Wellcome Trust Hilleman Laboratories, New Delhi, India)

12.40-13.20
Lunch Break & Poster Session B

SESSION 10: CHOLERA VACCINES – CONTINUED

Moderator: Kevin Killeen
(Matrivax Research & Development Corporation, Boston, Massachusetts, USA)

13.20-13.40
"Long term immune responses to bivalent oral cholera vaccine in Haitian adults"
B. Falkard1, R.C. Charles2, L. Mayo-Smith1, W.R. Matias1,4, J.E. Teng5, Xu Peng6, Pavel Kovač6, E.T. Ryan1,2, M.F. Franke1, L.C. Ivers1,4,5 and J.B. Harris1,7
(1 Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts, USA; 2 Harvard Medical School, Boston, Massachusetts, USA; 3 Department of Global Health & Social Medicine, Harvard Medical School, Boston, Massachusetts, USA; 4 Partners in Health, Boston, Massachusetts, USA; 5 Division of Global Health Equity, Brigham & Women’s Hospital, Boston, Massachusetts, USA; 6 MIDDK, LBC, National Institutes of Health, Bethesda, Maryland, USA; 7 Department of Pediatrics, Harvard Medical School, Boston, Massachusetts, USA)

13.40-14.00
"Re-engineering the cholera pathogen yields a probiotic-like agent that rapidly protects against cholera"
Matthew Kaden Waldor
(Brigham & Women’s Hospital, Boston, Massachusetts, USA)

14.00-14.20
"Update on OCV requests and deployments in 2016/2017"
Lorenzo Pezzoli
(WHO Cholera Team / Focal Point for Vaccination, Geneva, Switzerland)
SESSION 12: FRONTIERS OF VACCINOLOGY

Moderator: Richard Walker  
(PATH, Washington DC, USA)

16.00-16.20  
‘Activated T follicular helper-like cells in blood after oral ETEC vaccination can be used as correlates for vaccine specific mucosal B cell memory’  
Ana Cárdeno, Maria K. Magnusson, Marianne Quinding-Jarbrink and Anna Lundgren  
(University of Gothenburg Vaccine Research Institute (GUVAX), Dept. of Microbiology and Immunology, Sahlgrenska Academy, Sweden)

16.20-16.40  
‘Adjuvant selection regulates gut migration and phenotypic diversity of antigen-specific CD4+ T cells following parenteral immunization’  
Daniel R. Frederick, Leila M. Sabbagh, Lucy C. Freytag, John D. Clements and James B. McLachlan  
(Department of Microbiology and Immunology, Tulane University School of Medicine, New Orleans, Louisiana, USA)

16.40-17.00  
“A campylobacter protein of the flagellin protein family as a potential vaccine antigen in broilers”  
D. Dory1, M. Meunier1,2, M. Guyard1, E. Viguouroux1, T. Poezevara1, V. Beven1, S. Quesne2, M. Amelot1 and M. Chemaly2  
(1 GVB – Viral Genetics and Biosafety Unit, French Agency for Food, Environmental and Occupational Health & Safety (ANSES), Ploufragan, France; 2 HQPAP – Unit of Hygiene and Quality of Poultry and Pork Products, French Agency for Food, Environmental and Occupational Health & Safety (ANSES), Ploufragan, France)

17.00-17.20  
CLOSING PRESENTATION:  
‘A comprehensive re-analysis of the etiology of community diarrhea in the MAL-ED study using quantitative PCR’  
Eric R. Houpt1, James A. Platts-Mills1, Jie Liu1, Jean Gratzi1,2, Darwin Operario1, Elizabeth T. Rogawski1, Timothy L. McMurry1, Rosemary Nshama2, Athanasia Maro3, Amidou Samie1, Nicola Page1, Ira Praharja1, Gagandeep Kang1, Carl Mason1, Ladaporn Bodhidatta1, Paphavee Lertsehtakarn1, Sadia Shakoor1, Furqan Kabir1, Shahida Qureshi1, Najeeha Iqbal1, Rashidul Haque1, Mami Taniuchi1, Shaila S. Khan4, Margaret Kosek4,5, Mery S. Salas5, Alexandre Havi1, Irene T. A. Maciel, Jose P. G. Leite1 and Aldo A. Lima1  
(1 Division of Infectious Diseases and International Health, University of Virginia, Charlottesville, Virginia, USA; 2 Haydom Lutheran Hospital, Haydom, Tanzania; 3 Department of Public Health Sciences, University of Virginia, Charlottesville, Virginia, USA; 4 University of Venda, Thohoyandou, South Africa; 5 Christian Medical College, Vellore, India; 6 Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand; 7 Aga Khan University, Karachi, Pakistan; 8 International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh; 9 Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland, USA; 10 Asociación Benéfica PRISMA, Iquitos, Peru; 11 Clinical Research Unit and Institute of Biomedicine, Federal University of Ceara, Fortaleza, Brazil)

17.15-17.25  
VED 2017 Overview & Closing Remarks  
Richard Walker  
(PATH, Washington DC, USA)

* This final programme is correct at the time of publication. However the organizers reserve the right to make any alterations that may be required in the interests and integrity of the conference programme.

The VED 2017 Scientific Advisory Panel and the organizers would like to acknowledge the support of the following sponsors:
Poster A101
‘Toxoid fusion of enterotoxigenic Escherichia coli (ETEC) heat-stable toxin (STa) and heat-labile toxin (LT), 3xSTaN12S-dmLT, induces specific and protective anti-STa antibodies’
Qiangde Duan1, Rahul Nandre1, Xiaosai Ruan1, Weiping Zhang1 and the STa Toxoid Consortium Group
(1 Department of Diagnostic Medicine/Pathobiology, Kansas State University College of Veterinary Medicine, Manhattan, Kansas, USA)

Poster A102
‘Reviewing new evidence on the health economics of rotavirus vaccination’
Frederic Debellut
(PATH, Geneva, Switzerland)

Poster A103
‘Rotavirus vaccination may reduce acute gastroenteritis rates across all age groups in the UK’
Margarita Riera-Montes, Tom Cattaert, Germano Ferreira and Thomas Verstraeten
(P95 Epidemiology and Pharmacovigilance, Leuven, Belgium)

Poster A104
‘Immunogenicity of Type 2 monovalent oral and inactivated poliovirus vaccines – Bangladesh, 2016’
K. Zaman1, Concepción F. Estilviar2, Michelle Morales2, Mohammad Yunus1, Cynthia Snider1, Howard E. Gary Jr.1, William C. Weldon1, Mark S. Oberste2, Steven G Wassilak2, Mark A. Faalansch3 and Abhijet Anand3
(1 International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), Dhaka, Bangladesh; 2 Centers for Disease Control and Prevention, Atlanta, Georgia, USA)

Poster A105
‘Bivalent oral cholera vaccine in participants aged 1 year and older in the Dominican Republic: A phase III, single-arm, safety and immunogenicity trial’
Lina Cordero De Los Santos1, Jesús Feris-Iglesias2, Naveena Aloyisa2, Venkata Jayanth Midde2, Badri Narayan Patnaik3, Yaël Thollot4, Anvar Rasuli4 and Jun Kunisawa1,3-5
(1 Caimed Dominicana S.A.S., Investigación en Salud, Santo Domingo, Dominican Republic; 2 Laboratory of Bio-Functional Molecular Chemistry, Graduate School of Pharmaceutical Sciences, Graduate School of Medicine, and the STa Toxoid Consortium Group
(POSTER WITHDRAWN)

Poster A106
‘Genomic and phenotypic characterization of typhoid vaccine strain Ty21a reveals insights impacting future vaccine development and optimization’
Yun Wu1, Tint Tint Wai1, Jonathan M. Jackson1, Stephen L. Hoffman1,2 and B. Kim Lee Sim1
(1 Protein Potential, LLC and Sanaria, Inc.2, Rockville, Maryland, USA)

Poster A107
‘Fusion protein of C-terminal fragment of Clostridium perfringens enterotoxin and cholera toxin B subunit acts as a bivalent food poisoning vaccine’
Hidehiko Suzuki1, Koji Hosomi2, Ayaka Nasu1, Masuo Kondoh2 and Jun Kunisawa1,3-5
(1 Laboratory of Vaccine Materials and Laboratory of Gut Environment System, National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN), Japan; 2 Laboratory of Bio-Functional Molecular Chemistry, Graduate School of Pharmaceutical Sciences, Osaka University, Osaka, Japan; 3 Division of Mucosal Immunology and International Research and Development Center for Mucosal Vaccine, Institute of Medical Science, The University of Tokyo, Tokyo, Japan; 4 Graduate School of Pharmaceutical Sciences, Graduate School of Medicine and Graduate School of Dentistry, Osaka University, Osaka, Japan; 5 Graduate School of Medicine, Kobe University, Kobe, Japan)

Poster A108
‘Evaluation of a 4-valent GMMA-based Shigella vaccine for overall coverage and impact based on serologic cross-reactivity among S. flexneri serotypes’
Francesco Citulio, Francesca Necchi, Francesca Manzini, Maria Grazia Aruta, Simona Rondini, Allan Saul and Laura Bartle Martin
(GSK Vaccines Institute for Global Health (GVGH), Siena, Italy)

Poster A109
‘Characterization of clinical Shigella boydii as multicomponent vaccine candidate’
Paula Taquita Serra, Paloma Inessa de Souza Dantas, Tainá Raíol Alencar, Milton Ozório de Moraes, Sabrina Epiphanio, Paulo Afonso Nogueira and Patricia Puccinelli Orlandi
(Fundação Oswaldo Cruz – ILDM/AM, Adrianópolis, Manaus/AM – Brazil)

Poster A110
‘Preformulation studies with the Escherichia coli double mutant heat-labile toxin adjuvant for use in an oral vaccine’
Jessica A. White, Candace Haghighi, Johanna Brunner, Marcus Estrada, Manjari Lal and Dexiong Chen
(PATH, Seattle, Washington, USA)

Poster A111
‘Incidence, transmission and burden of acute viral gastroenteritis: A household study in The Netherlands’
P. Bruinjung-Verhagen1, F.A. Quee1, R. Schuurman2 and M.L.A. de Hoog1
(1 Julius Centre for Health Sciences, Infectious Diseases Epidemiology, University Medical Centre Utrecht, The Netherlands; 2 Department of Medical Microbiology, University Medical Centre Utrecht, Utrecht, The Netherlands)

Poster A112
‘Norovirus-associated hospital discharge rates in Europe, 2004-2015’
T. Verstraeten1, E. Negro Calduch1, T. Cattaert1 and J. Weil2
(1 P95 PharmacoVigilance and Epidemiology Services, Leuven, Belgium; 2 Takeda Vaccines, Bozeman, Illinois, USA)

Poster A113
‘Quantifying the double burden of Cryptosporidium infection: Morbidity, mortality, and the long-term consequences’
Ibrahim Khalil, Christopher Troeger, Puja Rao, Manny Garcia, Shijun Cao, Alexandria Brown, Mohammad Forouzanfar, Robert Reiner, Simon Hay and Ali H. Mokdad
(Institute for Health Metrics and Evaluation, University of Washington, Seattle, Washington, USA)

Poster A114
‘The changing epidemiology of rotavirus diarrhea: Results from the Global Burden of Disease study 2016’
Christopher Troeger, Ibrahim Khalil, Puja Rao, Manny Garcia, Shijun Cao, Simon Hay and Robert Reiner
(Institute for Health Metrics and Evaluation, University of Washington, Seattle, Washington, USA)

Poster A115
‘The global burden of Shigella and Enterotoxigenic E. coli: Results from the Global Burden of Disease study 2016’
Ibrahim Khalil, Christopher Troeger, Puja Rao, Manny Garcia, Shijun Cao, Ali H. Mokdad, Simon Hay and Robert Reiner
(Institute for Health Metrics and Evaluation, University of Washington, Seattle, Washington, USA)

Poster A116
‘Development of oral cholera & LT-ETEC vaccine tablets containing single strain Hikojima and low cost recombinant cholera toxin B’
Tarun Sharma1, Neeraj Joshi1, Vibhu Kanchan1, Deepa Sikriwal1, Aij Pal Singh1, Khalid Ali Syed1, Stefan Karlsson2, Michael Lebens3, Manuela Tettinoni3, Madeleine Lüftstrand1, Annelie Ekman2, Jan Holmgren2 and Davinder Gill2
(1 MSD Wellcome Trust Hilleman Laboratories Pvt. Ltd New Delhi, India; 2 Gotovax, University of Gothenburg, Gothenburg, Sweden)

(POSTER WITHDRAWN)
Poster A17
‘The molecular epidemiology of human astroviruses from selected sites in South Africa from 2009 to 2014’
Sandra Gana1,2 and Nicola A Page1,3
(1 Center for Enteric Diseases – Virology, National Institute for Communicable Diseases, National Health Laboratory Services, Johannesburg, South Africa; 2 Department of Medical Virology, Faculty of Health Sciences, University of Pretoria, Pretoria, South Africa)
Poster A18
‘Inactivated derivatives of the bi-valent Shigella-ETEC vaccine candidate CVD 1208S-122’
Tao Wu, Jonathan Moon and Eileen M. Barry
(Center for Vaccine Development, University of Maryland School of Medicine, Baltimore, Maryland, USA)
Poster A19
‘Predicting the epidemiological impact of changes to current rotavirus vaccine coverage in the United States’
Molly K. Steele, Andreas Handel, Virginia E. Pitner, Beryl L. Guterman, Umesh Parashar and Benjamin A. Lopman
(Centers for Disease Control and Prevention, Atlanta, Georgia, USA)
Poster A20
‘Key factors to understand and improve live oral rotavirus vaccine performance in high-disease burden settings: a review of the evidence’
Daniel E. Velasquez, Umesh Parashar and Bamoning Jiang
(Division of Viral Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia, USA)
Poster A21
‘All-cause mortality among hospitalized patients in England attributable to acute gastro-enteritis not caused by Clostridium difficile’
Thomas Verstraeten, Maria Alexandridou, Tom Cattaert and Germano Ferreira
(P95 Pharmacovigilance and Epidemiology Services, Leuven, Belgium)
Poster A22
‘Stabilization of the recombinant Ty21a-vectored vaccine, TyOraV, against Shigellosis by foam drying’
Victoria Laney1, Henry Huang2, Yun Wu2, Jonathan Jackson2, Minglin Li2, Linxi Gao2, Rui Xu2,sumana Chakravart2, B. Kim Lee Sia2 and Eric R. James1
(1 Sanaria Inc, Rockville, Maryland, USA; 2 Protein Potential LLC, Rockville, Maryland, USA)
Poster A23
‘The impact of universal rotavirus immunization in Israel 2011-2016’
Khitham Muhlsen and Dani Cohen
(Department of Epidemiology and Preventive Medicine, School of Public Health, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel)
Poster A24
‘Inactivated Shigella as effective vaccines and vaccine vectors’
K. Navarrete, I, Albino-Flores, E.S. Stibitz and M. Osorio
(Division of Bacterial, Parasitic and Allergenic Products, Center for Biologics Evaluation and Research, US Food and Drug Administration, Silver Spring, Maryland, USA)
Poster A25
‘Campylobacteriosis outcomes assessed by baseline immune status in controlled human Campylobacter jejuni infection in humans’
David Tribble1, Elizabeth Zelt2, William Bradley1, Ashley Alica1, Jamie Fraser1,2, Beth Kirkpatrick1, Shahida Baqar1, Mark Riddle1, Renee Laird1,4, Patricia Guerry1, Frederic Pol1 and Chad Porter1
(1 Infectious Disease Clinical Research Program, Department of Preventive Medicine and Biostatistics, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA; 2 Stat-Epi Associates Inc., Ponte Vedra Beach, Florida, USA; 3 The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., Bethesda, Maryland, USA; 4 Enteric Diseases Department, Naval Medical Research Center, Silver Spring, Maryland, USA; 5 Dept of Medicine, University of Vermont, Burlington, Vermont, USA; 6 Division of Microbiology and Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, Maryland, USA)
Poster A26
‘Hospital-based surveillance for severe rotavirus gastroenteritis among young children in Bangladesh: Defining the potential impact of a rotavirus vaccine program’
Syed M. Satter1, Paul A. Gastanaduy2, Khaleda Islam3, Mahmudur Rahman3, Meerjady S. Flora4, Mustafizur Rahman5, Stephen P. Luby6, Umesh D. Parashar2, James D. Hefteffinger1 and Emily S. Gurley1
(1 Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh; 2 Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA; 3 Institute of Epidemiology, Disease Control and Research (IEDCR), Dhaka, Bangladesh; 4 Infectious Diseases and Geographic Medicine, Stanford University, Stanford, California, USA)
(POSTER WITHDRAWN)
Poster A27
‘Epidemiology of childhood intussusception in Bangladesh: A review of an active national hospital based surveillance system, 2012-2016’
Syed M. Satter1, Negan Aliabadii2, Catherine Yen3, Paul A. Gastanaduy2, Makhdum Ahmed1, Abdullah Mamun3, Khaleda Islam3, Meerjady S. Flora3, Mahmudur Rahman5, K. Zaman4, Mustafizur Rahman5, James D. Hefteffinger1, Stephen P. Luby6, Emily S. Gurley1 and Umesh D. Parashar2
(1 Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh; 2 Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA; 3 The University of Texas MD Anderson Cancer Center, Houston, Texas, USA; 4 UBC and Vancouver General Hospital, Vancouver, Canada; 5 Institute of Epidemiology, Disease Control and Research (IEDCR), Dhaka, Bangladesh; 6 Center for Innovation in Global Health, Stanford University, Stanford, California, USA)
(POSTER WITHDRAWN)
Poster A28
‘Adhesion of human enterotoxigenic Escherichia coli (ETEC) O169:H41 to porcine intestinal epithelial cells by the novel colonization factor’
Yuko Omor1, Dongming Zheng1, Erika Ban1, Eriko Kage-Nakadai1, Taro Tachibana2, Takayuki Wada2, Yukiko Hara-Kudo3 and Yoshikazu Nishikawa1
(1 Department of Food and Human Health Sciences, Graduate School of Human Life Science; 2 Department of Applied Chemistry and Bioengineering, Graduate School of Engineering, Osaka City University, Osaka Japan; 3 Department of International Health, Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan; 4 Division of Microbiology, National Institute of Health Sciences, Tokyo, Japan)
Poster A29
‘LT-derived adjuvants (dmLT, LTA1) induce differentiation and altered metabolism in human antigen-presenting cells’
Eduardo Vaili, Kevin J. Zwezdarky, John D. Clements and Elizabeth B. Norton
(Department of Microbiology and Immunology, Tulane University School of Medicine, New Orleans, Louisiana, USA)
Poster A30
‘Rough and non-invasive Shigella vaccine strains generated by different gene deletions all elicit serotype independent protection in the mouse lung shigellosis model’
Shushan Harutyunyan, Petra Girardi, Irene Neuhauser, Eszter Nagy and Tamás Henics
(Eveliqure Biotechnologies GmbH, Vienna, Austria)
Poster A31
‘Development, characterization and immunogenicity of CS5 and CS7 subunit vaccine candidates’
Milton Maciel Jr., Steven Poole, Yang Liu, Glomil Corbin, Aaron Kim, Annette McVeigh and Michael G. Prouty
(Naval Medical Research Center, Silver Spring, Maryland, USA)
(POSTER WITHDRAWN)
Poster A32
‘Yeast ghosts as oral vaccines against enterotoxigenic E. coli in a piglet model’
Bert Devriendt
(Laboratory of Immunology, Faculty of Veterinary Medicine, Ghent University, Ghent, Belgium)
Antigen specific HLA-DR+ antibody secreting cell (OR+ASC) responses in whole blood in enteric infections using an ELISPOT technique
Taufiqur Rahman Bhuiyan1, Mohammad Rubel Hoq1, Naoshin Sharmin Nishat1, Deena Al Mahbuba1, Rashaduzzaman Rashu2, Kamrul Islam1, Nazia Hossain1, Jason B. Harris1,4, Edward T. Ryan1, Stephen B. Calderwood2, Ann-Mari Svennerholm1 and Firdausi Qadri1
(1 Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh; 2 Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts, USA; 3 Department of Microbiology and Immunology, University of Gothenburg, Sweden; 4 Division of Pediatric Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts, USA)

High cell density fermentation of Salmonella sp to develop an oral enteric fever vaccine
(Research and Development Unit, Probiomed S.A. de C.V., México)

Structural basis for the Acinetobacter baumannii biofilm formation
Natalia Pakharukova, Minna Tuttii, Sari Paavilainen, Olena Parilova, Henri Malmi and Anton V. Zavalov
(University of Turku, Turku, Finland; Joint Biotechnology Laboratory, Arcanum, Turku, Finland)

‘Antigen specific HLA-DR+ antibody secreting cell (OR+ASC) responses in whole blood in enteric infections using an ELISPOT technique’
Taufiqur Rahman Bhuiyan1, Mohammad Rubel Hoq1, Naoshin Sharmin Nishat1, Deena Al Mahbuba1, Rashaduzzaman Rashu2, Kamrul Islam1, Nazia Hossain1, Jason B. Harris1,4, Edward T. Ryan1, Stephen B. Calderwood2, Ann-Mari Svennerholm1 and Firdausi Qadri1
(1 Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh; 2 Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts, USA; 3 Department of Microbiology and Immunology, University of Gothenburg, Sweden; 4 Division of Pediatric Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts, USA)

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Natalia Pakharukova, Minna Tuttii, Sari Paavilainen, Olena Parilova, Henri Malmi and Anton V. Zavalov
(University of Turku, Turku, Finland; Joint Biotechnology Laboratory, Arcanum, Turku, Finland)
‘A Campylobacter jejuni capsule conjugate vaccine and army liposome formulation adjuvants induce enhanced Th1 immune responses and bactericidal antibody responses’
Christina L. Gariepy1, Nina M. Schumack1, Lisa A. Applebee1, Zoltan Beck2,3, Gary R. Matyas1, Carl R. Alving2, Patricia Guerry1 and Renee M. Laird1
(1) Enteric Diseases Department, Naval Medical Research Center; 2 U.S. Military HIV Research Program, Walter Reed Army Institute of Research; and 3 Henry M. Jackson Foundation for the Advancement of Military Medicine, Silver Spring, Maryland, USA
Poster B107
‘The PREVAIL Cohort: A US maternal-child longitudinal cohort to evaluate immunologic influences on asymptomatic and symptomatic norovirus infections in early life’
Daniel C. Payne1, Jan Vinje1, Umesh D. Parashar1, Alexi Piasecki1, Aron Hall1, Rachel M. Burke1, Monica McNeal2, Jeanne Kleiman2, Mary Allen Staat2, Elizabeth Schlaudecker2, Allison Cline2, Emily DeFranco1 and Artythe L. Morrow1
(1) US Centers for Disease Control and Prevention; Atlanta, Georgia, USA; 2 National Centre for Tropical Infectious Diseases, Haukeland University Hospital, Bergen, Norway
Poster B114
‘Increasing anti-adhesin immune responses by modifying fimbrial gene stem-loop structure in live attenuated Shigella/ETEC vaccine strains’
Kurt Hanevik1,2, Chris Grassel1 and Eileen M. Barry2
(1) Department of Clinical Science, University of Bergen, Norway; 2 Center for Vaccine Development, University of Maryland School of Medicine, Baltimore, Maryland, USA; 3 National Centre for Tropical Infectious Diseases, Haukeland University Hospital, Bergen, Norway
Poster B113
‘Estimated incidence of medically attended rotavirus across the age spectrum—Kaiser Permanente Northwest (KPNW), 2014 – 2016’
(CDC, Atlanta, Georgia, USA)
Poster B115
‘Announcing a study to characterize the international epidemiology of ETEC- and Shigella-associated moderate-to-severe travelers’ diarrhea’
Sophie Drue1les, Michael Prouty3, Nichole Giller2, Mark Simons2, Michael Gregory1, Elizabeth Odundo1, Stacey Bateman1, Brett Świerczewski1, Zhi-Dong Jiang2 and Mark S. Riddle3
(1) Sanofi Pasteur, Health Economics and Outcome Research Department, Lyon, France; 2 Naval Medical Research Center, Enteric Diseases Department, Silver Spring, Maryland, USA; 3 Naval Medical Research Unit 6, Lima, Peru; 4 Naval Medical Research Unit 3, Cairo, Egypt; 5 US Army Medical Research Directorate, Kenya; 6 Armed Forces Institute of Medical Sciences, Bangkok, Thailand; 7 The University of Texas Health Science Center, Houston, Texas, USA; 8 Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA
Poster B116
‘Development and immunological characterization of multivalent adhesin-based fusions to broaden coverage of a subunit enterotoxigenic Escherichia coli vaccine’
Steven Poole, Milton Maciel, Jr., Yang Liu and Michael G. Prouty
(U.S. Naval Medical Research Center, Silver Spring, Maryland, USA) (POSTER WITHDRAWN)
Poster B117
‘Both the STh and the STp variant of the heat-stable toxin of enterotoxigenic Escherichia coli can elicit antibodies that cross-react with guanylin and/or uroguanylin’
Yuleima Diaz1, Morten A.G. Larsen1, Ephrem Debebe Zegeye1 and Pål Puntervoll1,2
(1) Centre for Applied Biotechnology, Uni Research Environment, Bergen, Norway; 2 Centre for International Health, Department of Global Public Health and Primary Care, University of Bergen, Bergen, Norway
Poster B118
‘Resistance to moderate-to-severe diarrhea following experimental oral challenge with CS6+ Enteroxigenic E. coli strain BTA was accompanied by increased serum and fecal antibody and ALS responses to heat-labile toxin’
Stefanie A. Trop1, Aaron Kim1, Glomil M. Corbin1, Beth Ward1, Chad K. Porter1, Michael G. Prouty1, Ramiro L. Gutiérrez2, Kayla Jaap3, Chris Duplessis3, Kawser Talaat1, Barbara DeNearing2, Louis Bourgeois3, Brittany Adjpodiani, Jessica Brubaker2 and Milton Maciel, Jr.
(1) Naval Research Center, Silver Spring, Maryland, USA; 2 Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA