2nd Annual Global Health and Infectious Disease Conference
Friday March 28, 2014, 1:00 – 2:00 pm
EPNEC Atrium & Great Room A

#1 Pharmaceutical Related Challenges in Developing Countries
Jonna Kemper, Sarah Brown, Cortney Rogers  St. Louis Children’s Hospital, Washington University School of Medicine, St. Louis Children’s Hospital

#2 Biophysical Investigation of HSV Tegument Protein-Protein Interactions
Eric Lazear and Daved H. Fremont, Department of Pathology and Immunology, Washington University in St. Louis

#3 Schistosoma mansoni: Assessment of Effects of Oleic Acid, Cercarial Age and Water Temperature on Parasite-Host Attraction
Vivien ST. Lee1,2, Jefferey L. Burgess1, Charles R. Sterling1,2, Eric A. Lutz1, Community, Environment and Policy, Mel and Enid Zuckerberg College of Public Health, University of Arizona, Tucson, AZ1, Department of Veterinary Science and Microbiology, University of Arizona, Tucson, AZ2

#4 Is dsRNA End Capping by VP35 Important for Filoviral Immune Evasion?
Gai Liu1, Priya Luthra2, Megan Edwards2, Daisy W. Leung2, Christopher F. Basler2 and Gaya K. Amarasinghe1, Department of Pathology and Immunology, Washington University School of Medicine in St. Louis; 2Department of Microbiology, Mount Sinai School of Medicine, New York

#5 Impact Of Pneumococcal Vaccination on the Pediatric Nasopharyngeal Microbiome in the First Year of Life
Maze Ndukum-Ndow1, Brenda Kwambana2, Hongyu Gao1,2, Kathie A. Mihndukulasuriya1, Kristine M. Wylie1, Yanjiao Zhou1, Todd Wylie1, Susanna Siebert1, Erica Sodergren1, Saha Samir1, Nierman Bill1, Lucero Luluth1, Adrian Peter1, Martin Antonio1, George M. Weinstock1, The Genome Institute (TGI), Washington University in St. Louis; 2Medical Research Council Unit (MRC), Banjul, The Gambia; 3Child Health Research Foundation (CHRF), Bangladesh; 4J. Craig Venter Institute (JCVI), USA; 5Research Institute for Tropical Medicine (RITM), Muntinlupa City, Philippines; 6Respiratory and Meningeal Pathogens Research Unit (RMPRU), Soweto, South Africa

#6 Gut Microbiome Dynamics of Humans Infected with Gastrointestinal Parasites
Bruce Rosa1,2, Yanjiao Zhou1, Maria Yazdanbakhsh1 and Makedonka Mitreva1,2, The Genome Institute, Washington University School of Medicine; 2Division of Laboratory Medicine, Department of Pediatrics, Washington University School of Medicine; 3Department of Parasitology and Leiden Parasite Immunology Group, Leiden University Medical Center; 4Division of Infectious Diseases, Department of Medicine, Washington University School of Medicine

#7 Exported Epoxide Hydrolases of Plasmodium falciparum: Possible Role in Modulation of Host Vasoregulation
Natalie J. Spillman and Daniel E. Goldberg, Howard Hughes Medical Institute, Washington University School of Medicine

#8 Pulmonary Vascular Delivery of an Anti-RSV Antibody Gene as Protection Against RSV Infection
Felipe Alves Morais1,2, Maurizio Buggio3, Sergey Kaliberov1, Sérgio Paulo Bydlowski2, Mark Buller3, Stefan Worgall4 and David T. Curiel1, 1Department of Radiation Oncology, School of Medicine, Washington University in St. Louis; 2Laboratory of Genetics and Molecular Hematology (LIM 31), School of Medicine, Universidade de São Paulo, São Paulo SP, Brazil; 3Department of Molecular Microbiology & Immunology, Saint Louis University School of Medicine; 4Division of Pediatric Pulmonology, Weill Cornell Medical College, Cornell University, New York

#9 A Novel Mouse Model For Immune Reconstitution Inflammatory Syndrome
Kristin L. Griffiths1, Samantha Slight2, Shabaana A. Khader2, Department of Molecular Microbiology, Washington University in St. Louis, St. Louis, MO; 2Division of Infectious Diseases, Department of Pediatrics, University of Pittsburgh School of Medicine, Pittsburgh, PA
#10 A Viral RNA Secondary Structure Antagonizes Ifit1
Jennifer L. Hyde1, Christina L. Gardner2, Taishi Kimura3, James P. White1, Gai Liu5, Derek W. Trobaugh2, Cheng Huang4, Marco Tonelli6, Slobodan Paesler7, Kiyoshi Takeda8, William B. Klimstra9, Gaya K. Amarasinghe5, Michael S. Diamond1,5,7; 1Department of Medicine, Washington University School of Medicine in St. Louis; 2Department of Microbiology and Molecular Genetics, Center for Vaccine Research, University of Pittsburgh, Pittsburgh; 3Laboratory of Immune Regulation, Graduate School of Medicine, Osaka University, Osaka, Japan; 4Department of Pathology, University of Texas Medical Branch at Galveston, Galveston, TX; 5Department of Pathology and Immunology, Washington University School of Medicine in St. Louis; 6National Magnetic Resonance Facility at Madison, University of Wisconsin, Madison, WI; 7Department of Molecular Microbiology, Washington University School of Medicine in St. Louis

#11 Enterotoxigenic Escherichia coli Soluble Etpa Adhesin Serves as a Novel Molecular Bridge Between Bacterial Flagella and Intestinal Mucins
Pardeep Kumar1 and James M. Fleckenstein1,2,3; Department of Internal Medicine, Division of Infectious Diseases1 and the Molecular Microbiology and Microbial Pathogenesis Program2, Washington University School of Medicine, St. Louis, Missouri, USA; Infectious Disease Section, Medicine Service, John Cochran Veterans Affairs Medical Center, St. Louis, Missouri

#12 Intraspecific Genetic Variation in the Species Onchocerca volvulus - The Causative Agent of River Blindness
Rahul Tyagi1, Samantha McNulty2, Thomas R. Unnasch3, Gary Weil4, Peter Fischer1 and Makedonka Mitreva1,3; 1The Genome Institute, Washington University School of Medicine in St. Louis; 2Global Health Infectious Disease Research, Department of Global Health, University of South Florida, Tampa, FL; 3Division of Infectious Diseases, Department of Internal Medicine, Washington University School of Medicine in St. Louis

#13 The Challenges of Establishing a Clinical Laboratory in Jimani, Dominican Republic
Craig B. Wilen4 and Sarah M. Brown5; Department of Pathology and Immunology, Washington University School of Medicine

#14 Loneliness and Self-Esteem of Migrant and Local Children in Wuhan, China
Lingzi Luo1, BS, Chunmei Zhang2, PhD; Washington University in St. Louis3, Wuhan University2

#15 Quantitative Evidence of Avian Influenza A(H7N9) Epidemiology: A Literature Review
Braydon Schaible1, Varadan Sevilimedu1, Isaac Chun-Hai Fung2, Manoj Gambhir3, 4Georgia Southern University, Jiang-Ping Hsu College of Public Health, Department of Biostatistics; 2Assistant Professor of Epidemiology, Georgia Southern University, Jiang-Ping Hsu College of Public Health; 3Associate Professor of Epidemiology and Demography, Monash University, Melbourne, Australia

#16 A Review of Foodborne Illness Outbreaks in Georgia, USA, 1993-2011.
Jessica K. Sexton1,2; Asli Aslan1,2, Isaac Chun-Hai Fung1,2; 1Department of Epidemiology and 2Department of Environmental Health Science, Jinn-Ping Hsu College of Public Health, Georgia Southern University, Statesboro, GA

#17 Highly Conserved Type 1 Fimbriae Promote Enterotoxigenic Escherichia coli (ETEC) Adhesion And Enterotoxin Delivery
Alaullah Sheikh1, Rita Kansal2, Nabilah Ibrat3, Yasmin Ara Begum3, Jerome S Pinkner1,4, Scott J Hultgren1,4, Firdausi Qadri3, and James M Fleckenstein1,5,6; Molecular Microbiology and Microbial Pathogenesis Program, Division of Biology and Biomedical Sciences1, Washington University in St. Louis; Research Service, Veterans Affairs Medical Center, Memphis, TN; International Centre for Diarrhoeal Disease Research, Bangladesh5; Center for Women’s Infectious Disease Research5, and the Department of Medicine5, Washington University School of Medicine in St. Louis; Medicine Service, Veterans Affairs Medical Center5, St. Louis

#18 Maternal Nutritional Supplementation in the Shada Slum of Cap Haitien, Haiti
Rachel Smidt, Brown School, Washington University in St. Louis
#19 **Stimulating Acupuncture Point LI4 With Magnets Reduced Fever, Headache, and Sore Throat**

Key Sun, Brown School, Washington University in St. Louis

#20 **Psychosocial Determinants of Influenza Vaccine Acceptance Among College Students in Statesboro, Georgia**

Pei-Ling Tseng, Georgia Southern University; Levi Ross, Georgia Southern University; Isaac Chun-Hai Fung, Georgia Southern University

#21 **A Gnotobiotic Mouse Model of Childhood Undernutrition in Bangladesh**

Vitas E. Wagner\(^1\), Janaki Guruge\(^2\), Jiye Cheng\(^1\), Sathish Subramanian\(^1\), Tahmeed Ahmed\(^2\), Rashidul Haque\(^2\), and Jeffrey I. Gordon\(^1\); Center for Genomes Systems and Systems Biology, Washington University in St. Louis; \(^1\)International Center for Diarrheal Disease Research Bangladesh, Dhaka, Bangladesh

#22 **Children Living with HIV**

Colleen Walsh Lang, Department of Anthropology and School of Medicine, Washington University in St. Louis

#23 **Replication and Pathogenesis of Reassortant Avian Origin Influenza A viruses**

Graham Williams\(^2\) and Jacco Boon\(^1\); Washington University in St. Louis; \(^1\)Department of Medicine, Molecular Microbiology and Pathology and Immunology, Division of Infectious Diseases; \(^2\)Division of Biology and Biomedical Sciences, Molecular Microbiology and Microbial Pathogenesis

#24 **Mathematical Modeling of Typhoid Fever: A Historical Perspective**

Iurii Bakach\(^1\), Isaac Chun-Hai Fung\(^2\), \(^1\)Department of Mathematics, College of Science and Mathematics, Georgia Southern University; \(^2\)Department of Epidemiology, Jiann-Ping Hsu College of Public Health, Georgia Southern University

#25 **Handwashing Promotion in Chinese Social Media: A Case Study of Global Handwashing Day 2012**

Isaac Chun-Hai Fung, Georgia Southern University; Jingxian Cai, Georgia Southern University; Yi Hao, Georgia Southern University; Yuchen Ying, University of Georgia; King-Wa Fu, University of HongKong; Zion Tsz-Ho Tse, University of Georgia

#26 **Chinese Social Media Reaction to the MERS-CoV and Avian Influenza A(H7N9) Outbreaks**

Isaac Chun-Hai Fung\(^1\), King-Wa Fu\(^2\), Yuchen Ying\(^3\), Braydon Schaible\(^1\), Yi Hao\(^1\), Chung-Hong Chan\(^2\) and Zion Tsz-Ho Tse\(^1\); Georgia Southern University; \(^1\)The University of Hong Kong; \(^2\)The University of Georgia

#27 **Gatekeeping: Metal Selectivity by the Yersiniabactin Siderophore System in Uropathogenic Escherichia coli**

Eun-Ik Koh\(^1\)\(^3\), Chia S Hung\(^1\)\(^3\), Jan R Crowley\(^4\), Jeffrey P Henderson\(^1\)\(^3\); \(^1\)Center for Women’s Infectious Diseases Research, Washington University School of Medicine in St. Louis; \(^2\)Department of Infectious Diseases, Washington University School of Medicine in St. Louis; \(^3\)Department of Internal Medicine, Washington University School of Medicine in St. Louis

#28 **Helminth Antigen-Driven Impairment of Th1 Responses in Tuberculosis**

Leticia Monin\(^1\)\(^6\), Radha Gopal\(^1\), Dongwan D. Kang\(^2\)\(^3\); Javier Rangel-Moreno\(^4\), Jay Kolls\(^5\), Edward Pearce\(^6\) & Shabaana Khader\(^6\);

\(^1\)Richard King Mellon Foundation Institute for Pediatric Research, Children’s Hospital of Pittsburgh of UPMC, Pittsburgh; \(^2\)Department of Energy, Joint Genome Institute, Walnut Creek, CA; \(^3\)Genomics Division, Lawrence Berkeley National Laboratory, Berkeley, CA; \(^4\)Department of Medicine, Division of Allergy, Immunology and Rheumatology, University of Rochester Medical Center, Rochester, NY; \(^5\)Division of Immunobiology, Department of Pathology and Immunology, Washington University School of Medicine in St. Louis; \(^6\)Department of Molecular Microbiology, Washington University School of Medicine in St. Louis

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#29 Molecular Insights into Recurrent Urinary Tract Infection: Elucidating the Pathogenesis of Acute Cystitis in the Non-Naive Host
Valerie P. O’Brien¹, Thomas J. Hannan², Drew J. Schwartz³, Amanda L. Lewis¹, Scott J. Hultgren¹; ¹Department of Molecular Microbiology and Center for Women’s Infectious Disease Research, Washington University School of Medicine; ²Department of Pathology and Immunology, Washington University School of Medicine

#30 ATG16L1 Regulates Host Defense to Uropathogenic Escherichia coli Infection by Controlling Macrophage-Mediated Bacterial Clearance
Jane Symington¹, Caihong Wang¹, Nana Owusu-Boaitey¹, Indira Mysorekar¹,²; Departments of Obstetrics & Gynecology¹, Pathology & Immunology², Washington University in St. Louis

#31 The Resistome of an Antibiotic-Naive Amerindian Community
Erica C Pehrsson¹, Jose C Clemente, Bin Wang, Zhan Gao³, Rob Knight⁴,³, Maria Gloria Dominguez-Bello³,⁴, Gautam Dantas¹; ¹Washington University in St. Louis; ²University of Colorado, Boulder; ³New York University; ⁴University of Puerto Rico; (⁵)Howard Hughes Medical Institute

#32 Identifying Patterns of HIV and TB Among Inpatient and Outpatient Population in Haiti
Marie Denis Luque¹, Kripa Regmi¹, Isaac Chun-Hai Fung²; Georgia Southern University¹,²,³

#33 Saving Babies in St. Vincent and the Grenadines: Designing a Quality Improvement and Capacity Building Effort at the Milton Cato NICU
Shahida Rice¹, Keith Elder¹, Katy Frankel¹, Robert Fleming³, Lauren Davis²; Department of Health Management and Policy, Saint Louis University College for Public Health & Social Justice¹, World Pediatric Project²; Saint Louis University School of Medicine³

#34 Congenital Heart Surgery Outcomes at a Guatemalan Surgical Center
Benzoni, Nicole; Mazate, Elizabeth, MD¹; Barnoya, Joaquin, MD, MPH²; Unidad de Cirugia Cardiovascular Pediatria de Guatemala²; Washington University School of Medicine, Institute of Public Health²

#35 Predictors of Stunting in Honduras: Structural v. Behavioral
Kate Clitheroe; Master of Public Health Student at the Brown School at Washington University in St. Louis

#36 Morphological & Genetic Characterization of Triatomine: Vectors of Chagas Disease in Texas
Heather Frady¹, Rachel Curtis², Sarah Hamer³, Gabriel Hamer¹; Department of Biology, Eastern Washington University¹, Department of Entomology, Texas A&M University¹,³,⁴; Department of Veterinary Integrative Biosciences Texas A&M University²,³

#37 Molecular Phylogenetic Analysis of Novel Non-Sexually Transmitted Strains of Haemophilus ducreyi
Jordan R. Gaston, Tricia L. Humphreys; Allegheny College

#38 Vaccine-Induced Protection Against HSV-2 Is Mediated by a Polyclonal Immune Response Towards Many Viral Proteins
Joshua J. Geltz and William P. Halford; Department of Medical Microbiology, Immunology, Cell Biology, Southern Illinois University School of Medicine, Springfield, IL

#39 Autophagy Induction Promotes Uropathogenic Escherichia coli to Persist in the Urinary Tract
Amanda Harris¹, Caihong Wang¹, and Indira U. Mysorekar¹,²; Departments of Obstetrics and Gynecology¹ and Pathology and Immunology², Washington University School of Medicine in St. Louis
#40 *Anthropological Perspectives on Human Prion Diseases and the Ethics of Transnational Epidemiological Research: A Review of Literature*
Tobeya Ibitayo, Arthur Aung, Alex Tinianow; 1Department of Anthropology, 2Department of Biology, Washington University in St. Louis

#41 *Contextualizing Malnutrition in Poor Mothers in Hyderabad: Suggestions for Future Research*
Amrutha Kumaran, Bachelor of Arts Candidate at Washington University in St. Louis

#42 *The Effectiveness of Corticosteroids on Tuberculous meningitis (TBM) in HIV-Positive Adults*
Angela Murro, MPH and Isaac Chun-Hai Fung, PhD; 1Department of Biostatistics, Jiann-Ping Hsu College of Public Health, Georgia Southern University and 2Department of Epidemiology, Jiann-Ping Hsu College of Public Health, Georgia Southern University

#43 *Transgenic Expression of CXCR3 Worsens the Inadequate Response to L. major Parasites by BALBc Mice*
Abhay Satoskar, Steve Oghumu, Sanjay Varikuti and James Stock, The Ohio State University

#44 *Autophagy Stimulation via Ifn-γ Treatment Promotes Clearance of Burkholderia cenocepacia Infected Human Cystic Fibrosis Macrophages*
Kaivon D. Assani, Amal Amer and Benjamin Kopp; 1Center for Microbial Pathogenesis, The Research Institute at Nationwide Children's Hospital, Columbus, OH; 2Section of Pediatric Pulmonology, Nationwide Children's Hospital, Columbus, OH; 3Department of Microbial Infection and Immunity and the Department of Internal Medicine, The Ohio State University, Columbus, OH

#45 *Restriction of Flaviviruses in Insects*
James D. Brien, Sherri L Hannah, Irma Sanchez-Vargas, Greg D Ebel, Sara Cherry, and Michael S Diamond; Departments of Medicine, Pathology & Immunology, Molecular Microbiology, Washington University School of Medicine, St. Louis. Department of Microbiology, University of Pennsylvania, Philadelphia. Department of Microbiology, Immunology & Pathology, College of Veterinary Medicine & Biomedical Sciences, Colorado State University

#46 *Chinese Social Media Reaction to News About 39 Notifiable Infectious Diseases*
Isaac Chun-Hai Fung, Yi Hao, Braydon J. Schaible, Jingxian Cai, Yuchen Ying, Zion Tsz-Ho Tse, King-Wa Fu; 1Department of Epidemiology and Department of Biostatistics, Jiann-Ping Hsu College of Public Health, Georgia Southern University; Department of Computer Science and College of Engineering, The University of Georgia; Journalism and Media Studies Center, The University of Hong Kong. * Corresponding author † Contributed equally ‡ Joint senior authors

#47 *Functional Differentiation of the Ascaris suum Intestine Revealed by Gene Expression Profiling*
Xin Gao, Bruce Rosa, Douglas P. Jasmer, Makedonka Mitreva; 1The Genome Institute, Washington University in St Louis; 2Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, WA; 3Division of Infectious Diseases, Department of Medicine, Washington University School of Medicine in St. Louis

#48 *Rehabilitation for Obstetric Fistula: Case Reports that Exemplify Intervention Needs*
1Campbell Mikush, OTD, OTRL 2Theresa Monaco Spitznagle, PT DPT MHS WCS 1Washington University Program in Occupational Therapy 2Washington University Program in Physical Therapy
#49 A Loss of Type I IFN Signaling Results in a MAVS-Dependent Induction of Cytokine Storm, Complement Activation, and Sepsis after Viral Infection
Amelia K. Pinto¹, Hilario J. Ramos³, Xiaobo Wu¹, Shilpa Aggarwal¹, Bimmi Shrestha¹, Matthew Gorman², Kristin Y. Kim⁵, Mehul S. Suthar⁶, John P. Atkinson¹,²,³, Michael Gale, Jr.⁴, and Michael S. Diamond¹,²,³; Departments of Medicine⁵, Pathology & Immunology⁵, and Molecular Microbiology³, Washington University School of Medicine in St Louis; Department of Immunology⁴, University of Washington School of Medicine, Seattle, WA; ⁵Department of Pediatrics, Emory Vaccine Center, Children’s Healthcare of Atlanta, Emory University, Atlanta, GA

#50 Environmental Pathogenicity and Human Milk Immune Responses: Evidence from Two Countries (Philippines and Tibetans in Nepal)
EA Quinn¹, G Childs¹, K McKinley¹, J Anderson¹, J Onugha¹, C Freemen¹, M Chernoff¹, J Borja², M Power³,⁴; ¹Department of Anthropology, Washington University in St. Louis; ²Office of Population Studies, University of San Carlos, Philippines; ³Smithsonian Conservation Biology Institute, Nutrition Laboratory and Conservation Ecology Center, National Zoological Park, Washington DC; ⁴Research Department, American College of Obstetricians and Gynecologists, Washington DC

#51 Estrogenic Modulation of Urinary Tract Infection in a Murine Menopausal Model
Caihong Wang¹, Jane W. Symington¹, Emily Ma¹, Bin Cao¹, and Indira U. Mysorekar¹, ²; Departments of ¹Obstetrics and Gynecology, ²Pathology and Immunology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO

#52 Application of Genomic and Metagenomic Approaches in Infectious Diseases
Yanjiao Zhou¹ and Makedonka Mitreva²,³ on behalf of the St. Louis Microbiome team; ¹Division of Laboratory Medicine, Department of Pediatrics, Washington University School of Medicine ²The Genome Institute, Washington University School of Medicine ³Division of Infectious Diseases, Department of Medicine, Washington University School of Medicine