

## Saturday, October 21

### Registration

Grand Ballroom Foyer - Ballroom Level (East Tower)  
Saturday, October 21, 7 a.m. - 5 p.m. U.S. Central Time Zone

### Speaker Ready Room (Closed 1 p.m. - 2 p.m.)

Grand Suite 2AB - Ballroom Level (East Tower)  
Saturday, October 21, 7 a.m. - 5 p.m. U.S. Central Time Zone

### TropStop - Student/Trainee Lounge

Grand Hall MN - Ballroom Level (East Tower)  
Saturday, October 21, 7 a.m. - 5 p.m. U.S. Central Time Zone

This casual setting, designed with students, trainees and residents in mind (coffee, internet), is your place for a break from the fast-pace of the meeting and relax with colleagues and friends. Check out the "Career Chats," held in the TropStop. This will be your opportunity to meet professionals in the fields of tropical medicine and global health who will share their personal career paths and answer your questions about the various bumps and forks in the road.

### Meeting Sign-Up Room

Hornor and Ogden - Third Floor (West Tower)  
Saturday, October 21, 7 a.m. - 7 p.m. U.S. Central Time Zone

### Prayer Room

Hong Kong - Ballroom Level (West Tower) and Field - Third Floor (West Tower)  
Saturday, October 21, 7 a.m. - 7 p.m. U.S. Central Time Zone

### Nursing Mothers Room

Grand Suite 1 and Grand Suite 4 - Ballroom Level (East Tower)  
Saturday, October 21, 7 a.m. - 7 p.m. U.S. Central Time Zone

### ASTMH Past Presidents Meeting

Michigan 3 - Concourse Level (East Tower)  
Saturday, October 21, 7 a.m. - 8 a.m. U.S. Central Time Zone

### Diploma Course Certification Committee Meeting

Gallery 3 Boardroom - Skyway Level (West Tower)  
Saturday, October 21, 7 a.m. - 8 a.m. U.S. Central Time Zone

### Scientific Program Committee Meeting

Michigan 1A/B/C - Concourse Level (East Tower)  
Saturday, October 21, 7 a.m. - 8 a.m. U.S. Central Time Zone

### Press Room

Randolph 1A - Concourse Level (East Tower)  
Saturday, October 21, 7:45 a.m. - 5 p.m. U.S. Central Time Zone

## Scientific Session 102

### Global Health: Maternal, Newborn and Child Health

Grand Ballroom A - Ballroom Level (East Tower)  
Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Catherine Oldenburg  
University of California, San Francisco, San Francisco, CA, United States  
Quique Bassat  
ISGlobal, Barcelona, Spain

8 a.m.

6466

#### CAUSES OF DEATH AMONG INFANTS AND CHILDREN ENROLLED THROUGH THE CHILD HEALTH AND MORTALITY PREVENTION SURVEILLANCE (CHAMPS) NETWORK

Quique Bassat<sup>1</sup>, Dianna M. Blau<sup>2</sup>, Ikechukwu U. Ogbuanu<sup>3</sup>, Solomon Samura<sup>4</sup>, Erick Kaluma<sup>5</sup>, Ima-Abasi Basse<sup>6</sup>, Samba Sow<sup>6</sup>, Adama Mamby Keita<sup>5</sup>, Milagritos Tapia<sup>6</sup>, Ashka Mehta<sup>6</sup>, Karen Kotloff<sup>6</sup>, Afruna Rahman<sup>7</sup>, Kazi Munisul Islam<sup>7</sup>, Muntasir Alam<sup>7</sup>, Shams El Arifeen<sup>7</sup>, Emily Gurley<sup>8</sup>, Vicky Baillie<sup>8</sup>, Portia Mutevedzi<sup>9</sup>, Sana Mahtab<sup>9</sup>, Bukie Nana Thwala<sup>9</sup>, Beth A. Tippet Barr<sup>10</sup>, Dickens Onyango<sup>11</sup>, Victor Akele<sup>12</sup>, Emily Rogena<sup>13</sup>, Peter Onyango<sup>14</sup>, Richard Omoro<sup>15</sup>, Inacio Mandomando<sup>16</sup>, Sara Ajanovic<sup>1</sup>, Rosauaro Varo<sup>1</sup>, Antonio M. Sitoe<sup>16</sup>, Miquel Duran-Frigola<sup>17</sup>, Nega Assefa<sup>18</sup>, J. Anthony G. Scott<sup>19</sup>, Lola Madrid<sup>19</sup>, Tseyon Tesfaye<sup>18</sup>, Yadeta Dessie<sup>18</sup>, Zachary Madewell<sup>2</sup>, Robert F. Breiman<sup>20</sup>, Cynthia G. Whitney<sup>20</sup>, Shabir Madhi<sup>9</sup>

<sup>1</sup>ISGlobal, Barcelona, Spain, <sup>2</sup>Center for Global Health, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>3</sup>Crown Agents in Sierra Leone, Freetown, Sierra Leone, <sup>4</sup>World Hope International, Makeni, Sierra Leone, <sup>5</sup>Centre pour le Développement des Vaccins (CVD-Mali), Ministère de la Santé, Bamako, Mali, <sup>6</sup>Department of Pediatrics, Center for Vaccine Development and Global Health, University of Maryland School of Medicine, Baltimore, MD, United States, <sup>7</sup>International Center for Diarrhoeal Diseases Research (icddr), Dhaka, Bangladesh, <sup>8</sup>Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>9</sup>African Leadership in Vaccinology Expertise; Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa, <sup>10</sup>Nyanja Health Research Institute, Salima, Malawi, <sup>11</sup>Kisumu County Department of Health, Kisumu, Kenya, <sup>12</sup>US Centers for Disease Control and Prevention—Kenya, Kisumu, Kenya, <sup>13</sup>Jomo Kenyatta University of Agriculture and Technology, Juja, Kenya, <sup>14</sup>Kenya Medical Research Institute, Center for Global Health Research (KEMRI-CGHR), Kisumu, Kenya, <sup>15</sup>Kenya Medical Research Institute, Centre for Global Health Research, Kisumu, Kenya, <sup>16</sup>Centro de Investigação em Saúde de Manhiça, Manhiça, Mozambique, <sup>17</sup>Ersilia Open Source Initiative, Cambridge, United Kingdom, <sup>18</sup>College of Health and Medical Sciences, Haramaya University, Harar, Ethiopia, <sup>19</sup>Department of Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>20</sup>Emory Global Health Institute, Emory University, Atlanta, GA, United States

8:15 a.m.

6467

#### INFANT MORTALITY AND GROWTH FAILURE AFTER ORAL AZITHROMYCIN AMONG LOW BIRTHWEIGHT AND UNDERWEIGHT NEONATES

Ali Sie<sup>1</sup>, Mamadou Bountogo<sup>1</sup>, Alphonse Zakane<sup>1</sup>, Guillaume Compaore<sup>1</sup>, Thierry Ouedraogo<sup>1</sup>, Elodie Lebas<sup>2</sup>, Benjamin F. Arnold<sup>2</sup>, Thomas M. Lietman<sup>2</sup>, Catherine Oldenburg<sup>2</sup>

<sup>1</sup>Centre de Recherche en Sante de Nouna, Nouna, Burkina Faso, <sup>2</sup>University of California, San Francisco, San Francisco, CA, United States

8:30 a.m.

6468

#### EFFECT OF A SINGLE DOSE OF PROPHYLACTIC AZITHROMYCIN TO INFANTS ON FECAL CARRIAGE OF ENTEROPATHOGENS IN PAKISTANI INFANTS

Aneela Pasha<sup>1</sup>, Ameer Muhammad<sup>2</sup>, Furqan Kabir<sup>1</sup>, Waqasuddin Khan<sup>1</sup>, Yasir Shafiq<sup>1</sup>, Imran Nisar<sup>1</sup>, Iqbal Azam<sup>1</sup>, Najeeha Iqbal<sup>1</sup>, Fyezah Jehan<sup>1</sup>

<sup>1</sup>Aga Khan University, Karachi, Pakistan, <sup>2</sup>Vital Pakistan Trust, Karachi, Pakistan

8:45 a.m.

6469

### EVALUATING THE ACCURACY OF INTERVA-5 AND INSILICOVA ALGORITHMS IN DETERMINING THE LEADING CAUSES OF MORTALITY IN INFANTS AND CHILDREN UNDER-5 IN WESTERN KENYA

Joyce Akinyi Were<sup>1</sup>, Victor Akelo<sup>2</sup>, David Obor<sup>1</sup>, Sammy Khagayi<sup>1</sup>, Benard Asuke<sup>1</sup>, Aggrey Igunza<sup>1</sup>, Cynthia Whitney<sup>2</sup>, Dianna Blau<sup>4</sup>, Beth Barr<sup>5</sup>

<sup>1</sup>Kenya Medical Research Institute, Kisumu, Kenya, <sup>2</sup>US Centers for Disease Control and Prevention, Kisumu, Kenya, <sup>3</sup>Emory Global Health Institute, Emory University, Atlanta, GA, United States, <sup>4</sup>US Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>5</sup>Nyanja Health Research Institute, Salima, Malawi

9 a.m.

6470

### IDENTIFYING RISK FACTORS FOR MATERNAL NEAR MISS (MNM) AMONG RURAL PREGNANT WOMEN ADMITTED TO A TERTIARY PUBLIC HOSPITAL IN BANGLADESH: A CASE-CONTROL STUDY

Rajib Biswas<sup>1</sup>, Emily S. Gurley<sup>2</sup>, Kazi Munisul Islam<sup>1</sup>, Mohammad Sabbir Ahmed<sup>1</sup>, Shovo Debnath<sup>1</sup>, Hafsa Hossain<sup>1</sup>, Salma Afroz Shifa<sup>1</sup>, Dilruba Zeba<sup>3</sup>, Qazi Sadeq-ur Rahman<sup>1</sup>, Sanwarul Bari<sup>1</sup>, Shams El Arifeen<sup>1</sup>, Mohammad Zahid Hossain<sup>1</sup>

<sup>1</sup>International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh, <sup>2</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>3</sup>Bangabandhu Sheikh Mujib Medical College, Faridpur, Bangladesh

9:15 a.m.

6471

### ANTENATAL CARE SERVICES IN BENIN AND TANZANIA, 2021-2022: AN EQUITY ANALYSIS STUDY

Anna Munsey<sup>1</sup>, Alen Kinyina<sup>2</sup>, Melkior Assenga<sup>2</sup>, Faustin Onikpo<sup>3</sup>, Alexandre Binazon<sup>3</sup>, Marie Adeyemi Idohou<sup>3</sup>, Manzidatou Alao<sup>3</sup>, Sijenunu Aron<sup>4</sup>, Samwel L. Nhiga<sup>4</sup>, Julie Niemczura<sup>5</sup>, Julie Buekens<sup>5</sup>, Chonge Kitojo<sup>6</sup>, Erik Reaves<sup>7</sup>, Catherine Dentinger<sup>8</sup>, Ahmed Saadani Hassani<sup>9</sup>, Mary Drake<sup>2</sup>, Katherine Wolf<sup>10</sup>, Stephanie Suhowatsky<sup>10</sup>, Aurore Ogouyemi-Hounto<sup>11</sup>, Ruth Lemwayi<sup>2</sup>, Julie R. Gutman<sup>1</sup>, Walter Ochieng<sup>12</sup>

<sup>1</sup>Malaria Branch, Division of Parasitic Diseases and Malaria, Global Health Center, U.S. Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>2</sup>Jhpiego, Dar es Salaam, United Republic of Tanzania, <sup>3</sup>U.S. Presidents' Malaria Initiative Impact Malaria project, MCD, Cotonou, Benin, <sup>4</sup>National Malaria Control Program, Dar es Salaam, United Republic of Tanzania, <sup>5</sup>U.S. Presidents' Malaria Initiative Impact Malaria project, MCD, Washington, DC, United States, <sup>6</sup>U.S. President's Malaria Initiative, USAID, Dar es Salaam, United Republic of Tanzania, <sup>7</sup>U.S. President's Malaria Initiative, U.S. Centers for Disease Control and Prevention, Dar es Salaam, United Republic of Tanzania, <sup>8</sup>U.S. President's Malaria Initiative, Malaria Branch, U.S. Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>9</sup>U.S. Presidents' Malaria Initiative, U.S. Centers for Disease Control and Prevention, Cotonou, Benin, <sup>10</sup>U.S. Presidents' Malaria Initiative Impact Malaria project, Jhpiego, Baltimore, MD, United States, <sup>11</sup>Unité de Parasitologie/Faculté des Sciences de la Santé /Université d'Abomey Calavi, Cotonou, Benin, <sup>12</sup>Office of the Director, Global Health Center, U.S. Centers for Disease Control and Prevention, Atlanta, GA, United States

9:30 a.m.

6472

### COSTING OF A COMBINATION INTERVENTION (KYATEREKERA) ADDRESSING SEXUAL RISK-TAKING BEHAVIORS AMONG VULNERABLE WOMEN IN SOUTHWESTERN UGANDA

Yesim Tozan<sup>1</sup>, Joshua Kiyingi<sup>2</sup>, Sooyoung Kim<sup>1</sup>, Ozge Bahar Sensoy<sup>2</sup>, Proscovia Nabunya<sup>2</sup>, Larissa Jennings Mayo-Wilson<sup>3</sup>, Joseph Kagaayi<sup>4</sup>, Mary M. McKay<sup>2</sup>, Susan S. Witte<sup>5</sup>, Fred M. Ssewamala<sup>2</sup>

<sup>1</sup>New York University School of Global Public Health, New York, NY, United States, <sup>2</sup>Brown School, Washington University in Saint Louis, Saint Louis, MO, United States, <sup>3</sup>Gilling School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>4</sup>International Center for Child Health and Development, Washington University in St. Louis, Uganda Field Office, Masaka, Uganda, <sup>5</sup>Columbia University School of Social Work, New York, NY, United States

## Scientific Session 103

### American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Parasites – Protective Mechanisms

Grand Ballroom B - Ballroom Level (East Tower)

Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

Supported with funding from the Burroughs Wellcome Fund

#### CHAIR

Julian Rayner  
University of Cambridge, Cambridge, United Kingdom

Katherine O'Flaherty  
Burnet Institute, Melbourne, Australia

8 a.m.

7264

### HIGH-RESOLUTION ANALYSIS OF TRANSLATIONAL REGULATION DURING LIFE CYCLE TRANSITIONS IN *TOXOPLASMA GONDII*

Michelle Peters, Aditi Shukla, Kehui Xiang, Dylan McCormick, David Bartel, Sebastian Lourido  
Whitehead Institute/Massachusetts Institute of Technology, Cambridge, MA, United States

8:15 a.m.

6473

### THE COLLABORATIVE CROSS REVEALS A SINGLE LOCUS REQUIRED FOR PROTECTIVE IMMUNITY AGAINST HIGHLY VIRULENT *TOXOPLASMA GONDII* STRAINS

Juan C. Sánchez-Arcila<sup>1</sup>, Arlon Wizzard<sup>1</sup>, Litzzy Lemus<sup>1</sup>, Jennifer Eggleston<sup>1</sup>, Darian Galvez<sup>2</sup>, Scott P. Souza<sup>1</sup>, Kirk Dc Jensen<sup>2</sup>

<sup>1</sup>Department of Molecular and Cell Biology, University of California, Merced, CA, United States, <sup>2</sup>Health Sciences Research Institute, University of California, Merced, CA, United States

8:30 a.m.

6474

### EXPLORING NATURALLY ACQUIRED IMMUNITY TO *PLASMODIUM FALCIPARUM* IN A GENOTYPIC ANALYSIS OF A LONGITUDINAL COHORT STUDY

Emily LaVerriere<sup>1</sup>, Zachary M. Johnson<sup>2</sup>, Meg Shieh<sup>2</sup>, Charlotte Switzer<sup>1</sup>, Caroline O. Buckee<sup>1</sup>, Peter D. Crompton<sup>3</sup>, Boubacar Traore<sup>4</sup>, Tuan M. Tran<sup>5</sup>, Daniel E. Neafsey<sup>1</sup>  
<sup>1</sup>Harvard T.H. Chan School of Public Health, Boston, MA, United States, <sup>2</sup>Broad Institute of MIT and Harvard, Cambridge, MA, United States, <sup>3</sup>National Institutes of Health, Rockville, MD, United States, <sup>4</sup>University of Sciences, Technique and Technology of Bamako, Bamako, Mali, <sup>5</sup>Indiana University School of Medicine, Indianapolis, IN, United States

8:45 a.m.

6475

### INVESTIGATION OF THE RELATIONSHIP BETWEEN NATURALLY ACQUIRED ANTIMALARIAL ANTIBODIES AND THE DURATION AND CLEARANCE OF ULTRA-LOW DENSITY *PLASMODIUM VIVAX* INFECTIONS

Katherine O'Flaherty<sup>1</sup>, Rhea J. Longley<sup>2</sup>, Merryn S. Roe<sup>1</sup>, Sophie G. Zaloumis<sup>3</sup>, D. Herbert Opi<sup>1</sup>, Kael Schöffers<sup>4</sup>, David J. Price<sup>5</sup>, Rupam Tripura<sup>6</sup>, Chea Ngoun<sup>7</sup>, Koukeo Phommason<sup>8</sup>, Mayfong Mayxay<sup>9</sup>, Paul N. Newton<sup>10</sup>, Thomas J. Peto<sup>6</sup>, James Callery<sup>6</sup>, Mehul Dhorda<sup>6</sup>, Nicholas P. Day<sup>6</sup>, Arjen M. Dondorp<sup>6</sup>, Eizo Takashima<sup>11</sup>, Takafumi Tsuboi<sup>11</sup>, Julie A. Simpson<sup>3</sup>, James G. Beeson<sup>12</sup>, Ivo Mueller<sup>2</sup>, Nicholas J. White<sup>6</sup>, Lorenz von Seidlein<sup>6</sup>, Freya J. I. Fowkes<sup>13</sup>

<sup>1</sup>Disease Elimination Program, Burnet Institute, Melbourne, Australia, <sup>2</sup>Population Health and Immunity Division, Walter and Eliza Hall Institute of Medical Research and Department of Medical Biology, The University of Melbourne, Melbourne, Australia, <sup>3</sup>Centre for Epidemiology and Biostatistics, The University of Melbourne, Melbourne, Australia, <sup>4</sup>Population Health and Immunity Division, Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia, <sup>5</sup>Centre for Epidemiology and Biostatistics, The University of Melbourne and

Department of Infectious Diseases, The University of Melbourne at the Peter Doherty Institute for Infection and Immunity, Melbourne, Australia, <sup>6</sup>Mahidol-Oxford Tropical Medicine Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand and Centre for Tropical Medicine and Global Health, University of Oxford, Oxford, United Kingdom, <sup>7</sup>National Centre for Parasitology, Entomology, and Malaria Control, Phnom Penh, Cambodia, <sup>8</sup>Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Vientiane, Lao PDR and Amsterdam Institute for Global Health & Development, Amsterdam, Netherlands, <sup>9</sup>Centre for Tropical Medicine and Global Health, University of Oxford, Oxford, United Kingdom and Institute of Research and Education Development, University of Health Sciences, Vientiane, Lao People's Democratic Republic, <sup>10</sup>Centre for Tropical Medicine and Global Health, University of Oxford, Oxford, United Kingdom and Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Vientiane, Lao People's Democratic Republic, <sup>11</sup>Division of Malaria Research, Proteo-Science Center, Ehime University, Matsuyama, Japan, <sup>12</sup>Disease Elimination Program, Burnet Institute and Departments of Medicine, Microbiology and Immunology, and Infectious Diseases, The University of Melbourne and Central Clinical School and Department of Microbiology, Monash University, Melbourne, Australia, <sup>13</sup>Disease Elimination Program, Burnet Institute and Centre for Epidemiology and Biostatistics, The University of Melbourne and Departments of Epidemiology and Preventative Medicine and Infectious Diseases, Monash University, Melbourne, Australia

9 a.m.

6476

### NEW INSIGHTS INTO SCHISTOSOMIASIS MANSONI PATHOGENESIS: EVIDENCE FOR BACTERIAL TRANSLOCATION, INFLAMMASOME ACTIVATION, AND UPREGULATION OF PROINFLAMMATORY CYTOKINES IN HEPATOSPLENIC PATIENTS

Thiago Almeida Pereira<sup>1</sup>, Jailza Lima Rodrigues<sup>2</sup>, Izabela Voietra<sup>2</sup>, José Roberto Lambertucci<sup>2</sup>, Stefan M. Geiger<sup>2</sup>, Deborah Negrão-Corrêa<sup>2</sup>

<sup>1</sup>Stanford University School of Medicine, Stanford, CA, United States, <sup>2</sup>Federal University of Minas Gerais, Belo Horizonte, Brazil

9:15 a.m.

6477

### IMMUNE RESPONSE KINETICS IN NEUROCYSTICERCOSIS OVER TIME POST INFECTION USING AN ANIMAL MODEL

Danitz G. Dávila-Villacorta<sup>1</sup>, Rensson Homero Céliz-Ygnacio<sup>1</sup>, Fabio Torres-Bocanegra<sup>1</sup>, Valeria Alejandra Rubio<sup>1</sup>, Alejandra Jimena Bustamante-Portocarrero<sup>1</sup>, María Milagros Dueñas-Mendoza<sup>1</sup>, Ayme Yadine Huaman-Navarro<sup>1</sup>, Cesar M Gavidia<sup>2</sup>, Robert H Gilman<sup>3</sup>, Manuela R. Verástegui<sup>1</sup>

<sup>1</sup>Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>School of Veterinary Medicine, Universidad Nacional Mayor de San Marcos, Lima, Peru, <sup>3</sup>The Department of International Health, Bloomberg School of Hygiene and Public Health, Johns Hopkins University, Baltimore, MD, United States

9:30 a.m.

6478

### TRANSCRIPTOMIC IDENTIFICATION OF BIOMARKERS FOR CHAGAS DISEASE PROGRESSION

Carolina Duque<sup>1</sup>, Jill Hakim<sup>1</sup>, Kelly DeToy<sup>1</sup>, Shilah Waters<sup>1</sup>, David Martin<sup>1</sup>, Rachel Marcus<sup>2</sup>, Manuela Verastegui<sup>3</sup>, Robert H. Gilman<sup>1</sup>, Monica R. Mugnier<sup>1</sup>

<sup>1</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Medstar Union Memorial Hospital, Baltimore, MD, United States, <sup>3</sup>Universidad Peruana Cayetano Heredia, Lima, Peru

## Symposium 104

### Generating Data on Typhoid Conjugate Vaccine to Save Lives – Clinical Studies to Country Introduction

Grand Hall J - Ballroom Level (East Tower)

Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

Typhoid is a serious disease that disproportionately impacts children in low-resource settings in sub-Saharan Africa and South/Southeast Asia. Typhoid is primarily spread through contaminated food and water and globally, accounts for more than 9 million cases and more than 110,000 deaths each year. There is a mounting need to contain and control typhoid driven

by growing antimicrobial resistant strains of Salmonella Typhi (S. Typhi) worldwide and severe adverse weather events due to climate change. Two safe, effective, and cost-effective typhoid conjugate vaccines (TCVs) are World Health Organization (WHO)-prequalified in children as young as six months. Broad introduction of TCVs is essential to combat the spread – and potentially devastating consequences – of typhoid. It is vital to empower, encourage, and facilitate typhoid-endemic countries to introduce TCVs and for decision-makers to embrace this critical tool to prevent typhoid and save lives. The Typhoid Vaccine Acceleration Consortium (TyVAC), led by the Center for Vaccine Development and Global Health at the University of Maryland, the Oxford Vaccine Group at the University of Oxford, and PATH, conducted the first clinical trials on TCVs in Africa – and two trials in Asia – to generate additional information on safety, immunogenicity, co-administration, and efficacy in different geographical settings. Data from clinical trials in diverse settings in Malawi, Nepal, and Bangladesh, show TCVs are safe, well-tolerated, and approximately 80% efficacious up to three years following a single dose. Additionally, efficacy has been demonstrated in all pediatric age groups, including children under two years of age. Trials in Malawi and Burkina Faso show TCVs can be safely co-administered with routine childhood vaccines at 9- and 15-months of age. This information informed TCV country introductions in Pakistan, Liberia, Zimbabwe, and Nepal, planned introduction in Malawi, and Gavi applications in Bangladesh and Kenya. The data generated helps guide policy and inform country decision-makers across the globe to accelerate the introduction of TCVs. This symposium will extend prior results to provide longer term efficacy data, results of alternative schedules, and early lessons learned from introduction. The objectives are to (1) provide updated data from on-going trials of TCV in Malawi and Nepal; (2) discuss lessons learned from country introductions in Malawi and Nepal; and (3) understand the importance of these data to regional and country policy makers to accelerate TCV introduction to help prevent and control typhoid. The session will begin with an overview of global policy recommendations on use of TCVs, followed by specific data from the trials and how it informed country introductions.

#### CHAIR

Kathleen Neuzil  
University of Maryland Baltimore, Baltimore, MD, United States

Nginache Nampota  
Blantyre Malaria Project, Blantyre, Malawi

8 a.m.

#### INTRODUCTION

8:10 a.m.

#### TCV INTRODUCTION – NOW IS THE TIME

Kathleen Neuzil  
University of Maryland Baltimore, Baltimore, MD, United States

8:20 a.m.

#### IMMUNOGENICITY AND TOLERABILITY OF DIFFERENT DOSE SCHEDULES IN NEPAL

Sanjeev Bijkhche  
OUCRU – Nepal, Kathmandu, Nepal

**8:35 a.m.**

**TCV CLINICAL TRIAL UPDATES FROM MALAWI: 4-YR EFFICACY DATA AND BOOSTER DOSE STUDY**

Nginache Nampota  
*Blantyre Malaria Project, Blantyre, Malawi*

**8:50 a.m.**

**INTRODUCTION OF TCV IN NEPAL: LESSONS LEARNED**

Mila Shakya  
*OUCRU – Nepal, Jhamiskhel, Lalitpur, Nepal*

**9:05 a.m.**

**MALAWI COUNTRY INTRODUCTION OF TYPHOID CONJUGATE VACCINE AND MEASLES RUBELLA**

Latif Ndeketa  
*Malawi-Liverpool-Wellcome Trust Clinical Research Programme, Blantyre, Malawi*



**Mechanisms of Protection Induced by the RTS,S/AS01 Vaccine and Identification of Host Signatures Influencing Vaccine Efficacy to Inform Next - Generation Malaria Vaccine Development**

*Grand Ballroom CDEF - Ballroom Level (East Tower)*  
**Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

Identifying correlates of protection following RTS,S/AS01 (RTS,S) vaccination can guide and accelerate the development of improved next-generation malaria vaccines. Antibody (Ab) and CD4+ T cell responses increase after RTS,S immunization and may be associated with protection. Ab features such as titer, affinity (avidity), and Fc-mediated effector functions (phagocytosis and NK cell activation) of anti-circumsporozoite (CSP) antibodies against the major NANP repeats of CSP are biomarkers associated with the RTS,S efficacy in controlled human malaria infection (CHMI) studies. Variations exist in vaccine responsiveness across populations and geographical areas. The emerging concept that baselines immune signatures, low-grade persistent malaria infection, and early post-vaccination signatures might play an essential role in predicting whether a vaccine will show efficacy can now be addressed using a multi-omics approach to understand why malaria vaccines exhibit variable performance. There is a need to understand the underlying immune mechanisms that contribute to malaria vaccine-elicited protection or vaccine hypo-responsiveness in endemic regions by capitalizing on recent advances in systems vaccinology and systems immunology as well as maximizing the application of big data science and bioinformatics. This symposium will first introduce to the audience the current RTS,S biomarkers identified in CHMI studies and the strategic applications of these biomarkers to vaccine development before addressing the host signatures and mechanistic factors that may influence malaria vaccine performance in malaria-endemic regions and how this critical knowledge could guide next-generation malaria vaccines development. The panel discussion will introduce the current RTS,S biomarkers as an efficient and

cost-effective guideline for protection to inform the development of next-generation malaria vaccines providing high-level and durable protection. The panel will also highlight priority areas for the evaluation of the immunogenicity of malaria vaccine candidates, focusing on how to set the stage for determining the long-term efficacy of the next generation of malaria vaccines.

**CHAIR**

Neville Kisalu  
*PATH, Washington, DC, United States*  
Ann Moormann  
*University of Massachusetts Chan Medical School, Worcester, MA, United States*

**8 a.m.**  
**INTRODUCTION**

**8:15 a.m.**  
**CURRENT RTS,S BIOMARKERS IDENTIFIED IN CHMI TRIALS: AN OVERVIEW**

Georgia D. Tomaras  
*Duke University, Durham, NC, United States*

**8:30 a.m.**  
**STRATEGIC APPLICATION OF RTS,S BIOMARKERS TO MALARIA VACCINE DEVELOPMENT**

Faith H. Osier  
*Imperial College London, London, United Kingdom*

**8:45 a.m.**  
**ANTIBODY FUNCTIONS MEDIATING PROTECTION BY THE RTS,S MALARIA VACCINE, AND UNDERSTANDING FACTORS DETERMINING THEIR INDUCTION, MAINTENANCE, AND DECAY IN CHILDREN**

Liriye Kurtovic  
*Burnet Institute, Melbourne, Australia*

**9 a.m.**  
**ANTIBODY, CELLULAR, AND TRANSCRIPTIONAL CORRELATES OF PROTECTION IN THE RTS,S PEDIATRIC PHASE 3 TRIALS**

Gemma Moncunill  
*ISGlobal, Barcelona, Spain*

**9:15 a.m.**  
**ASSESSING TRANSCRIPTOMIC AND FUNCTIONAL DIFFERENCES BETWEEN PEDIATRIC AND ADULT NATURAL KILLER CELLS AND THEIR IMPLICATIONS FOR MALARIA VACCINE EFFICACY**

Cliff Oduor  
*Brown University, Providence, RI, United States*

**9:20 a.m.**  
**MODERATOR, PANEL DISCUSSION**

Faith H. Osier  
*Imperial College, London, United Kingdom*  
John Ong'echa  
*Kenya Medical Research Institute, Kisumu, Kenya*  
Neville Kisalu  
*PATH, Washington, DC, United States*



## Scientific Session 106

### Integrated Control Measures for Neglected Tropical Diseases I

Grand Hall K - Ballroom Level (East Tower)

Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Maureen Headland  
FHI 360, Washington DC, United States

Dieudonne Nare  
Helen Keller International, Ouagadougou, Burkina Faso

8 a.m.

6479

#### REDUCTION OF SEXUALLY TRANSMITTED INFECTIONS FOLLOWING AZITHROMYCIN MASS DRUG ADMINISTRATION FOR TRACHOMA IN NAURU

Lucia Romani<sup>1</sup>, Sue-Chen Apadinuwe<sup>2</sup>, Aisling Byrne<sup>1</sup>, Mitchell Starr<sup>3</sup>, Kathleen Lynch<sup>4</sup>, Susan Star<sup>2</sup>, Philip Cunningham<sup>3</sup>, Stephen Lambert<sup>4</sup>, Susana Vaz Nery<sup>1</sup>

<sup>1</sup>Kirby Institute, UNSW, Sydney, Australia, <sup>2</sup>Ministry of Health and Medical Services, Denig, Nauru, <sup>3</sup>NSW State Reference Laboratory for HIV, Sydney, Australia, <sup>4</sup>UQ Centre for Clinical Research, Brisbane, Australia

8:15 a.m.

6480

#### THE SECONDARY EFFECTS OF IVERMECTIN MDA DESIGNED FOR MALARIA ON ECTOPARASITIC INFESTATIONS IN MOPEIA, MOZAMBIQUE: A CLUSTER-RANDOMIZED CONTROLLED TRIAL

Joanna Furnival-Adams<sup>1</sup>, Amelia Houana<sup>2</sup>, Hansel Mundaca<sup>1</sup>, Aina Casellas<sup>1</sup>, Patricia Nicolas<sup>1</sup>, Julia Montaña<sup>1</sup>, Eldo Elobolobo<sup>2</sup>, Samuel Martinho<sup>1</sup>, Aida Xerinda<sup>2</sup>, Arlindo Soares<sup>2</sup>, Almudena Sanz<sup>1</sup>, Victor Mutepa<sup>1</sup>, Mary Mael<sup>1</sup>, Felisbela Materula<sup>2</sup>, Marta Ribes<sup>1</sup>, Valeria Lopez<sup>1</sup>, Antonio Macucha<sup>2</sup>, Paula Ruiz-Castillo<sup>1</sup>, Mussa Sale<sup>2</sup>, Jenisse Mbanze<sup>2</sup>, Humberto Munguambe<sup>1</sup>, Francisco Saute<sup>2</sup>, Regina Rabinovich<sup>1</sup>, Daniel Engelman<sup>1</sup>, Carlos Chaccour<sup>1</sup>

<sup>1</sup>Barcelona Institute for Global Health, Barcelona, Spain, <sup>2</sup>Centro de Investigação em Saúde de Manhiça (CISM), Manhiça, Mozambique, <sup>3</sup>Murdoch Children's Research Institute, Melbourne, Australia

8:30 a.m.

6481

#### ASSESSING THE PREVALENCE OF SOIL TRANSMITTED HELMINTHS AND TUNGIASIS DURING LYMPHATIC FILARIASIS SURVEILLANCE IN THE COASTAL REGION OF KENYA

Michael O. Ofire<sup>1</sup>, Wyckliff P. Omond<sup>2</sup>, Sultani H. Matendechero<sup>2</sup>, Sammy M. Njenga<sup>3</sup>, Collins O. Okoyo<sup>3</sup>, Stella Kepha<sup>3</sup>, Lynne Elson<sup>4</sup>, Joseph O. Oloo<sup>2</sup>, Gerald G. Gakuo<sup>2</sup>

<sup>1</sup>Amref Health Africa, Nairobi, Kenya, <sup>2</sup>Ministry of Health, Nairobi, Kenya, <sup>3</sup>Kenya Medical Research Institute, Nairobi, Kenya, <sup>4</sup>Kenya Medical Research Institute-Wellcome Trust, Nairobi, Kenya

8:45 a.m.

6482

#### ESTIMATING THE BURDEN OF MALARIA-HELMINTH CO-INFECTIONS AMONG CHILDREN LIVING IN A SETTING OF HIGH COVERAGE OF STANDARD INTERVENTIONS FOR MALARIA AND HELMINTHS

Muhammed O. Afolabi<sup>1</sup>, Doudou Sow<sup>2</sup>, Ibrahima Mbaye<sup>3</sup>, Marie Pierre Diouf<sup>3</sup>, Mor Absa Loum<sup>3</sup>, Elhadj Babacar Fall<sup>3</sup>, Amadou Seck<sup>3</sup>, Isaac A. Manga<sup>4</sup>, Cheikh Cisse<sup>3</sup>, Baba Camara<sup>3</sup>, Awa Diouf<sup>3</sup>, Ndéye Aida Gaye<sup>3</sup>, Aminata Colle Lo<sup>5</sup>, Brian Greenwood<sup>1</sup>, Jean Louis A. Ndiaye<sup>7</sup>

<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Université Gaston Berger de Saint-Louis, Saint-Louis, Senegal, <sup>3</sup>Université de Thies, Thies, Senegal, <sup>4</sup>Université Cheikh Anta Diop, Dakar, Senegal, <sup>5</sup>Saraya Health Centre, Saraya, Senegal, <sup>6</sup>Université Cheikh Anta Diop, Dakar, United Kingdom, <sup>7</sup>University of Thies, Thies, Senegal

9 a.m.

6483

#### INTEGRATED NEGLECTED TROPICAL DISEASES (NTDS) SURVEYS TO ASSESS IMPACT OF INTEGRATED MDA IN VANUATU

Elizabeth Nguyen<sup>1</sup>, Md Saiful Islam<sup>1</sup>, Fasihah Taleo<sup>2</sup>, Clare Dyer<sup>1</sup>, David S. Kennedy<sup>1</sup>, Macklyne Katenga<sup>3</sup>, Stephanie Tabe<sup>3</sup>, Prudence Rymill<sup>3</sup>, Sze F. Hii<sup>4</sup>, Vito Colella<sup>4</sup>, Rebecca Traub<sup>4</sup>, Anastasia Pantelias<sup>5</sup>, Julie Jacobson<sup>5</sup>, John M. Kaldor<sup>1</sup>, Susana Vaz Nery<sup>1</sup>

<sup>1</sup>Kirby Institute, University of New South Wales, Sydney, Australia, <sup>2</sup>World Health Organization, Port Vila, Vanuatu, <sup>3</sup>Ministry of Health, Government of Vanuatu, Vanuatu, <sup>4</sup>The University of Melbourne, Victoria, Australia, <sup>5</sup>Bridges to Development, Seattle, WA, United States

9:15 a.m.

6484

#### COMMUNITY DIALOGUE AS AN INNOVATIVE APPROACH TO IMPROVE THE EFFECTIVENESS OF NTD CONTROL PROGRAMS TO IMPROVE MDA COVERAGE FOR LF IN BURKINA FASO

Clarisse Bougouma<sup>1</sup>, Mamadou Serme<sup>1</sup>, Christophe Nassa<sup>1</sup>, Kima Appolinaire<sup>1</sup>, Zoromé Harouna<sup>1</sup>, Cathérine Kabré<sup>1</sup>, Ilboudo Adama<sup>1</sup>, Georges Diminthe<sup>2</sup>, Regina Khassanova<sup>2</sup>, Dieudonné Naré<sup>2</sup>, Micheline Ouedraogo<sup>2</sup>, Lucien Mano<sup>2</sup>, Elisabeth Chop<sup>3</sup>, Angel Weng<sup>3</sup>, Patricia Houck<sup>3</sup>, Yaobi Zhang<sup>3</sup>, Benoit Demebele<sup>4</sup>, Steven D. Reid<sup>3</sup>, Angela Weaver<sup>3</sup>

<sup>1</sup>NTD Control Program - Ministry of Health, Ouagadougou, Burkina Faso, <sup>2</sup>Helen Keller International, Ouagadougou, Burkina Faso, <sup>3</sup>Helen Keller International, New York, NY, United States, <sup>4</sup>Helen Keller International, Dakar, Senegal

9:30 a.m.

6485

#### CHARACTERISTICS OF NON-TREATED POPULATIONS AMONG SELECT NTD MDA CAMPAIGNS IN WEST AFRICA: RESULTS FROM MULTI-LEVEL MODELING USING COVERAGE EVALUATION SURVEYS

Maureen K. Headland<sup>1</sup>, Kaustubh Wagh<sup>1</sup>, Andres Martinez<sup>2</sup>, Vance Harris<sup>2</sup>, Elisabeth Chop<sup>3</sup>, Caleb Parker<sup>2</sup>, Diana Stukel<sup>1</sup>

<sup>1</sup>FHI 360, Washington, DC, United States, <sup>2</sup>FHI 360, Durham, NC, United States, <sup>3</sup>Helen Keller International, Washington, DC, United States

## Scientific Session 107

### Cestodes

Grand Hall L - Ballroom Level (East Tower)

Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Philip J. Bugde  
Washington University School of Medicine, St. Louis, MO, United States

Shubha Bevkall Subramanyaswamy  
Weill Cornell Medicine, New York, NY, United States

8 a.m.

6486

#### A SEMI-QUANTITATIVE DIPSTICK ASSAY IN SERUM FOR THE FOLLOW-UP OF PATIENTS WITH SUBARACHNOID NCC

Luz M. Toribio<sup>1</sup>, Sukwan Handali<sup>2</sup>, Carolina Guzman<sup>1</sup>, Erika Perez<sup>1</sup>, Yesenia Castillo<sup>1</sup>, Javier Bustos<sup>1</sup>, Herbert Saavedra<sup>3</sup>, Seth O'Neal<sup>4</sup>, Hector H. Garcia<sup>1</sup>

<sup>1</sup>Center for Global Health, Universidad Cayetano Heredia, Lima, Peru, <sup>2</sup>Division of Parasitic Diseases, Center for Disease Control and Prevention, Atlanta, GA, United States, <sup>3</sup>Instituto Nacional de Ciencias Neurológicas, Lima, Peru, <sup>4</sup>Oregon Health & Sciences University-Portland State University, Portland, OR, United States

8:15 a.m.

6487

**OPTIMIZATION OF A PCR ASSAY TO DETECT URINARY PARASITE DERIVATE DNA IN PATIENTS WITH NEUROCYSTICERCOSIS**

Luz M. Toribio<sup>1</sup>, Mariel Almanza<sup>1</sup>, Isidro Gonzales<sup>2</sup>, Alan Scott<sup>3</sup>, Javier Bustos<sup>1</sup>, Hector H. Garcia<sup>1</sup>, Clive Shiff<sup>3</sup>

<sup>1</sup>Center for Global Health, Universidad Cayetano Heredia, Lima, Peru, <sup>2</sup>Instituto Nacional de Ciencias Neurológicas, Lima, Peru, <sup>3</sup>Department of Molecular Microbiology and Immunology, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, United States

8:30 a.m.

6488

**DETECTION OF TAENIA SOLIUM ANTIGENS IN PAIRED SERUM AND URINE SAMPLES FROM PATIENTS WITH NEUROCYSTICERCOSIS USING THE TSW8/TSW5 ANTIGEN ENZYME-LINKED IMMUNOSORBENT ASSAY (AG- ELISA)**

Carolina Guzman<sup>1</sup>, Luz M. Toribio<sup>1</sup>, Yesenia Castillo<sup>1</sup>, Mirla Villafuerte<sup>2</sup>, Cindy Espinoza<sup>2</sup>, Javier Bustos<sup>1</sup>, Herbert Saavedra<sup>4</sup>, Seth O'Neal<sup>5</sup>, Hector Garcia<sup>1</sup>

<sup>1</sup>Center for Global Health, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>Hospital Nacional Edgardo Rebagliati Martins, Lima, Peru, <sup>3</sup>Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>4</sup>Instituto Nacional de Ciencias Neurológicas, Lima, Peru, <sup>5</sup>School of Public Health, Oregon Health & Sciences, Portland State University, Oregon, USA, Oregon, OR, United States

8:45 a.m.

6489

**PRESENTATION, COMPLICATIONS, AND OUTCOMES OF CYSTIC ECHINOCOCCOSIS IN CUSCO, PERU**

Roberto Pineda-Reyes<sup>1</sup>, Angel Gamarra<sup>2</sup>, Ramiro Hermoza<sup>2</sup>, Rocio Cuaresma<sup>2</sup>, Maria L. Morales<sup>3</sup>, Karen Mozo<sup>3</sup>, Maria A. Caravedo<sup>1</sup>, Miguel M. Cabada<sup>1</sup>

<sup>1</sup>Infectious Disease Division, University of Texas Medical Branch, Galveston, TX, United States, <sup>2</sup>Hospital Regional del Cusco, Cusco, Peru, <sup>3</sup>Cusco Branch - Alexander von Humboldt Tropical Medicine Institute, Universidad Peruana Cayetano Heredia, Cusco, Peru

9 a.m.

6490

**DEVELOPMENT OF A HIGHLY SENSITIVE QPCR ASSAY FOR DETECTION OF MULTICULARIS AND FURTHER MAPPING THE EXTENT OF EUROPEAN-LIKE STRAINS IN NORTH AMERICA**

Jiana Blaha<sup>1</sup>, Sasisekhar Bennuru<sup>1</sup>, Michael Grigg<sup>1</sup>, Tammy Chen<sup>1</sup>, Yang Chen<sup>1</sup>, Stephen Raverty<sup>2</sup>, Rick McKown<sup>3</sup>, Brian Xi<sup>1</sup>, Jennifer Noyes<sup>4</sup>, Roger Ramirez Barrios<sup>5</sup>, Elise M. O'Connell<sup>1</sup>

<sup>1</sup>National Institute of Allergy and Infectious Diseases, Bethesda, MD, United States, <sup>2</sup>Animal Health Center, Vancouver, BC, Canada, <sup>3</sup>USDA Meat Animal Research Center, Clay Center, NE, United States, <sup>4</sup>Hollins University, Roanoke, VA, United States, <sup>5</sup>Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, VA, United States

9:15 a.m.

6491

**EVALUATION OF ETIDRONATE IN CALCIFIED CYSTS IN THE PIG MODEL OF NEUROCYSTICERCOSIS**

Laura Baquedano Santana<sup>1</sup>, Noemi Miranda<sup>1</sup>, Gianfranco Arroyo<sup>1</sup>, Hector H. Garcia<sup>1</sup>, Javier A. Bustos<sup>2</sup>

<sup>1</sup>Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>Instituto Nacional de Ciencias Neurológicas, Lima, Peru

9:30 a.m.

6492

**DYSREGULATED AUTOPHAGY LEADS TO AXONAL SWELLING IN NEUROCYSTICERCOSIS**

Gino Castillo<sup>1</sup>, Katty Ore<sup>1</sup>, Oscar Ramos<sup>1</sup>, Ana Claudia Palacios<sup>1</sup>, Nancy Chile<sup>1</sup>, Edson Bernal<sup>1</sup>, Dina Luz Patilla Chihuan<sup>1</sup>, Dina Maria Ramirez Cubas<sup>1</sup>, Danitza Davila<sup>1</sup>, Cesar Gavidia<sup>2</sup>, Manuela Verastegui<sup>1</sup>, Robert Gilman<sup>3</sup>, Cysticercosis Working Group of Peru<sup>1</sup>

<sup>1</sup>Laboratorio de Investigación en Enfermedades Infecciosas, LID, Facultad de Ciencias y Filosofía, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>School of Veterinary Medicine, Universidad Nacional Mayor de San Marcos, Lima, Perú., Lima, Peru, <sup>3</sup>Department of International Health, Johns Hopkins School of Public Health, Baltimore, Maryland, USA., Baltimore, MD, United States

**Scientific Session 108**

**American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Parasites – Disease Mechanisms**

Plaza Ballroom - Lobby Level (East Tower)

Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

Supported with funding from the Burroughs Wellcome Fund

**CHAIR**

Usheer Kanjee

Harvard T.H. Chan School of Public Health, Boston, MA, United States

Vanessa Angelova

Georgetown University, Washington, DC, United States

8 a.m.

7265

**CRYPTOSPORIDIUM REMODELS HOST MICROVILLI THROUGH AN EXPORTED VIRULENCE FACTOR**

Elena Rodrigues, Tapoka T. Mkandawire, Kat Sala, Silvia Haase, Adam Sateriale  
The Francis Crick Institute, London, United Kingdom

8:15 a.m.

7266

**A SKIN-ON-CHIP ORGANOID MODEL TO UNRAVEL THE DEVELOPMENT OF DERMAL TRYPANOSOMES**

Parul Sharma<sup>1</sup>, Christelle Travaillé<sup>2</sup>, Samy Gobaa<sup>3</sup>, Brice Rotureau<sup>1</sup>

<sup>1</sup>Trypanosome Transmission Group, Trypanosome Cell Biology, Unit Institut Pasteur, Paris, France, <sup>2</sup>Biomagerie Photonique (UTechS PBI), Institut Pasteur, Paris, France, <sup>3</sup>Biomaterials and Microfluidics Core Facility, Institut Pasteur, Paris, France

8:30 a.m.

6493

**EVALUATION OF APOPTOSIS IN RESPONSE TO ANTHELMINTIC TREATMENT IN RAT BRAINS EXPERIMENTALLY INFECTED WITH ONCOSPHERES OF TAENIA SOLIUM**

Valeria Alejandra Rubio<sup>1</sup>, DG Dávila-Villacorta<sup>1</sup>, Rensson Homero Céliz-Ygnacio<sup>1</sup>, Gino Castillo Vilca<sup>1</sup>, Edson G. Bernal-Terán<sup>1</sup>, Alejandra J. Bustamante-Portocarrero<sup>1</sup>, Ayme Yadine Huaman-Navarro<sup>1</sup>, Fabio C. Torres-Bocanegra<sup>1</sup>, Milagros M. Dueñas-Mendoza<sup>1</sup>, Robert H. Gilman<sup>2</sup>, Cesar M. Gavidia<sup>3</sup>, Manuela R. Verastegui<sup>1</sup>, Cysticercosis Working Group in Peru<sup>1</sup>

<sup>1</sup>Infectious Diseases Laboratory Research-LID, Faculty of Science and Philosophy, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>Bloomberg School of Hygiene and Public Health, Johns Hopkins University, Baltimore, MD, United States, <sup>3</sup>School of Veterinary Medicine, Universidad Nacional Mayor de San Marcos, Lima, Peru

8:45 a.m.

6494

### LEAKY GUT MECHANISMS IN GIARDIASIS

Vanessa V. Angelova, Erqiu Li, Brooke Fiedler, Haley Wexelblatt, Rita Kosile, Matthew Darmadi, Eleanor Miskovsky, Steven Singer  
Georgetown University, Washington, DC, United States

9 a.m.

6495

### DISRUPTION OF HUMAN LYMPHATIC EPITHELIAL CELL CONTACT INTEGRITY PROTEINS BY FILARIAL MIRNAS

Denis Voronin, Hailey Johnson, Elodie Ghedin  
Systems Genomics Section, Laboratory of Parasitic Diseases, NIAID, NIH, Bethesda, MD, United States

9:15 a.m.

6496

### A HUMAN PLURIPOTENT STEM CELL DERIVED MODEL OF THE BLOOD-BRAIN BARRIER IN CEREBRAL MALARIA

Adnan Gopinadhan<sup>1</sup>, Jason M. Hughes<sup>2</sup>, Andrea L. Conroy<sup>1</sup>, Chandy C. John<sup>1</sup>, Scott G. Canfield<sup>3</sup>, Dibiyadyuti Datta<sup>1</sup>  
<sup>1</sup>Indiana University School of Medicine, Indianapolis, IN, United States, <sup>2</sup>Indiana University School of Medicine, Terre Haute, IN, United States, <sup>3</sup>Indiana University School of Medicine, Terre Haute, IN, United States

9:30 a.m.

6497

### THE BRCT DOMAIN FROM LEISHMANIA MAJOR LMJPES PROMOTES MALIGNANCY AND DRUG RESISTANCE IN MAMMALIAN CELLS

Paul Nguewa<sup>1</sup>, Esther Larrea<sup>1</sup>, Celia Fernandez-Rubio<sup>1</sup>, José Peña-Guerrero<sup>1</sup>, Elizabeth Guruceaga<sup>2</sup>  
<sup>1</sup>Institute of Tropical Health University of Navarra (ISTUN), Pamplona, Spain, <sup>2</sup>Bioinformatics Platform, Center for Applied Medical Research, University of Navarra (ISTUN), Pamplona, Spain

## Scientific Session 109

### Malaria - Proteins to Populations: Transmission Biology across Scales

Crystal Ballroom A - Lobby Level (West Tower)  
Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Hosea Akala  
USAMRU-K, Kisumu, Kenya

Scott E. Lindner  
Pennsylvania State University, University Park, PA, United States

8 a.m.

6498

### SUPER RESOLUTION IMAGING REVEALS CYTOSKELETON REGULATION IN PLASMODIUM SEXUAL STAGE DEVELOPMENT

Jiahong Li, Sophie Collier, Emma Pietsch, Sash Lopaticki, Paul McMillan, James McCarthy, Leann Tilley, Matthew Dixon  
University of Melbourne, Melbourne, Australia

8:15 a.m.

6499

### DEVELOPMENT OF AN *IN VIVO* MOUSE MODEL FOR TRANSMISSION BLOCKING STUDIES WITH HUMAN MALARIA PARASITE *P. FALCIPARUM*

Abhai K. Tripathi, Godfree Mlambo, Tassanee Thanakornsombut, George Dimopoulos  
Johns Hopkins University, Baltimore, MD, United States

8:30 a.m.

6500

### GLOBAL RELEASE OF TRANSLATIONAL REPRESSION ACROSS *PLASMODIUM*'S HOST-TO-VECTOR TRANSMISSION EVENT

Kelly T. Rios<sup>1</sup>, James P. McGee<sup>1</sup>, Kristian E. Swearingen<sup>2</sup>, Scott E. Lindner<sup>1</sup>  
<sup>1</sup>Pennsylvania State University, University Park, PA, United States, <sup>2</sup>Institute for Systems Biology, Seattle, WA, United States

8:45 a.m.

6501

### DYNAMICS OF ASYMPTOMATIC *PLASMODIUM FALCIPARUM* AND *PLASMODIUM VIVAX* INFECTIONS AND INFECTIOUSNESS TO MOSQUITO IN LOW TRANSMISSION SETTING OF ETHIOPIA: A LONGITUDINAL OBSERVATIONAL STUDY

Elifaged Hailemeskel<sup>1</sup>, Surafel K. Tebeje<sup>1</sup>, Temsigen Ashine<sup>1</sup>, Sinknesh W. Behaksra<sup>1</sup>, Tadele Emiru<sup>1</sup>, Tizita Tsegaye<sup>1</sup>, Kjerstin Lanke<sup>2</sup>, Abraham Gashaw<sup>1</sup>, Wakoya Chalie<sup>1</sup>, Endashaw Esayas<sup>1</sup>, Temesgen Tafesse<sup>1</sup>, Mikiyas Gebremichael<sup>1</sup>, Girma Shumie<sup>1</sup>, Beyene Petros<sup>3</sup>, Hassen Mamo<sup>4</sup>, Jordache Ramjith<sup>2</sup>, Chris Drakeley<sup>5</sup>, Endalamaw Gadisa<sup>1</sup>, Teun Bousema<sup>2</sup>, Fitsum G. Tadesse<sup>1</sup>  
<sup>1</sup>Armauer Hansen Research Institute, Addis Ababa, Ethiopia, <sup>2</sup>Radboud Institute for Health Science, Radboud University Medical Center, Nijmegen, Netherlands, <sup>3</sup>Department of Biomedical Sciences, College of Natural and Computational Sciences, Addis Ababa university, Addis Ababa, Ethiopia, <sup>4</sup>Department of Biomedical Sciences, College of Natural and Computational Sciences, Addis Ababa university, Ethiopia, Addis Ababa, Ethiopia, <sup>5</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom

9 a.m.

6502

### EFFECT OF CHLOROQUINE ON *PLASMODIUM VIVAX* PARASITE TRANSMISSION TO MOSQUITOES IN THE EARLY POST-TREATMENT HOURS, ARBA MINCH, ETHIOPIA

Girum Datanbo<sup>1</sup>, Biniam Wondale<sup>1</sup>, Nigatu Eligo<sup>1</sup>, Endalamaw Gadisa<sup>2</sup>, Bernt Lindtjorn<sup>3</sup>, Fitsum Girma<sup>2</sup>, Fekadu Massebo<sup>1</sup>  
<sup>1</sup>Arba Minch University, Arba Minch, Ethiopia, <sup>2</sup>Armauer Hansen Research Institute, Addis Ababa, Ethiopia, <sup>3</sup>Centre for International Health, University of Bergen, Norway

9:15 a.m.

6503

### CLINICAL INVESTIGATION STUDY TO EVALUATE THE CONSISTENCY AND REPRODUCIBILITY OF TWO CONSECUTIVE MOSQUITO FEEDING ASSAYS IN ADULTS WITH VARYING *PLASMODIUM FALCIPARUM* GAMETOCYTE DENSITIES

Hosea M. Akala<sup>1</sup>, Millicent Anyango Achola<sup>1</sup>, Ben M. Andagalu<sup>1</sup>, Mike Raine<sup>2</sup>, Valerie Moore Moore<sup>2</sup>, Yimin Wu<sup>2</sup>, Benjamin H. Opot<sup>1</sup>, Raphael O. Okoth<sup>3</sup>, Jackline A. Juma<sup>1</sup>, Edwin W. Mwakio<sup>4</sup>, Maurine Mwalo A. Mwalo<sup>1</sup>, David O. Oullo<sup>1</sup>, Fredrick L. Eyase L. Eyase<sup>1</sup>, Lucas Otieno Tina<sup>1</sup>, Amanda Roth<sup>5</sup>, Nathaniel Copeland<sup>1</sup>, James Mutunga<sup>1</sup>, Irene onyango<sup>1</sup>, Jaree Johnson<sup>6</sup>, Bernhards Ogutu<sup>7</sup>, Timothy E. Egbo<sup>8</sup>, Jack Hutter<sup>6</sup>, John Aponte<sup>2</sup>, Christian F. Ockenhouse<sup>2</sup>  
<sup>1</sup>Department of Emerging and Infectious Diseases (DEID), United States Army Medical Research Directorate-Africa (USAMRD-A), Kenya Medical Research Institute (KEMRI) / Walter Reed Project, Kisumu, Kenya, KISUMU, Kenya, <sup>2</sup>PATH, Seattle, WA, USA, SEATTLE, WA, United States, <sup>3</sup>Department of Emerging and Infectious Diseases (DEID), United States Army Medical Research Directorate-Africa (USAMRD-A), Kenya Medical Research Institute (KEMRI) / Walter Reed Project, Kisumu, Kenya, KISUMU, Kenya, <sup>4</sup>Department of Emerging and Infectious Diseases (DEID), United States Army Medical Research Directorate-Africa (USAMRD-A), Kenya Medical Research Institute (KEMRI) / Walter Reed

Project, Kisumu, Kenya, KISUMU, Kenya, <sup>5</sup>Medical Communications for Combat Casualty Care, 1540 Porter Street, Fort Detrick MD 21702, Fort Detrick, VA, United States, <sup>6</sup>Armed Forces Pest Management Board 2460 Linden Ln, Silver Spring, MD 20910, Washington, VA, United States, <sup>7</sup>Centre for Clinical Research, Kenya Medical Research Institute, Kisumu, Kenya, KISUMU, Kenya, <sup>8</sup>United States Army Medical Research Directorate-Africa, Kenya (USAMRD-A), KISUMU, Kenya

9:30 a.m.

6504

## HYPER-DIVERSE ANTIGENIC VARIATION AND RESILIENCE TO TRANSMISSION-REDUCING INTERVENTION IN FALCIPARUM MALARIA

Qi Zhan<sup>1</sup>, Kathryn Tiedje<sup>2</sup>, Qixin He<sup>3</sup>, Karen Day<sup>4</sup>, Mercedes Pascual<sup>1</sup>

<sup>1</sup>University of Chicago, Chicago, IL, United States, <sup>2</sup>The University of Melbourne, Melbourne, Australia, <sup>3</sup>Purdue University, West Lafayette, IN, United States

## Scientific Session 110

### Clinical Tropical Medicine: Arboviral Infections

Crystal Ballroom B - Lobby Level (West Tower)

Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Rapeephan Maude

Mahidol-Oxford Tropical Medicine Research Unit, Bangkok, Thailand

Maria Caravedo

University of Texas Medical Branch, Galveston, TX, United States

8 a.m.

6505

## DENGUE SEVERITY BY SEROTYPE IN 17 YEARS OF A PEDIATRIC HOSPITAL STUDY IN NICARAGUA

Federico Narvaez<sup>1</sup>, Karla Gonzalez<sup>2</sup>, Elsa Videz<sup>1</sup>, Cesar Narvaez<sup>1</sup>, Sonia Arguello<sup>1</sup>, Carlos Montenegro<sup>1</sup>, Jose Juarez<sup>1</sup>, Eva Harris<sup>3</sup>, Angel Balmaseda<sup>2</sup>

<sup>1</sup>Sustainable Science Institute, Managua, Nicaragua, <sup>2</sup>Laboratorio Nacional de Virología, Centro Nacional de Diagnóstico y Referencia, Ministerio de Salud, Managua, Nicaragua, <sup>3</sup>Division of Infectious Diseases and Vaccinology, School of Public Health, University of California, Berkeley, Berkeley, CA, United States

8:15 a.m.

6506

## COMPARATIVE EVALUATION OF FIVE RAPID DIAGNOSTIC TESTS FOR DENGUE DIAGNOSIS

Jyotshna Sapkota<sup>1</sup>, Rumina Hasan<sup>2</sup>, Zahida Azizullah<sup>2</sup>, Hina Shams<sup>2</sup>, Berra Erkosar<sup>1</sup>, Sabine Dittrich<sup>3</sup>, Kevin Tetteh<sup>1</sup>

<sup>1</sup>FIND, Geneva, Switzerland, <sup>2</sup>Aga Khan University, Karachi, Pakistan, <sup>3</sup>Deggendorf Institut of Technology, Pffarrkirchen, Germany

8:30 a.m.

6507

## POTENTIAL UTILITY OF CONTINUOUS PPG MONITORING IN THE MANAGEMENT OF SEVERE DENGUE

Ngan H. Lyle<sup>1</sup>, Chanh Q. Ho<sup>1</sup>, Huy Q. Nguyen<sup>1</sup>, Giang T. Nguyen<sup>1</sup>, Huyen T. Vu<sup>1</sup>, Van-Khoa D. Le<sup>1</sup>, Damien K. Ming<sup>2</sup>, Stefan Karolcik<sup>3</sup>, Hao V. Nguyen<sup>4</sup>, Qui T. Phan<sup>4</sup>, Trieu T. Huynh<sup>4</sup>, Sophie Yacoub<sup>1</sup>

<sup>1</sup>Oxford Clinical Research Unit Vietnam, Ho Chi Minh City, Vietnam, <sup>2</sup>Centre for Antimicrobial Optimisation (CAMO), Imperial College London, London, United Kingdom, <sup>3</sup>Centre for Bio-Inspired Technology, Imperial College London, London, United Kingdom, <sup>4</sup>Hospital for Tropical Diseases, Ho Chi Minh City, Vietnam

8:45 a.m.

6508

## METFORMIN AS ADJUNCTIVE THERAPY IN OVERWEIGHT AND OBESE PATIENTS WITH DENGUE: AN OPEN-LABEL SAFETY AND TOLERABILITY TRIAL (MEDO)

Tam Dong Thi Hoai<sup>1</sup>, Nguyet Nguyen Minh<sup>1</sup>, Phong Nguyen Thanh<sup>2</sup>, Tai Luong Thi Hue<sup>2</sup>, Tam Cao Thi<sup>2</sup>, Kieu Nguyen Tan Thanh<sup>1</sup>, Thuy Huynh Le Phuong<sup>1</sup>, Van Nguyen Thanh<sup>1</sup>, Chau Nguyen Thi Xuan<sup>1</sup>, Chanh Ho Quang<sup>1</sup>, Duyen Huynh Thi Le<sup>1</sup>, Vi Tran Thuy<sup>1</sup>, Ronald Gekus<sup>1</sup>, Evelyne Kestelyn<sup>1</sup>, Vuong Nguyen Lam<sup>1</sup>, Sophie Yacoub<sup>1</sup>

<sup>1</sup>Oxford University Clinical Research Unit, Ho Chi Minh City, Vietnam, <sup>2</sup>Hospital for Tropical Diseases, Ho Chi Minh City, Vietnam

9 a.m.

6509

## AFTERSHOCK: PERSISTENT INFLAMMATION AND ENDOTHELIAL ACTIVATION IN ADULT SURVIVORS OF DENGUE SHOCK

Angela McBride<sup>1</sup>, Phan Vinh Tho<sup>2</sup>, Luong Thi Hue Tai<sup>2</sup>, Nguyen Thanh Phong<sup>2</sup>, Nguyen Thanh Ngoc<sup>3</sup>, Duyen Huynh Thi Le<sup>3</sup>, Nguyen Lam Vuong<sup>3</sup>, Louise Thwaites<sup>1</sup>, Martin J Llewelyn<sup>1</sup>, Nguyen Van Hao<sup>4</sup>, Sophie Yacoub<sup>3</sup>

<sup>1</sup>Brighton and Sussex Medical School, Brighton, United Kingdom, <sup>2</sup>Hospital for Tropical Diseases, Ho Chi Minh City, Vietnam, <sup>3</sup>Oxford University Clinical Research Unit, Ho Chi Minh City, Vietnam, <sup>4</sup>University of Medicine and Pharmacy, Ho Chi Minh City, Vietnam

9:15 a.m.

6510

## NEURODEVELOPMENTAL OUTCOMES IN TWO YEAR OLD CHILDREN BORN DURING THE ZIKA EPIDEMIC IN BRAZIL: A PROSPECTIVE COHORT STUDY

Nivison Ruy R. Nery Jr<sup>1</sup>, Pablo Aguilar<sup>2</sup>, Claudia G. Sampaney<sup>3</sup>, Millani S. A. Lessa<sup>2</sup>, Adeolu Aromolaran<sup>3</sup>, Valmir Rastely-Júnior<sup>1</sup>, Gielson A. Sacramento<sup>1</sup>, Jaqueline S. Cruz<sup>1</sup>, Daiana de Oliveira<sup>1</sup>, Laiara Lopes dos Santos<sup>1</sup>, Crislaine G. da Silva<sup>1</sup>, Adriana Mattos<sup>4</sup>, Bruno Freitas<sup>1</sup>, Joseane Bouzon<sup>4</sup>, Ailema Guerra<sup>1</sup>, Viviane F. Botosso<sup>5</sup>, Camila P. Soares<sup>6</sup>, Danielle B. Oliveira<sup>2</sup>, Danielle Bastos Araujo<sup>6</sup>, Rubens Prince dos Santos Alves<sup>7</sup>, Robert Andreato-Santos<sup>7</sup>, Edison L. Durigon<sup>8</sup>, Luis Carlos de Souza Ferreira<sup>7</sup>, Elsie A. Wunder, Jr.<sup>3</sup>, Ricardo Khouri<sup>1</sup>, Jamary Oliveira-Filho<sup>9</sup>, Isadora C. de Siqueira<sup>1</sup>, Antônio R. P. Almeida<sup>4</sup>, Derek A.T. Cummings<sup>3</sup>, Mitermayer G. Reis<sup>1</sup>, Frederico Costa<sup>2</sup>, Albert I. Ko<sup>3</sup>

<sup>1</sup>Goncalo Moniz Institute, Salvador, Brazil, <sup>2</sup>Institute of Collective Health, Federal University of Bahia, Salvador, Brazil, <sup>3</sup>Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT, United States, <sup>4</sup>Roberto Santos General Hospital, Salvador, Brazil, <sup>5</sup>Development and Innovation Center, Laboratory of Virology, Butantan Institute, São Paulo, Brazil, <sup>6</sup>Department of Microbiology, Institute of Biomedical Sciences, University of São Paulo, São Paulo, Brazil, <sup>7</sup>Vaccine Development Laboratory, Department of Microbiology, Institute of Biomedical Sciences, University of São Paulo, São Paulo, Brazil, <sup>8</sup>Faculty of Medicine of Bahia, Federal University of Bahia, Salvador, Brazil, <sup>9</sup>Department of Biology, University of Florida, Gainesville, FL, United States

9:30 a.m.

6511

## PERSISTENT RHEUMATOLOGICAL DISEASE AFTER 7 YEARS OF CHIKUNGUNYA VIRUS INFECTION: RESULTS FROM A COHORT STUDY IN PIEDECUESTA, COLOMBIA

Anyela Lozano-Parra<sup>1</sup>, Carlos Andrés Calderón<sup>2</sup>, Reynaldo Badillo<sup>3</sup>, Luis Angel Villar<sup>2</sup>, Victor Herrera<sup>4</sup>, Rosa Margarita Gelvez<sup>2</sup>, Jose Fernando Lozano<sup>2</sup>, Maria Isabel Estupiñán<sup>2</sup>, Elsa Marina Rojas<sup>2</sup>

<sup>1</sup>Centro de Investigaciones Epidemiológicas, Universidad Industrial de Santander, Bucaramanga, Colombia, <sup>2</sup>Centro de Atención y Diagnóstico de Enfermedades Infecciosas-CDI, Fundación INFOVIDA, Bucaramanga, Colombia, <sup>3</sup>RBA. Director Departamento Medicina Interna. Universidad de Santander-UDES, Bucaramanga, Colombia, <sup>4</sup>Department of Public Health, Universidad Industrial de Santander, Bucaramanga, Colombia



## Symposium 111

### American Committee on Arthropod-Borne and Zoonotic Viruses (ACAV) Symposium I: Annual Business Meeting

Regency Ballroom A - Ballroom Level (West Tower)  
Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

The American Committee on Arthropod-Borne Viruses (ACAV) provides a forum for exchanging information among people interested in arbovirus research and research in diseases caused by high consequence viral pathogens. This session will include the ACAV business meeting, award presentations, research presentations by ACAV award recipients, and outbreak reports. These presenters will describe their research on arbovirology and emerging viral diseases.

#### CHAIR

Saravanan Thangamani  
SUNY Upstate Medical University, Syracuse, NY, United States

Mauricio Lacerda Nogueira  
Faculdade de Medicina de São José do Rio Preto (FAMERP), Sao Paulo, Brazil

#### 8 a.m. INTRODUCTION

#### 8:10 a.m. ACAV AWARDS AND BUSINESS MEETING

Saravanan Thangamani  
SUNY Upstate Medical University, Syracuse, NY, United States

#### 8:40 a.m. AN OVERVIEW OF THE EMERGENCE OF ARBOVIRUSES IN LATIN-AMERICA

Jairo Mendez-Rico  
PAHO/WHO Collaborating Centre for Arboviruses, Washington, DC, United States

#### 8:55 a.m. STRUCTURAL BIOLOGY OF ARBOVIRUSES OF MEDICAL INTEREST

Rafael Elias Marques  
Brazilian Center for Research in Energy and Materials, Sao Paulo, Brazil

#### 9:10 a.m. AUDIENCE AND PANEL DISCUSSION: CHALLENGES AND LESSONS LEARNED FOR RESEARCH AND OPERATIONAL SUPPORT

Mauricio Lacerda Nogueira  
Faculty of Medicine of São José do Rio Preto, Sao Paulo, Brazil

#### 9:25 a.m. CO-MODERATOR: AUDIENCE AND PANEL DISCUSSION: CHALLENGES AND LESSONS LEARNED FOR RESEARCH AND OPERATIONAL SUPPORT

Rebecca Christofferson  
LSU School of Veterinary Medicine, Baton Rouge, LA, United States

#### 9:35 a.m. NETWORKING RECEPTION

## Scientific Session 112

### Water, Sanitation, Hygiene and Environmental Health (WaSH-E): Interventions

Regency Ballroom B - Ballroom Level (West Tower)  
Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Drew Capone  
Indiana University, Bloomington, IN, United States

Anna Nguyen  
Stanford University, Stanford, CA, United States

#### 8 a.m. 6512

#### MAPUTO SANITATION TRIAL 60-MONTH FOLLOW-UP ANTHROPOMETRIC MEASUREMENTS AND CHILD HEALTH

Erin Kowalsky<sup>1</sup>, Drew Capone<sup>2</sup>, Oliver Cumming<sup>3</sup>, Márcia Chiluvane<sup>4</sup>, Victória Cumbane Cumbane<sup>5</sup>, David Holcomb<sup>1</sup>, Amanda Lai<sup>1</sup>, Yarrow Linden<sup>1</sup>, Elly Mataveia Mataveia<sup>6</sup>, Vanessa Monteiro<sup>5</sup>, Gouthami Rao<sup>1</sup>, Edna Viegas<sup>5</sup>, Joe Brown<sup>1</sup>  
<sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>2</sup>Indiana University, Bloomington, IN, United States, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>4</sup>Instituto Nacional de Saúde, Mozambique, Maputo, Mozambique, <sup>5</sup>Instituto Nacional de Saúde, Mozambique, Maputo, Mozambique

#### 8:15 a.m. 6513

#### EFFECT OF A WATER, SANITATION AND HYGIENE PROGRAM ON HANDWASHING WITH SOAP AMONG DIARRHEA PATIENTS AND ATTENDANTS IN HEALTHCARE FACILITIES IN THE DEMOCRATIC REPUBLIC OF THE CONGO: A RANDOMIZED PILOT OF THE PICHAT7 PROGRAM

Alain Mwishingo<sup>1</sup>, Kelly Endres<sup>2</sup>, Presence Sanvura<sup>1</sup>, Jean-Claude Bisimwa<sup>1</sup>, Lucien Bisimwa<sup>1</sup>, Camille Williams<sup>2</sup>, Jamie Perin<sup>2</sup>, Justin Bengheya<sup>1</sup>, Cirhuza Cikonola<sup>1</sup>, Ghislain Maheshe<sup>1</sup>, Christine Marie George<sup>2</sup>  
<sup>1</sup>Université Catholique de Bukavu, Bukavu, Democratic Republic of the Congo, <sup>2</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

#### 8:30 a.m. 6514

#### THE LONG-TERM EFFECTS OF IMPROVED WATER, SANITATION, AND HYGIENE (WASH) AND IMPROVED COMPLEMENTARY FEEDING ON SCHOOL-AGE GROWTH AND DEVELOPMENT IN RURAL ZIMBABWE: FOLLOW-UP OF THE SHINE CLUSTER-RANDOMIZED TRIAL

Joseph Daniel Piper<sup>1</sup>, Clever Mazhanga<sup>2</sup>, Marian Mwapaura<sup>2</sup>, Idah Mapurisa<sup>2</sup>, Gloria Mapako<sup>2</sup>, Tsitsi Mashedze<sup>2</sup>, Eunice Munyama<sup>2</sup>, Maria Kuona<sup>2</sup>, Thomizodwa Mashiri<sup>2</sup>, Kundai Sibanda<sup>2</sup>, Dzidzai Matemavi<sup>2</sup>, Monica Tichagwa<sup>2</sup>, Soneni Nyoni<sup>2</sup>, Asinje Saidi<sup>2</sup>, Mwanasa Mangwende<sup>2</sup>, Dzvidzvo Chidhanguro<sup>2</sup>, Eddington Mpofu<sup>2</sup>, Joice Tome<sup>2</sup>, Batsirai Mutasa<sup>2</sup>, Bernard Chasekwa<sup>2</sup>, Melanie Smuk<sup>1</sup>, Laura Smith<sup>2</sup>, Virginia Sauramba<sup>2</sup>, Lisa Langhaug<sup>2</sup>, Naume Tavengwa<sup>2</sup>, Melissa Gladstone<sup>3</sup>, Jonathan Wells<sup>4</sup>, Elizabeth Allen<sup>5</sup>, SHINE Follow-up trial Team<sup>2</sup>, Jean Humphrey<sup>6</sup>, Robert Ntozini<sup>2</sup>, Andrew Prendergast<sup>1</sup>  
<sup>1</sup>Queen Mary University of London, LONDON, United Kingdom, <sup>2</sup>Zvitambo Institute of Maternal and Child Health Research, Harare, Zimbabwe, <sup>3</sup>University of Liverpool, Liverpool, United Kingdom, <sup>4</sup>UCL Institute of Child Health, LONDON, United Kingdom, <sup>5</sup>London School of Hygiene & Tropical Medicine, LONDON, United Kingdom, <sup>6</sup>Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, United States

8:45 a.m.

6515

### SURPRISE SOAP: EFFECT OF A NOVEL HYGIENE INTERVENTION ON OLDER CHILDREN'S HANDWASHING IN COMPLEX HUMANITARIAN SETTINGS: RESULTS OF TWO CLUSTER-RANDOMIZED CONTROLLED EQUIVALENCE TRIALS

Julie Watson<sup>1</sup>, Claudio Deola<sup>2</sup>, Mohamed Abji Haji<sup>3</sup>, Mohamed Rashid Sheikh<sup>3</sup>, Feysal Abdusalman Mohamud<sup>3</sup>, Salman Yasin Ali<sup>3</sup>, Ibtihal Osman<sup>4</sup>, Maud Akissi Amon-Tanoh<sup>1</sup>, Amy MacDougall<sup>1</sup>, Oliver Cumming<sup>1</sup>

<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Save the Children International, London, United Kingdom, <sup>3</sup>Action Against Hunger, Mogadishu, Somalia, <sup>4</sup>Care International, Khartoum, Sudan

9 a.m.

6516

### EFFECTIVENESS OF SEWAGE INTERVENTION ON LEPTOSPIRA TRANSMISSION AMONG RESIDENTS OF URBAN INFORMAL SETTLEMENTS

Fábio N. Souza<sup>1</sup>, Freya Clark<sup>2</sup>, Max T. Eyre<sup>3</sup>, Juliet O. Santana<sup>4</sup>, Nivison Nery<sup>4</sup>, Fabiana A. Palma<sup>4</sup>, Daiana Oliveira<sup>1</sup>, Jaqueline S. Cruz<sup>5</sup>, Mitermayer G. Reis<sup>5</sup>, Emanuele Giorgi<sup>6</sup>, Cleber Cremonese<sup>1</sup>, Albert I. Ko<sup>6</sup>, Federico Costa<sup>1</sup>

<sup>1</sup>Institute Collective Health, Federal University of Bahia, Salvador, Brazil, <sup>2</sup>Centre for Health Informatics, Computing, and Statistics, Lancaster University Medical School Lancaster, Lancaster, United Kingdom, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>4</sup>Institute Collective Health, Federal University of Bahia, Salvador, Brazil, <sup>5</sup>Instituto Gonçalo Moniz, Fundação Oswaldo Cruz, Salvador, Brazil, <sup>6</sup>Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT, United States

9:15 a.m.

6517

### IMPACT OF THE WASH IN SCHOOLS FOR EVERYONE (WISE) PROGRAMME ON CHILD HEALTH AND SCHOOL ATTENDANCE IN ADDIS ABABA, ETHIOPIA: A CLUSTER-RANDOMISED CONTROLLED TRIAL

Sarah Bick<sup>1</sup>, Charles Opondo<sup>1</sup>, Baptiste Leurent<sup>2</sup>, Oliver Cumming<sup>1</sup>, Alem Ezezew<sup>3</sup>, Elizabeth Allen<sup>1</sup>, Robert Dreifelbis<sup>1</sup>

<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>University College London, London, United Kingdom, <sup>3</sup>Holster International Research and Development Consultancy, Addis Ababa, Ethiopia

9:30 a.m.

6518

### PROCESS EVALUATION OF THE PREVENTATIVE INTERVENTION FOR CHOLERA FOR 7 DAYS (PICH7) WATER, SANITATION AND HYGIENE MOBILE HEALTH PROGRAM

Presence Sanvura<sup>1</sup>, Kelly Endres<sup>2</sup>, Jean-Claude Bisimwa<sup>1</sup>, Alain Mwishingo<sup>1</sup>, Lucien Bisimwa<sup>1</sup>, Camille Williams<sup>2</sup>, Jamie Perin<sup>2</sup>, Justin Bengheya<sup>1</sup>, Cirhuza Cikomola<sup>1</sup>, Ghislain Maheshe<sup>1</sup>, Christine Marie George<sup>2</sup>

<sup>1</sup>Université Catholique de Bukavu, Bukavu, Democratic Republic of the Congo, <sup>2</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

## Scientific Session 113

### Ectoparasite-Borne Diseases II

Regency Ballroom C - Ballroom Level (West Tower)

Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Adélaïde Miarinjara

Emory University, Atlanta, GA, United States

Holly Tuten

University of Illinois Urbana-Champaign, Champaign, IL, United States

8 a.m.

6519

### BACTERIAL ZONOSSES DETECTED BY 16S RRNA METAGENOMICS AMONG FEBRILE ADMISSIONS IN KILIMANJARO, TANZANIA, 2007-2009

Robert J. Rolfe, Jr<sup>1</sup>, Matthew P. Rubach<sup>1</sup>, Venance P. Maro<sup>2</sup>, Grace Kinabo<sup>2</sup>, Wilbrod Saganda<sup>3</sup>, Jeannine M. Petersen<sup>4</sup>, Luke C. Kingry<sup>4</sup>, Sarah Sheldon<sup>4</sup>, John A. Crump<sup>5</sup>

<sup>1</sup>Duke University, Durham, NC, United States, <sup>2</sup>Kilimanjaro Christian Medical Centre, Moshi, United Republic of Tanzania, <sup>3</sup>Mawenzi Regional Referral Hospital, Moshi, United Republic of Tanzania, <sup>4</sup>Bacterial Diseases Branch, Division of Vector-Borne Diseases, Centers for Disease Control and Prevention, Fort Collins, CO, United States, <sup>5</sup>Centre for International Health, University of Otago, Denedin, New Zealand

8:15 a.m.

6520

### DETERMINING FLEA VECTOR SUSCEPTIBILITY TO INSECTICIDES AS PART OF PLAGUE RISK MONITORING IN MADAGASCAR

Mireille Harimalala<sup>1</sup>, Soanandrasana Rahelinirina<sup>2</sup>, Sarah Zohdy<sup>3</sup>, Minoarisoa Rajerison<sup>2</sup>, Romain Girod<sup>1</sup>

<sup>1</sup>Medical Entomology Unit, Institut Pasteur de Madagascar, Antananarivo, Madagascar, <sup>2</sup>Plague Unit, Institut Pasteur de Madagascar, Antananarivo, Madagascar, <sup>3</sup>US President's Malaria Initiative, Malaria Branch, US Centers for Disease Control and Prevention, Atlanta, GA, United States

8:30 a.m.

6521

### RISK FACTORS ASSOCIATED WITH RURAL HOUSEHOLD FLEA INFESTATIONS IN THE PLAGUE ENDEMIC AREA OF MADAGASCAR

Adélaïde Miarinjara<sup>1</sup>, Annick O. Raveloson<sup>2</sup>, Stephen G. Mugal<sup>1</sup>, Nick An<sup>1</sup>, Andry Andriamiadanarivo<sup>3</sup>, Romain Girod<sup>2</sup>, Thomas R. Gillespie<sup>1</sup>

<sup>1</sup>Emory University, Atlanta, GA, United States, <sup>2</sup>Institut Pasteur de Madagascar, Antananarivo, Madagascar, <sup>3</sup>Centre ValBio Ranomafana, Ranomafana, Madagascar

8:45 a.m.

6522

### SURVEILLANCE FOR METASTRIATE TICKS AND SPOTTED FEVER GROUP RICKETTSIOSES IN SOUTHERN ILLINOIS

Victoria Phillips<sup>1</sup>, Matt Flenniken<sup>1</sup>, Levi Mick<sup>1</sup>, Leta Chesser<sup>1</sup>, Edna Alfaro<sup>1</sup>, Chang-Hyun Kim<sup>1</sup>, April Holmes<sup>2</sup>, Samantha Kerr<sup>2</sup>, Holly Gaff<sup>3</sup>, Brian Allan<sup>1</sup>, Chris Stone<sup>1</sup>, Holly Tuten<sup>1</sup>

<sup>1</sup>University of Illinois Urbana-Champaign, Champaign, IL, United States, <sup>2</sup>Illinois Department of Public Health, Springfield, IL, United States, <sup>3</sup>Old Dominion University, Norfolk, VA, United States

9 a.m.

6523

### SEROLOGIC TESTING FOR THE DIAGNOSIS OF BARTONELLA INFECTIONS IN PATIENTS IN MARYLAND

Kristin E. Mullins, Robert H. Christenson

University of Maryland School of Medicine, Baltimore, MD, United States

9:15 a.m.

6524

### MOLECULAR SURVEY OF ANAPLASMATACEAE AGENTS AND BARTONELLA SPP IN COATISNASUA NASUA FROM URBAN FORESTED AREAS IN BRAZIL

Lívia Perles<sup>1</sup>, Wanessa Barreto<sup>2</sup>, Gabriel de Macedo<sup>3</sup>, Heitor Herrera<sup>3</sup>, Rosângela Machado<sup>1</sup>, Marcos Rogério André<sup>1</sup>

<sup>1</sup>Universidade Estadual Paulista (UNESP), Jaboticabal, Brazil, <sup>2</sup>Universidade Federal do Mato Grosso do Sul, Campo Grande, Brazil, <sup>3</sup>Universidade Católica Dom Bosco, Campo Grande, Brazil

9:30 a.m.

6525

**DOGS AS RICKETTSIA SPP. SENTINELS IN A PERUVIAN AMAZON NATURAL RESERVE BUFFER ZONE**Oliver A. Bocanegra<sup>1</sup>, Cusi Ferradas<sup>1</sup>, Winnie Contreras<sup>1</sup>, Diana León-Luna<sup>1</sup>, Andres M. Lopez<sup>2</sup>, Raul Bello<sup>3</sup>, Andres G. Lescano<sup>1</sup><sup>1</sup>Emerge, Emerging Diseases and Climate Change Research Unit, School of Public Health and Administration, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>Department of Medicine and Epidemiology, School of Veterinary Medicine, University of California, Davis, CA, United States, <sup>3</sup>Kawsay Biological Station, Puerto Maldonado, Peru**Symposium 114****The Many Paths to *P. falciparum* Artemisinin Resistance: Lessons Learned from Asia with Implications for Africa***Regency Ballroom D - Ballroom Level (West Tower)***Saturday, October 21, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

The emergence of resistance to the artemisinin derivatives and their partner drugs threatens recent progress toward regional malaria elimination and eventual global malaria eradication. In the 15 years since artemisinin resistance was first reported in the Greater Mekong Subregion, substantial progress has been made in understanding the molecular mechanisms underlying resistance and its emergence and spread through populations. Prior studies have identified multiple genomic regions and differentially expressed genes associated with artemisinin resistance phenotypes, and forward genetic screens continue to provide insights into the function and biological relevance of these genes. These studies have indicated that artemisinin resistance is a multigenic trait, with multiple biological processes contributing to parasite resistance to artemisinin-induced damage and/or the fitness of resistant parasites. A recent meta-analysis of population genomic and transcriptomic studies indicated an enrichment of predicted favored mutations in genes encoding products involved in endocytosis, vesicular trafficking, oxidative stress response, DNA repair and host cell remodeling. Transcriptomic studies have observed similar enriched functions with 156 differentially expressed genes defining the Artemisinin Resistance Transcriptional Profile (ARTP) in Southeast Asian parasites. Functional studies have also implicated altered isoprenoid biosynthesis, RNA processing, DNA repair, and mitochondrial processes in artemisinin resistance, and have identified links between artemisinin resistance and increased gametocytogenesis, potentially facilitating resistance spread by providing a transmission advantage to resistant parasites. With the emergence of artemisinin resistance in areas of sub-Saharan Africa, it is critical to consider how our increased understanding of artemisinin resistance can be leveraged to monitor and control the emergence and spread of resistance in these high malaria burden areas. In this symposium, we will discuss new insights into the contribution of transcriptional regulation to artemisinin resistance, the relationship between artemisinin susceptibility and gametocytogenesis, genomic surveillance approaches that account for the multigenic mechanisms of resistance, and the implications of these findings for efforts to counter resistance in high-burden African settings.

**CHAIR**John H. Adams  
*University of South Florida, Tampa, FL, United States*Zbynek Bozdech  
*Nanyang Technological University, Singapore, Singapore***8 a.m.****INTRODUCTION****8:10 a.m.****CONTRIBUTION OF EPIGENETICS AND TRANSCRIPTIONAL REGULATION TO ARTEMISININ RESISTANCE**Zbynek Bozdech  
*Nanyang Technological University, Singapore, Singapore***8:30 a.m.****FORWARD GENETIC SCREENS OF *P. FALCIPARUM* MUTANT LIBRARIES LINK THE GENETIC BASIS OF ARTEMISININ SENSITIVITY TO INCREASED GAMETOCYTOGENESIS**Camilla V. Pires  
*University of South Florida, Tampa, FL, United States***8:45 a.m.****A GENETIC LINK BETWEEN MALARIA TRANSMISSION AND ARTEMISININ RESISTANCE**Lauriane Sollelis  
*University of Zurich, Zurich, Switzerland***9 a.m.****IMPLICATIONS OF THE MULTIGENIC MECHANISM OF ARTEMISININ RESISTANCE FOR GENOMIC SURVEILLANCE: MOVING BEYOND A CANDIDATE GENE APPROACH**Shannon Takala Harrison  
*University of Maryland School of Medicine, Baltimore, MD, United States***9:15 a.m.****MECHANISMS OF ARTEMISININ RESISTANCE EMERGENCE AND SPREAD: IMPLICATIONS FOR MONITORING AND COUNTERING RESISTANCE IN AFRICA**Abdoulaye Djimde  
*University of Bamako, Bamako, Mali***Exhibit Hall Open***Riverside Center - Exhibit Level (East Tower)***Saturday, October 21, 9:30 a.m. - 10:30 a.m. U.S. Central Time Zone****Coffee Break***Riverside Center - Exhibit Level (East Tower)***Saturday, October 21, 9:45 a.m. - 10:15 a.m. U.S. Central Time Zone****Poster Session C Set-Up***Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI - Ballroom Level (East Tower)***Saturday, October 21, 9:45 a.m. - 10:15 a.m.****Poster Session C Viewing***Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI - Ballroom Level (East Tower)***Saturday, October 21, 10:15 a.m. - 11 a.m.****Saturday  
October 21**

## Plenary Session 115



### Plenary Session IV: Presidents' Address: A Forward Look from the Society's Present and Past Presidents

Grand Ballroom CDEF - Ballroom Level (East Tower)  
Saturday, October 21, 10:15 a.m. - 11 a.m. U.S. Central Time Zone

*This session does not carry CME credit.*

Each year at the ASTMH Annual Meeting, the President addresses Society members with an update and reflections. This year, however, we will broaden the format and outlook by calling on the wisdom of the ages: Current President Daniel Bausch will bring to the stage a group of ASTMH Past Presidents and lead an informal discussion on the state of the world of tropical medicine and global health. Don't miss this opportunity to hear this illustrious group of leaders from diverse disciplines discuss the challenges and opportunities facing our planet and Society, and the Society's role in meeting them.

#### CHAIR

Daniel G. Bausch  
FINN, Geneva, Switzerland

#### 10:15 a.m.

#### MODERATOR

Daniel G. Bausch  
FINN, Geneva, Switzerland

#### PANEL

Past President (2021)  
Julie Jacobson  
*Bridges to Development, Seattle, WA, United States*

Past President (2019)  
Chandy John  
*Indiana University, Indianapolis, IN, United States*

Past President (2012)  
James Kazura  
*Case Western Reserve University, Cleveland, OH, United States*

Past President (2018)  
Regina Rabinovich  
*Harvard T.H. Chan School of Public Health/ISGlobal, Boston, MA, United States*

Past President (2013)  
David Walker  
*Department of Pathology, University of Texas Medical Branch at Galveston, Galveston, TX, United States*

### Exhibit Hall Open (Light Lunch)

Riverside Center - Exhibit Level (East Tower)  
Saturday, October 21, 11 a.m. - 12:30 p.m.

## Poster Session 116

### Poster Session C Presentations

Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI - Ballroom Level (East Tower)  
Saturday, October 21, 11 a.m. - 12:45 p.m. U.S. Central Time Zone

### Poster Session C Directory

Global Health - Information/Communication/Technologies Solutions in Global Health including Modeling: 6526- 6543  
Global Health - Other: 6544- 6569  
Global Health - Planetary Health including Climate Change: 6570- 6578  
Global Health - Security/Emerging Infection Preparedness, Surveillance and Response(s): 6579- 6603  
Arthropods/Entomology - Other: 6604- 6614  
Mosquitoes - Biology, Physiology and Immunity: 6615- 6626  
Mosquitoes - Bionomics, Behavior and Surveillance: 6627- 6648  
Mosquitoes - Epidemiology and Vector Control: 6649- 6677  
Ectoparasite-Borne Disease - Other: 6678- 6688  
Viruses - Emerging Viral Diseases: 6689- 6706  
Viruses - Epidemiology: 6707- 6722  
Viruses - Field and ecological studies of viruses, including surveillance and spillover risk and emergence: 6723- 6736  
Viruses - Immunology: 6737- 6751  
Viruses - Transmission Biology: 6752- 6761  
Viruses - Vaccine Clinical Trials: 6762- 6769  
Malaria - Antimalarial Resistance and Chemotherapy: 6770- 6789  
Malaria - Diagnosis - Challenges and Innovations: 6790- 6809  
Malaria - Drug Development and Clinical Trials: 6810- 6821  
Malaria - Elimination: 6822- 6837  
Malaria - Epidemiology: 6838- 6863  
Malaria - Genetics, Genomics and Evolution: 6864- 6879  
Malaria - Immunology: 6880- 6890  
Malaria - Pathogenesis: 6891- 6900  
Malaria - Prevention: 6901- 6926  
Malaria - Surveillance and Data Utilization: 6927- 6947  
Malaria - Vaccines and Immunotherapeutics: 6948- 6961  
Bacteriology - Enteric Infections: 6962- 6974  
Bacteriology - Systemic Infections: 6975- 6985  
Cestodes (including taeniasis and cysticercosis, echinococcosis/hydatid disease, and others): 6986- 6998  
Clinical Tropical Medicine: 6999- 7016  
Helminths - Nematodes - Filariasis (Cellular and Molecular Biology): 7017- 7019  
Helminths - Nematodes - Filariasis (Clinical): 7020-7027  
Helminths - Nematodes - Filariasis (Other): 7028-7039  
Integrated Control Measures for Neglected Tropical Diseases (NTDs): 7040-7051  
Kinoplastida and Other Protozoa - Epidemiology (Including Leishmania and Trypanosomes): 7052-7066  
One Health: The Interconnection between People, Animals, Plants and Their Shared Environment: 7067-7077  
Pneumonia, Respiratory Infections and Tuberculosis: 7078-7092  
Schistosomiasis and Other Trematodes - Epidemiology and Control: 7093-7102  
Water, Sanitation, Hygiene and Environmental Health: 7103-7112



# Global Health - Information/ Communication/Technologies Solutions in Global Health including Modeling

6526

## BIOMETRICS DATA COLLECTION FOR TRACHOMATOUS TRICHIASIS (TT) SURGERY PROGRAM IN OROMIA, SNNP AND SIDAMA REGIONS, ETHIOPIA: LESSONS LEARNT

**Nigusie Fetene**, Dawit Seyum Buda, Belay Bayissasse, Mulatu Gebre, Getachew Mekonnen, Doris Macharia, Alemayehu Sisay  
*Orbis, Addis Ababa, Ethiopia*

6527

## SPATIAL VARIATION IN HOUSING CONSTRUCTION MATERIAL IN LOW- AND MIDDLE-INCOME COUNTRIES: A BAYESIAN PREDICTION MODEL OF A KEY INFECTIOUS DISEASES RISK FACTOR AND SOCIAL DETERMINANT OF HEALTH

**Josh Michael Colston**<sup>1</sup>, Bin Fang<sup>2</sup>, Margaret Kosek<sup>1</sup>, Venkataraman Lakshmi<sup>2</sup>  
<sup>1</sup>University of Virginia School of Medicine, Charlottesville, VA, United States, <sup>2</sup>University of Virginia, Charlottesville, VA, United States

6528

## USE OF MATHEMATICAL MODELING TO INFORM INSECTICIDE-TREATED BEDNET DISTRIBUTION CAMPAIGNS: A HAITIAN CASE STUDY

**Billy Bauzile**<sup>1</sup>, Clara Champagne<sup>1</sup>, Punam Amratia<sup>2</sup>, Ewan Cameron<sup>2</sup>, Peter Gething<sup>2</sup>, Nick Ruktanonchai<sup>3</sup>, Marc A. Telfort<sup>4</sup>, Valerian Turbé<sup>5</sup>, Justin T. Lana<sup>6</sup>, Emilie Pothin<sup>1</sup>  
<sup>1</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland, <sup>2</sup>Malaria Atlas Project, Telethon kids Institute, Perth Children's Hospital, Perth, Australia, <sup>3</sup>Virginia Tech, Blacksburg, Virginia, VA, United States, <sup>4</sup>Programme National de Contrôle de la Malaria, Ministère de la Santé Publique et de la Population, Port-au-Prince, Haiti, <sup>5</sup>Clinton Health Access Initiative, Port-au-Prince, Haiti, <sup>6</sup>Clinton Health Access Initiative, Panama, Panama

6529

## NET WORTH: A MODELING EXPLORATION OF COST AND COST-EFFECTIVENESS IN INSECTICIDE-TREATED NET INTERVENTIONS

**Amelia Bertozzi-Villa**, Daniel Bridenbecker, Caitlin Bever  
*Institute for Disease Modeling, Seattle, WA, United States*

6530

## MULTIFACETED INTERVENTIONS FOR UNINTERRUPTED MALARIA COMMODITIES: LESSONS FROM MALAWI

**Daniel Taddesse**<sup>1</sup>, Elias Mwalabu<sup>1</sup>, Fikadu Deme<sup>1</sup>, Lumbani Makwakwa<sup>2</sup>, Charles Nzawa<sup>1</sup>, Lumbani Munthali<sup>3</sup>  
<sup>1</sup>USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project, Washington DC, DC, United States, <sup>2</sup>USAID, Washington DC, DC, United States, <sup>3</sup>Ministry of Health Malawi, Lilongwe, Malawi

6531

## MULTI-OBJECTIVE CALIBRATION OF THE AGENT-BASED MALARIA TRANSMISSION MODEL, EMOD, TO SYMPTOM, PARASITE, GAMETOCYTE, AND MOSQUITO INFECTION DATA FROM A TRIAL OF ASYMPTOMATIC SCREENING IN SAPONE, BURKINA FASO

**Tobias M. Holden**<sup>1</sup>, Katharine A. Collins<sup>2</sup>, Teun Bousema<sup>2</sup>, Chris Drakeley<sup>2</sup>, Aurélien Cavelan<sup>4</sup>, Melissa Penny<sup>4</sup>, Anne Stahlfeld<sup>1</sup>, Manuela Runge<sup>1</sup>, Jaline Gerardin<sup>1</sup>  
<sup>1</sup>Northwestern University, Chicago, IL, United States, <sup>2</sup>Radboud University Medical Center, Nijmegen, Netherlands, <sup>3</sup>London School of Tropical Medicine and Hygiene, London, United Kingdom, <sup>4</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland

6532

## IMPLEMENTING A LARGE-SCALE COMMUNITY DIGITAL HEALTH PLATFORM IN MOZAMBIQUE: LESSONS LEARNT FROM UPSCALE

**Maria Rodrigues**  
*Malaria Consortium, MAPUTO, Mozambique*

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## PREDICTIVE MODEL FOR REAL WORLD PERFORMANCE OF RAPID ANTIGEN TESTS BASED ON LABORATORY EVALUATION

**Irene Bosch**, Miguel Bosch, Dawlyn Garcia, Lindsey Rudtner, Nol Salcedo, Sina Hoche, Jose G Arocha, Helena de Puig, Helena del Corral, Lee Gehrke, Alfred Harding, Laura Holberger  
*IDX20 Inc., Boston, MA, United States*

6534

## EVALUATING A DHIS2 BASED PLATFORM FOR REAL TIME MONITORING OF MASS DRUG ADMINISTRATION OF NEGLECTED TROPICAL DISEASES MEDICINES: LEARNINGS FROM NIGERIA

**Martins Imhansoleeva**<sup>1</sup>, Christian Nwosu<sup>1</sup>, Ruth Dixon<sup>2</sup>, Omosefe Osinoiki<sup>1</sup>, Chukwuma Anyaika<sup>3</sup>, Perpetua Amodu-Agbi<sup>3</sup>, Ununumah Egbelu<sup>3</sup>, Richard Selby<sup>4</sup>, Sarah Bartlett<sup>4</sup>, Sunday Isiyaku<sup>4</sup>  
<sup>1</sup>Sightsavers, Abuja, Nigeria, <sup>2</sup>Technopolis, Brighton, United Kingdom, <sup>3</sup>Federal Ministry of Health, Abuja, Nigeria, <sup>4</sup>Sightsavers, Haywards Heath, United Kingdom

6535

## A PROBABILISTIC FRAMEWORK OF MALARIA EPIDEMIOLOGY USING AGE OF INFECTION

**John M. Henry**<sup>1</sup>, Austin R. Carter<sup>1</sup>, Juliet N. Nsumba<sup>2</sup>, Doreen M. Ssebubiba<sup>2</sup>, David L. Smith<sup>1</sup>  
<sup>1</sup>University of Washington, Seattle, WA, United States, <sup>2</sup>Makerere University, Kampala, Uganda

6536

## DENGUE--AN EMERGING THREAT WORLDWIDE: A MATHEMATICAL MODEL EXPLORING GLOBAL RELATIVE RISK USING CLIMATIC, GEOLOCALIZED ECONOMIC, AND VECTOR DISTRIBUTION DATA

**Amber F. Britt**, Sina Mokhtar, Rebecca Fischer, Patrick Tarwater, Angela Clendenin, Martial Ndeffo-Mbah  
*Texas A&M, College Station, TX, United States*

6537

## THE SINGLE PATCH *PLASMODIUM FALCIPARUM* (SPPF) APPLICATION - A TOOL FOR MALARIA MODELLING IN LMIC

**Sheetal P. Silal**  
*Modelling and Simulation Hub, Africa (MASHA), University of Cape Town, Cape Town, South Africa*

6538

## HEALTH: RADAR - A PROJECT FOR BETTER CLIMATE SENSITIVE INFECTIOUS DISEASE MODELS IN THE GLOBAL SOUTH

**Jared M. Norman**<sup>1</sup>, Christopher Lennard<sup>2</sup>, Sadiq Wanjala<sup>3</sup>, Rajendra Maharaj<sup>4</sup>, Sheetal P. Silal<sup>1</sup>  
<sup>1</sup>Modelling and Simulation Hub, Africa (MASHA), University of Cape Town, Cape Town, South Africa, <sup>2</sup>Climate Systems Analysis Group, University of Cape Town, Cape Town, South Africa, <sup>3</sup>Clinton Health Access Initiative, South Africa Office, Cape Town, South Africa, <sup>4</sup>South African Medical Research Council, Durban, South Africa

Saturday  
October 21

6539

### A PREDICTIVE MODEL FOR NON-INVASIVE ANEMIA DIAGNOSIS

Jia Ying Jennifer Teo<sup>1</sup>, Sophie Wu<sup>2</sup>, Kartik Pejavara<sup>3</sup>, Dominic Garrity<sup>4</sup>, Adam Wax<sup>2</sup>, Nirmish Shah<sup>5</sup>

<sup>1</sup>Duke University School of Medicine, Durham, NC, United States, <sup>2</sup>Department of Biomedical Engineering, Duke University, Durham, NC, United States, <sup>3</sup>Department of Computer Science, Duke University, Durham, NC, United States, <sup>4</sup>Global Alliance for Medical Innovation, Boston, MA, United States, <sup>5</sup>Department of Medicine, Duke University Medical Center, Durham, NC, United States

6540

### IMPACT OF GOVERNMENT-REGULATED LOCKDOWNS DURING THE COVID-19 PANDEMIC ON ACCESS TO MENTAL HEALTH SERVICES THROUGH A TERTIARY PSYCHIATRIC CARE FACILITY AND THE NATIONAL MENTAL HEALTH CALL HELPLINE IN SRI LANKA

Madhubhashinee Dayabandara<sup>1</sup>, Chaminda Prasad Giggumaduwa Liyanage<sup>2</sup>, Pushpa Ranasinghe<sup>3</sup>, Dhammika Wijesinghe<sup>3</sup>, Charith Pathirana<sup>3</sup>, Suhashini Ratnatunga<sup>1</sup>, Shenal Madhushan<sup>1</sup>, Yasasvi Dewasirinarayana<sup>1</sup>, Kasuni Hasintha<sup>1</sup>, Dharani Rajahewa<sup>1</sup>, Shakthi Wijesekara<sup>1</sup>, Ayodya Amarasinghe<sup>1</sup>, Joacim Rocklöv<sup>4</sup>, Yesim Tozan<sup>2</sup>

<sup>1</sup>Department of Psychiatry, Faculty of Medicine, University of Colombo, Colombo, Sri Lanka, <sup>2</sup>School of Global Public Health, New York University, New York, NY, United States, <sup>3</sup>National Institute of Mental Health, Angoda, Sri Lanka, <sup>4</sup>Heidelberg Institute of Global Health & the Interdisciplinary Center for Scientific Computing, University of Heidelberg, Heidelberg, Germany

6541

### CREATING A DATA LIBRARY USING PUBLICLY AVAILABLE RESEARCH DATA ON NEGLECTED AND EMERGING INFECTIOUS DISEASES

Michael Anthony Vizcaino

CUNY SPH, Manhattan, NY, United States

6542

### FEASIBILITY AND ACCEPTABILITY OF MOBILE TECHNOLOGY TO IMPROVE ONE HEALTH OUTBREAK REPORTING IN BWINDI, UGANDA

Julia Lippert<sup>1</sup>, Nahabwe Haven<sup>2</sup>, Scott Kellermann<sup>2</sup>, Latha Rajan<sup>1</sup>, Tierra Smiley Evans<sup>3</sup>

<sup>1</sup>Tulane University School of Public Health and Tropical Medicine, New Orleans, LA, United States, <sup>2</sup>Bwindi Community Hospital, Buhoma, Uganda, <sup>3</sup>One Health Institute, UC Davis, Davis, CA, United States

6543

### TRANSFERRING HEALTHCARE DIAGNOSTIC PRODUCT TECHNOLOGY TO THE POINT-OF-CARE IN LOW- AND MIDDLE-INCOME COUNTRIES

Sally M. McFall<sup>1</sup>, Robert L. Murphy<sup>2</sup>, Chad J. Achenbach<sup>3</sup>, Kara M. Palamountain<sup>2</sup>, Mamoudou Maiga<sup>3</sup>, Matthew R. Glucksberg<sup>2</sup>, Lesley Scott<sup>4</sup>, Grant Theron<sup>5</sup>, Thomas Franz<sup>6</sup>, Eligius Lyamuya<sup>7</sup>, Akinniyi Osuntoki<sup>8</sup>, Akinwale Coker<sup>9</sup>, Oche Agbaji<sup>10</sup>, Seydi Moussa<sup>11</sup>, Almoustapha Maiga<sup>12</sup>

<sup>1</sup>Biomedical Engineering, Northwestern University, Evanston, IL, United States, <sup>2</sup>Northwestern University, Chicago, IL, United States, <sup>3</sup>University of the Witwatersrand, Johannesburg, South Africa, <sup>4</sup>Stellenbosch University, Cape Town, South Africa, <sup>5</sup>University of Cape Town, Cape Town, South Africa, <sup>6</sup>Muhimbili University, Dar es Salaam, United Republic of Tanzania, <sup>7</sup>University of Lagos, Lagos, Nigeria, <sup>8</sup>University of Ibadan, Ibadan, Nigeria, <sup>9</sup>University of Jos, Jos, Nigeria, <sup>10</sup>Université Cheikh Anta Diop, Dakar, Senegal, <sup>11</sup>University Of Science Of Technical And Technology De Bamako, Bamako, Mali

## Global Health - Other

6544

### CLOSE ENCOUNTERS OF THE ENVENOMATING KIND: MISSIONARIES, INSECTS, AND SNAKES DURING THE SCRAMBLE FOR AFRICA, 1885 - 1914

David P. Adams<sup>1</sup>, Michael Kent<sup>2</sup>

<sup>1</sup>National University of Ireland-Galway, Galway, Ireland, <sup>2</sup>Point University, Savannah, GA, United States

6545

### IMPACT OF AN ANCILLARY CARE POLICY DURING AN EBOLA VACCINE TRIAL IN THE DEMOCRATIC REPUBLIC OF THE CONGO

Gwen Lemey<sup>1</sup>, Ynke Larivière<sup>1</sup>, Trésor Zola<sup>2</sup>, Solange Milolo<sup>2</sup>, Engbu Danoff<sup>2</sup>, Emmanuel Esanga<sup>2</sup>, Junior Matangila<sup>2</sup>, Raffaella Ravinetto<sup>3</sup>, Jean-Pierre Van geertruyden<sup>1</sup>, Vivi Maketa<sup>2</sup>, Patrick Mitashi<sup>2</sup>, Pierre Van Damme<sup>1</sup>, Hypolite Muhindo Mavoko<sup>2</sup>

<sup>1</sup>University of Antwerp, Antwerp, Belgium, <sup>2</sup>University of Kinshasa, Kinshasa, Democratic Republic of the Congo, <sup>3</sup>Institute of Tropical Medicine, Antwerp, Belgium

6546

### THE SOUTH AND SOUTHEAST ASIAN COMMUNITY BASED TRIALS NETWORK (SEACTN)

Yoel Lubell<sup>1</sup>, Arjun Chandna<sup>2</sup>, Rusheng Chew<sup>1</sup>, Nan Shwe Nwe Htun<sup>1</sup>, Thomas J. Peto<sup>1</sup>, Meiwen Zhang<sup>1</sup>, Marco Liverani<sup>3</sup>, Koukeo Phommason<sup>4</sup>, Carlo Perrone<sup>1</sup>, Aung Pyae Phyo<sup>5</sup>, Jetsumon Sattabongkot<sup>6</sup>, Wanlapa Roobsoong<sup>7</sup>, Wang Nguiragool<sup>8</sup>, Aninda Sen<sup>7</sup>, Sazid Ibn Zama<sup>8</sup>, Elizabeth Batty<sup>9</sup>, Naomi Waithira<sup>1</sup>, Mohammad Yazid Abdal<sup>1</sup>, Stuart Blacksell<sup>1</sup>, Ladaporn Bodhidatta<sup>8</sup>, James Callery<sup>1</sup>, Watcharintorn Thongpiam<sup>8</sup>, Witchayoot Huangsuranun<sup>1</sup>, Shayla Islam<sup>7</sup>, Mavuto Mukaka<sup>1</sup>, Vanna Moul<sup>9</sup>, Amit Kumar Neogi<sup>7</sup>, Supalert Nedsuwan<sup>10</sup>, Tiengkham Pongvongsa<sup>11</sup>, Melissa Richard-Greenblatt<sup>12</sup>, Shaun Morris<sup>13</sup>, Kristen Aiemjoy<sup>14</sup>, Sue Lee<sup>1</sup>, Alistair Mclean<sup>15</sup>, Janjira Thaipadungpanit<sup>4</sup>, Rupam Tripura<sup>8</sup>, Arjen Dondorp<sup>1</sup>, Mayfong Mayxay<sup>16</sup>, Nicholas J. White<sup>1</sup>, Francois Nosten<sup>5</sup>, Frank Smithuis<sup>17</sup>, Md Akramul Islam<sup>7</sup>, Richard J. Maude<sup>1</sup>, Elizabeth A. Ashley<sup>18</sup>, Nicholas Day<sup>1</sup>

<sup>1</sup>University of Oxford, Bangkok, Thailand, <sup>2</sup>University of Oxford, Oxford, United Kingdom, <sup>3</sup>LSHTM, London, United Kingdom, <sup>4</sup>LOMWRU, Vientiane, Lao People's Democratic Republic, <sup>5</sup>SMRU, Mae Sot, Thailand, <sup>6</sup>Mahidol University, Bangkok, Thailand, <sup>7</sup>BRAC, Dhaka, Bangladesh, <sup>8</sup>MORU, Bangkok, Thailand, <sup>9</sup>AHEAD, Battambang, Cambodia, <sup>10</sup>Chiangrai Phrachanukroh, Chiangrai, Thailand, <sup>11</sup>Savannakhet Provincial Health Department, Savannakhet, Lao People's Democratic Republic, <sup>12</sup>OAHP, Toronto, ON, Canada, <sup>13</sup>University of Toronto, Toronto, ON, Canada, <sup>14</sup>University of California, Davis, California, CA, United States, <sup>15</sup>University of Melbourne, Melbourne, Australia, <sup>16</sup>Lao-Oxford-Mahosot Hospital Wellcome Trust Research Unit, Vientiane, Lao People's Democratic Republic, <sup>17</sup>Medical Action Myanmar, Yangon, Myanmar, <sup>18</sup>Lao-Oxford-Mahosot Hospital Wellcome Trust Research Unit, Vientiane, Lao People's Democratic Republic

6547

### FEEDBACK FROM THE FAMILY FOLLOW-UP SESSIONS WITH DECEASED FAMILIES TO SHARE THE CAUSE OF DEATH (COD) REPORT: LESSON LEARNT FROM CHAMPS BANGLADESH

Dalia Yeasmin<sup>1</sup>, Sazzad Hossain Khan<sup>1</sup>, Tonmoy Sarkar<sup>1</sup>, Afroz Zahan<sup>1</sup>, Abdus Suban Mulla<sup>1</sup>, Aziz Ahamed<sup>1</sup>, Shikha Datta Gupta<sup>1</sup>, Farhana Hasnat Khan<sup>1</sup>, Syead Tamim Mahmud<sup>1</sup>, Afruna Rahman<sup>1</sup>, Faruque Hussain<sup>1</sup>, Mohammad Sabbir Ahmed<sup>1</sup>, Shovo Debnath<sup>1</sup>, Rajib Biswas<sup>1</sup>, Mohammad Zahid Hossain<sup>1</sup>, Maria Amixenchs<sup>2</sup>, John Blevins<sup>3</sup>, Shams EL Arifeen<sup>1</sup>, Emily S Gurley<sup>4</sup>, Shahana Parveen<sup>1</sup>

<sup>1</sup>icddr, Dhaka, Bangladesh, <sup>2</sup>ISGlobal, Hospital Clinic Universitat De Barcelona, Spain, <sup>3</sup>Spain, <sup>4</sup>Emory Global Health Institute, Atlanta, GA, USA, American Samoa, <sup>5</sup>Department of Epidemiology, Bloomberg School of Public Health, Johns Hopkins University, USA, MD, United States

6548

### HOW DO SUBSTANDARD AND FALSIFIED ANTIMICROBIALS AFFECT THE EMERGENCE AND SPREAD OF ANTIMICROBIAL RESISTANCE?

Sean M. Cavany, Stella Nanyonga, Cathrin Hauk, Céline Caillet, Paul Newton, Ben Cooper

University of Oxford, Oxford, United Kingdom

6549

**THE DEVILS INVADE THE HOUSE THROUGH THE HOLES IN THE BAMBOO BOOTH: A NARRATIVE OF LOKU AND TAKAYA FEVER ILLNESS AMONG CHILDREN IN EASTERN INDONESIA**

**Lenny L. Ekawati<sup>1</sup>**, I Nyoman I.K. Wijaya<sup>1</sup>, Benidiktus Delpada<sup>1</sup>, Iqbal Elyazar<sup>1</sup>, Adrian D. Smith<sup>2</sup>, J. Kevin Baird<sup>1</sup>, Philip Kreager<sup>3</sup>  
<sup>1</sup>*Oxford University Clinical Research Unit (OUCRU), Jakarta, Indonesia*, <sup>2</sup>*Nuffield Department of Population Health, University of Oxford, Oxford, United Kingdom*, <sup>3</sup>*Institute of Human Sciences, University of Oxford, Oxford, United Kingdom*

6550

**PREVALENCE OF ANTIBIOTIC USE AMONG THREE SELECTED TERTIARY LEVEL HOSPITALIZED PATIENTS, A POINT PREVALENCE SURVEY FINDING IN BANGLADESH**

**Dr. Ayesha Afrin<sup>1</sup>**, Md. Mahbubur Rashid<sup>1</sup>, Md. Kamal Hossain<sup>1</sup>, Nitish Debnath<sup>2</sup>, Aninda Rahman<sup>3</sup>, Fahmida Chowdhury<sup>1</sup>  
<sup>1</sup>*icddr,b, Dhaka, Bangladesh*, <sup>2</sup>*Fleming Fund Country Grant to Bangladesh, DAI Global, LLC., Dhaka, Bangladesh*, <sup>3</sup>*Communicable Disease Control (CDC), Directorate General of Health Services, Government of Bangladesh, Dhaka, Bangladesh*

6551

**IMPROVING MALARIA COMMODITY ACCOUNTABILITY: - THE CASE OF MALAWI**

**Elias Mwalabu<sup>1</sup>**, Daniel Taddesse<sup>1</sup>, Elizabeth Mkandawire<sup>2</sup>, Dennis Chali<sup>3</sup>, Fikadu Deme<sup>1</sup>  
<sup>1</sup>*USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project., Washington DC, DC, United States*, <sup>2</sup>*Ministry of Health Malawi, Lilongwe, DC, United States*, <sup>3</sup>*USAID, Lilongwe, Malawi*

6552

**ANTIMICROBIAL STEWARDSHIP IN SOUTH ASIA: A SYSTEMATIC REVIEW OF QUALITATIVE LITERATURE**

**Jennifer L. Murray<sup>1</sup>**, Daniel Leung<sup>1</sup>, Olivia R. Hanson<sup>1</sup>, Sharia M. Ahmed<sup>1</sup>, Ashrafal I. Khan<sup>2</sup>, Debashish Biswas<sup>2</sup>, Melissa H. Watt<sup>1</sup>  
<sup>1</sup>*University of Utah, Salt Lake City, UT, United States*, <sup>2</sup>*International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh*

6553

**A PHYSICIAN-LED PRIMARY PREVENTION CARE ON RISK OF CARDIOVASCULAR DISEASE: A RANDOMIZED CONTROLLED TRIAL (PRIMCARD STUDY)**

**Isaac Olugbenga Aladeniyi<sup>1</sup>**, Olufunmilayo Fawole<sup>2</sup>, Adesegun Fatusi<sup>3</sup>, Folukemi Bosede Aladenola<sup>4</sup>, Ikeola Adeoye<sup>5</sup>, Olayemi Rhoda Aladeniyi<sup>6</sup>  
<sup>1</sup>*University of Medical Sciences, Ondo State, Nigeria, Akure, Nigeria*, <sup>2</sup>*University of Ibadan, Ibadan, Nigeria*, <sup>3</sup>*University of Medical Sciences, Ondo State, Nigeria, Ondo, Nigeria*, <sup>4</sup>*Ministry of health, Ondo State, Nigeria, Akure, Nigeria*, <sup>5</sup>*University of Ibadan, Ibadan, Oyo State, Nigeria, Ibadan, Nigeria*, <sup>6</sup>*College of Health Technology, Ondo State, Nigeria, Akure, Nigeria*

6554

**HYDROCEPHALUS 20 YEAR TRENDS IN UGANDA**

**Edith Mbabazi Kabachelor**  
*CURE Children's Hospital, Uganda, Mbale, Uganda*

6555

**MALAWI INTEGRATED TYPHOID CONJUGATE VACCINE CAMPAIGN AND ROUTINE INTRODUCTION**

**Latif Ndeketa**, Melita Gordon, Donnie Mategula  
*Malawi-Liverpool-Wellcome Research Programme, Blantyre, Malawi*

6556

**THE NUTRITIONAL IMPACT OF THE COVID-19 PANDEMIC ON YOUNG CHILDREN IN PERI-URBAN PERU: A MIXED METHODS STUDY**

**Jessica Rothstein<sup>1</sup>**, Emma Fletcher<sup>2</sup>, Riley Wilgenbusch<sup>2</sup>, Robert Gilman<sup>2</sup>  
<sup>1</sup>*University of Illinois at Chicago, Chicago, IL, United States*, <sup>2</sup>*Johns Hopkins University, Baltimore, MD, United States*

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**CONTRIBUTION OF VERBAL AUTOPSY INFORMATION TO CAUSE OF DEATH ATTRIBUTION AMONG CASES UNDERGOING MINIMALLY INVASIVE TISSUE SAMPLING: FINDINGS FROM CHILD HEALTH AND MORTALITY PREVENTION SURVEILLANCE (CHAMPS) BANGLADESH**

**Afruna Rahman<sup>1</sup>**, Afsana Afrin<sup>1</sup>, Muntasir Alam<sup>1</sup>, Md. Mamunur Rashid<sup>1</sup>, Md. Abu Bakkar Siddique<sup>1</sup>, Qazi Sadeq-ur Rahman<sup>1</sup>, Mohammad Zahid Hossain<sup>1</sup>, Md. Atique Iqbal Chowdhury<sup>1</sup>, Mohammad Sabbir Ahmed<sup>1</sup>, Rajib Biswas<sup>1</sup>, Shovo Debnath<sup>1</sup>, Emily S. Gurley<sup>2</sup>, Shams El Arifeen<sup>1</sup>  
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**ASSESSING THE ESSENTIAL DATA SOURCES FOR PRECISE CAUSE OF DEATH DETERMINATION USING MINIMALLY INVASIVE TISSUE SAMPLING: FINDINGS FROM CHILD HEALTH AND MORTALITY PREVENTION SURVEILLANCE (CHAMPS) BANGLADESH**

**Afsana Afrin<sup>1</sup>**, Afruna Rahman<sup>1</sup>, Muntasir Alam<sup>1</sup>, Md. Atique Iqbal Chowdhury<sup>1</sup>, Kazi Munisul Islam<sup>1</sup>, Afsana Rashed<sup>1</sup>, Shams El Arifeen<sup>1</sup>, Emily S. Gurley<sup>2</sup>, Mohammad Zahid Hossain<sup>1</sup>  
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**DETERMINANTS OF NEONATAL MORTALITY IN RIVERCESS: SECONDARY DATA ANALYSIS OF NEONATAL DEATH IN HEALTH FACILITIES IN RIVERCESS, 2016-2020**

**Jusu Kamara**  
*Global Humanitarian Initiative Inc., Monrovia, Liberia*

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**PROGRESS VS PERSISTENT CHALLENGES- WHAT WE HAVE HEARD: CHALLENGES AND OPPORTUNITIES**

**Jackson K. Miller**  
*Liberia Agriculture Commodity Regulatory Authority, Monrovia, Liberia*

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**ASSOCIATED FACTORS WITH THE POOR PERFORMANCE OF THE MATERNAL DEATH SURVEILLANCE SYSTEM IN CAMEROON, 2020-2022**

**ANTSELE ONANENA BLONDEL<sup>1</sup>**, MENDJIME PATRICIA<sup>2</sup>, AKAME Roland<sup>3</sup>, OTTHOU MESSINDE<sup>4</sup>, TONYE HAGBE<sup>5</sup>, GAVLI DONGOA<sup>6</sup>, KENFACK NICOLE<sup>7</sup>, AMINATOU KOUOTOU<sup>8</sup>, LINONGE CHRISTIANA<sup>9</sup>, KINYUIYI EMMANUELLA<sup>10</sup>, PANMO ELIANNE<sup>11</sup>, ATOUBA BENJAMIN<sup>12</sup>, NTSIMI BRICE<sup>13</sup>, NGASSA K. Flore<sup>13</sup>, YOPA SANDRA<sup>13</sup>, KOUAMEN GAEL<sup>13</sup>, ETOUNDI MBALLA GEORGES ALAIN<sup>13</sup>  
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Saturday  
October 21

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### ASSESSMENT OF KNOWLEDGE, ATTITUDES, AND PRACTICES (KAP) TOWARD COVID-19 IN KINSHASA, DRC

Kristin Banek<sup>1</sup>, Melchoir M. Kashamuka<sup>2</sup>, Delphin Mubanga<sup>3</sup>, Sadie J. Ryan<sup>4</sup>, Jean-Claude Biayi Kalenga<sup>2</sup>, Georges Emo Mahilu<sup>2</sup>, Joseph Atibu<sup>2</sup>, Latifeh Dahmash<sup>4</sup>, Richard R. Luce<sup>5</sup>, Jonathan B. Parr<sup>1</sup>, Jonathan J. Juliano<sup>1</sup>, Rhoel R. Dinglasan<sup>4</sup>, Antoinette K. Tshetu<sup>2</sup>

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### PROFILING THE QUALITY OF LIFE OF SLUM RESIDENTS DURING THE COVID-19 PANDEMIC, AND THE EFFECTS OF SOME SOCIO-DEMOGRAPHIC AND ECONOMIC MEASURES

Hammed O. Mogaji<sup>1</sup>, Nivison N. Junior<sup>1</sup>, Hernan D. Argibay<sup>1</sup>, Jaqueline S. Cruz<sup>1</sup>, Ianei O. Carneiro<sup>1</sup>, Ricardo Lustosa<sup>1</sup>, Albert I. Ko<sup>2</sup>, Federico Costa<sup>1</sup>, Mike Begon<sup>3</sup>, Hussein Khalil<sup>4</sup>  
<sup>1</sup>Institute of Collective Health, Salvador, Brazil, <sup>2</sup>Yale School of Public Health, New Haven, CT, United States, <sup>3</sup>University of Liverpool, Liverpool, United Kingdom, <sup>4</sup>Swedish University of Agricultural Sciences, Umeå, Sweden

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### AN IN -SILICO APPROACH ON THE EFFECT OF LOPHENOL AND ITS DERIVATIVES ON PANCREATIC LIPASE, ALDOSE REDUCTASE AND DIPEPTIDYL PEPTIDASE-IV AS POTENTIAL TARGET FOR DIABETES MELLITUS(TYPEII)

Patience Akosua Darko<sup>1</sup>, Michael Buer Adinortey<sup>2</sup>, Russell Koranteng<sup>1</sup>  
<sup>1</sup>Noguchi Memorial Institute for Medical Research, Accra, Ghana, <sup>2</sup>University of Cape Coast, Cape Coast, Ghana

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### EVERY CASE CONFIRMED: EXPANDING UGANDA'S INTEGRATED COMMUNITY CASE MANAGEMENT THROUGH INNOVATIVE PARTNERSHIP

Maureen Amutahaire<sup>1</sup>, Jimmy Opigo<sup>1</sup>, Catherine Maiteki-Sebuguzi<sup>1</sup>, Ruth Nabwire<sup>1</sup>, Steven Shepelwich<sup>2</sup>, Adriana Lanting<sup>1</sup>, Dorothy Echodu<sup>3</sup>, Ken Mugishu<sup>4</sup>, Brian Gower<sup>5</sup>, Fred Bukenya<sup>6</sup>, Wycliff Odude<sup>7</sup>, Chrispus Hyuha<sup>8</sup>, Victoria Nabunya<sup>1</sup>  
<sup>1</sup>National Malaria Control Division, Kampala, Uganda, <sup>2</sup>Malaria Partners International, Seattle, WA, United States, <sup>3</sup>Pilgrim Africa, Seattle, WA, United States, <sup>4</sup>PDG, Rotary District 9211, PP, Muyenga Rotary Club, Kampala, Uganda, <sup>5</sup>World Vision US, Seattle, WA, United States, <sup>6</sup>Pilgrim Africa, Kampala, Uganda, <sup>7</sup>Pilgrim Africa, Soroti, Uganda, <sup>8</sup>World Vision Uganda, Soroti, Uganda

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### FEASIBILITY OF A SOUTH SOUTH NORTH COLLABORATION ON IMPLEMENTING A STUDY TO COMPARE VACCINATION COVERAGE SURVEY METHODS: CASE OF DEMOCRATIC REPUBLIC OF CONGO AND CENTRAL AFRICAN REPUBLIC

Jean-Bosco Kasonga<sup>1</sup>, Emmanuel Fandema<sup>2</sup>, Nkamba Mukadi Mukadi Dalau<sup>1</sup>, Nicole A. Hoff<sup>3</sup>, Sylvia Tangney<sup>4</sup>, Eric Mafuta<sup>1</sup>, Amine El Mourid<sup>5</sup>, Katie Stahley<sup>6</sup>, Patrice Feilema<sup>5</sup>, Jean De Dieu Longo<sup>7</sup>, Alexandre Manirakiza<sup>8</sup>, Didine Kaba<sup>1</sup>, Anne W. Rimoin<sup>4</sup>  
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### DISTRIBUTED MANUFACTURING STRATEGIES TO CIRCUMVENT SUPPLY CHAIN COMPLEXITIES, LOWER COST, AND INCREASE ACCESS TO COMPOSTABLE MENSTRUAL HYGIENE PRODUCTS

Anton Molina<sup>1</sup>, Anesta Kothari<sup>1</sup>, Alex Odundo<sup>2</sup>, Manu Prakash<sup>1</sup>  
<sup>1</sup>Stanford University, Stanford, CA, United States, <sup>2</sup>Olex Technoenterprises, Kisumu, Kenya

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### SOCIAL DETERMINANTS OF COVID-19 VACCINE ACCEPTANCE AND UPTAKE IN A BRAZILIAN SLUM COMMUNITY: A LONGITUDINAL TIME-TO-EVENT STUDY

Murilo Dorion<sup>1</sup>, Juan Pablo A. Ticona<sup>2</sup>, Mariam O. Fofana<sup>1</sup>, Margaret L. Lind<sup>1</sup>, Nivison Nery Jr.<sup>2</sup>, Renato Victoriano<sup>3</sup>, Ananias S. do Aragão Filho<sup>3</sup>, Mitermayer G. Reis<sup>3</sup>, Federico Costa<sup>4</sup>, Albert I. Ko<sup>1</sup>  
<sup>1</sup>Yale School of Public Health, New Haven, CT, United States, <sup>2</sup>Instituto de Saúde Coletiva, Universidade Federal da Bahia, Salvador, Brazil, <sup>3</sup>Instituto Gonçalo Moniz, Fundação Oswaldo Cruz, Ministério da Saúde, Salvador, Brazil

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### MEASLES OUTBREAKS IN REGIONS NEIGHBORING ARMED CONFLICT ZONES; EXPERIENCES FROM THE WEST REGION OF CAMEROON, 2018 TO 2022

Gael T. Kouamen  
Cameroon Field Epidemiology Training Program (CAFETP), YAOUNDE, Cameroon

## Global Health - Planetary Health including Climate Change

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### HEAT EXPOSURE AND IMPACTS ON HEALTH AND PRODUCTIVITY OF READY-MADE GARMENT WORKERS BANGLADESH: A QUALITATIVE STUDY

Farzana Yeasmin<sup>1</sup>, Aaron Bach<sup>1</sup>, Jean Palutikof<sup>1</sup>, Fahim Tonmoy<sup>1</sup>, Fahmida Tofail<sup>2</sup>, Mahbubur Rahman<sup>2</sup>, Shannon Rutherford<sup>1</sup>  
<sup>1</sup>Griffith University, Gold Coast, Australia, <sup>2</sup>icddr, Dhaka, Bangladesh

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### TOO HOT FOR BED NETS IN A CHANGING CLIMATE: SPATIAL ANALYSIS AND RISK MODELLING OF MALARIA INDICATOR SURVEY DATA IN SUB-SAHARAN AFRICA 2018-2022

Morgan E. Lemin, Louise Kelly-Hope  
University of Liverpool, Liverpool, United Kingdom

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### CLIMATE CHANGE ADAPTATION MEASURES INFLUENCE HOUSEHOLD FOOD INSECURITY IN SOUTHERN ETHIOPIA

Taye Ayana<sup>1</sup>, Bethlehem Mezgebe<sup>1</sup>, Mehretu Belayneh<sup>1</sup>, Bernt Lindtjorn<sup>2</sup>  
<sup>1</sup>Hawassa University, Hawassa, Ethiopia, <sup>2</sup>University of Bergen, Bergen, Norway

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### LABEAUD LAB WASTE AUDIT

Esra Buyukcangaz, Bethel Bayrau, A.Desiree LaBeaud  
Stanford University, Stanford, CA, United States



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**ASSESSING DISTRIBUTIONAL CHANGES OF BULINUS TRUNCATUS, INTERMEDIATE SNAIL HOST OF SCHISTOSOMA HAEMATOBIIUM, UNDER CLIMATE CHANGE USING AN INTEGRATED APPROACH**

**Tim Maes**<sup>1</sup>, Julie Verheyen<sup>1</sup>, Tiem van der Deure<sup>2</sup>, Bruno Senghor<sup>3</sup>, Aspire Mudavanhu<sup>4</sup>, Ruben Schols<sup>5</sup>, Anna-Sofie Stensgaard<sup>2</sup>, Filip A.M. Volckaert<sup>1</sup>, Tine Huyse<sup>6</sup>  
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**THE PLANETARY CHILD HEALTH AND ENTERICS OBSERVATORY (PLAN-EO): AN INTERDISCIPLINARY RESEARCH INITIATIVE AND WEB-BASED DASHBOARD FOR MAPPING ENTERIC INFECTIOUS DISEASES AND THEIR RISK FACTORS AND INTERVENTIONS IN LOW- AND MIDDLE-INCOME COUNTRIES**

**Josh Michael Colston**  
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**ADAPTING TO CLIMATE CHANGE IN SUB-SAHARAN AFRICA, ONE MALARIA INTERVENTION AT A TIME**

**Jemima Andriamihamina**<sup>1</sup>, Solofo Razakamiadana<sup>1</sup>, Aboubacar Sadou<sup>2</sup>, Presley Musonda<sup>3</sup>, Colin Quinn<sup>4</sup>, Radina P. Soebiyanto<sup>4</sup>, Ashley Garley<sup>4</sup>  
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**MALARIA MANAGEMENT IN AN ERA OF CLIMATE CHANGE**

**Ravikanthi Rapiti**, Wisam Haddadin  
 Abbott Rapid Diagnostics, Woodmead, South Africa

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**FROM FOOD SECURITY TO PUBLIC HEALTH - HOW CLIMATE INFORMATION CAN BE USED IN EARLY WARNING SYSTEMS AND PREPAREDNESS FOR DISEASE THREATS**

**Tashiana Osborne**<sup>1</sup>, Colin Quinn<sup>2</sup>, Elizabeth Daut<sup>3</sup>, Shaina Craige<sup>2</sup>, Kiersten Johnson<sup>2</sup>, Janine Mitchell<sup>3</sup>, Nicole DeCastro<sup>4</sup>, Omer T. Njajou<sup>4</sup>, Rhiannon T. Gulick<sup>4</sup>  
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**Global Health - Security/Emerging Infection Preparedness, Surveillance and Response(s)**

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**COVID-19 VACCINE BOOSTER DOSE UPTAKE AMONG A COHORT OF HEALTHCARE WORKERS IN BANGLADESH**

**Md Zakiul Hassan**<sup>1</sup>, Ahamed Khairul Basher<sup>1</sup>, Aninda Rahman<sup>2</sup>, Md. Abdul Aleem<sup>1</sup>, Mahmudur Rahman<sup>3</sup>, Fahmida Chowdhury<sup>1</sup>  
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**ADAPTING SUB-NATIONAL PUBLIC HEALTH EMERGENCY MANAGEMENT: THE MBALE REGIONAL EMERGENCY OPERATIONS CENTER EXPERIENCE IN EASTERN UGANDA**

**Isabirye Herbert Kiirya**<sup>1</sup>, Benjamin Fuller<sup>2</sup>, Simon Kyazze<sup>3</sup>, Anita Kisakye<sup>3</sup>, Nabukenya Immaculate<sup>4</sup>, Nanyondo Judith<sup>4</sup>, Makumbi Issa<sup>5</sup>, Kesande Maureen<sup>4</sup>, Tugaineyo Emmanuel<sup>6</sup>, Obbo Stephen<sup>7</sup>, Maiteki Robert<sup>1</sup>, Mohamed Larmode<sup>4</sup>, Otto Emmanuel<sup>8</sup>, Felix Ocom<sup>5</sup>, Henry Bosa Kyobe<sup>9</sup>, Peter Babigumira<sup>4</sup>, Ssekitoleko Richard<sup>10</sup>, Christopher C Moore<sup>2</sup>  
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**AN ASSESSMENT OF RESEARCH, SURVEILLANCE, LABORATORY, AND OUTBREAK RISK MANAGEMENT CAPACITIES FOR NIPAH AND AVIAN INFLUENZA VIRUSES IN BANGLADESH**

**Md Mustafizur Rahman**<sup>1</sup>, Tristan Burgess<sup>2</sup>, Syed Moinuddin Satter<sup>1</sup>, Mohammad Enayet Hossain<sup>1</sup>, Jeffrey C. Mariner<sup>3</sup>, Jonathon D. Gass<sup>3</sup>, Elizabeth Gold<sup>4</sup>, Nadia Ali Rimi<sup>1</sup>, Ausratul Islam<sup>1</sup>  
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**COVID-19 VACCINE ACCEPTABILITY AMONG HEALTH WORKERS IN THE DEMOCRATIC REPUBLIC OF CONGO**

**Kristen Stolka**<sup>1</sup>, Anselme Manyong<sup>2</sup>, **Claire Standley**<sup>3</sup>, Alanna Fogarty<sup>3</sup>, Shanice Fezeu Meyou<sup>1</sup>, Pia MacDonald<sup>1</sup>, Dana Sessoms<sup>1</sup>, Jean de Dieu Kamenga Asiley<sup>2</sup>, Michel Nzaji<sup>2</sup>  
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**NATIONAL AND SUB-NATIONAL AUTHORITIES' DECISION-MAKING PROCESSES DURING THE COVID-19 PANDEMIC: LESSONS FROM NIGERIA**

**Sanjana Mukherjee**<sup>1</sup>, Sumezha Asthana<sup>1</sup>, Winifred S. Ukponu<sup>2</sup>, Adachioma C. Ihueze<sup>2</sup>, Ibrahim B. Gobir<sup>2</sup>, Claire J. Standley<sup>1</sup>, Alexandra L. Phelan<sup>3</sup>  
<sup>1</sup>Georgetown University, Washington, DC, United States, <sup>2</sup>Georgetown University, Abuja, Nigeria, <sup>3</sup>Johns Hopkins University, Baltimore, MD, United States

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**GLOBAL ARBOVIRUS INITIATIVE: TACKLING MOSQUITO BORNE VIRUSES WITH EPIDEMIC AND PANDEMIC POTENTIAL**

**Diana P. Rojas**, Raman Velayudhan, Laurence Cibrelus, Ingrid B. Rabe, Qingxia Zhong, Maria D. Van Kerkhove, Soce Fall, Sylvie Briand  
 World Health Organization, Geneva, Switzerland

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**DESIGN AND STANDARDIZATION OF MOLECULAR SYSTEMS BASED ON CRISPR-CAS TECHNOLOGY FOR THE IDENTIFICATION OF GENES ASSOCIATED WITH ANTIBIOTIC RESISTANCE**

**Maryhory Vargas Reyes**<sup>1</sup>, Roberto Alcántara<sup>1</sup>, Mónica Pajuelo<sup>2</sup>, Pohl Milón<sup>1</sup>  
<sup>1</sup>Peruvian University of Applied Sciences, UPC, Lima, Peru, <sup>2</sup>Peruvian University Cayetano Heredia, UPCH, Lima, Peru

Saturday  
 October 21

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### EFFECTS OF INTERPREGNANCY INTERVAL AND MATERNAL AGE ON GESTATIONAL DIABETES MELLITUS: FINDINGS FROM CHAMPS PREGNANCY SURVEILLANCE IN BANGLADESH

**Shovo Debnath**<sup>1</sup>, Emily S. Gurley<sup>2</sup>, Atique Iqbal Chowdhury<sup>1</sup>, Kazi Munisul Islam<sup>1</sup>, Mohammad Sabbir Ahmed<sup>1</sup>, Rajib Biswas<sup>1</sup>, Afruna Rahman<sup>1</sup>, Mohammad Abdus Salam<sup>1</sup>, Abu Mohammad Saleheen<sup>1</sup>, Mamunur Rashid<sup>1</sup>, Qazi Sadeq-ur Rahman<sup>1</sup>, Sanwarul Bari<sup>1</sup>, Shams El Arifeen<sup>1</sup>, Mohammad Zahid Hossain<sup>1</sup>  
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### USE OF STOCHASTIC BRANCHING PROCESSES TO ESTIMATE THE EMERGENCE OF MPOX IN NORTH CAROLINA

Meddly L. Santolalla<sup>1</sup>, Andres G. Lescano<sup>1</sup>, John W. Sanders<sup>2</sup>, **Michael E. DeWitt**<sup>2</sup>  
<sup>1</sup>Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>Wake Forest University School of Medicine, Winston-Salem, NC, United States

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### A FRAMEWORK FOR PATHOGEN SELECTION USING TAQMAN ARRAY CARDS FOR SURVEILLANCE OF ACUTE FEBRILE ILLNESS IN NIGERIA

**Lauren Courtney**, Claire Quiner, Jean Kim, Sarah Hatcher, Emmanuel Oga  
 RTI International, Durham, NC, United States

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### ESTABLISHING THE SPATIAL DISTRIBUTION OF CIRCULATING ARBOVIRUSES IN URBAN AND RURAL LIBERIA

**Albert To**<sup>1</sup>, Varney M. Kamara<sup>1</sup>, Davidetta M. Tekah<sup>2</sup>, Mohammed A. Jalloh<sup>2</sup>, Salematu B. Kamara<sup>2</sup>, Teri Ann S. Wong<sup>1</sup>, Aquena H. Ball<sup>1</sup>, Ludwig Mayerlen<sup>1</sup>, Bode Shobayo<sup>3</sup>, Julius Teahon<sup>3</sup>, Brien K. Haun<sup>1</sup>, Wei-Kung Wang<sup>1</sup>, John M. Berestecky<sup>4</sup>, Peter S. Humphrey<sup>2</sup>, Vivek R. Nerurkar<sup>1</sup>, Axel T. Lehrer<sup>1</sup>  
<sup>1</sup>University of Hawaii at Manoa, Honolulu, HI, United States, <sup>2</sup>Department of Biological Sciences, Medical Science TJR Faulkner College of Science and Technology, University of Liberia, Fendall, Liberia, <sup>3</sup>National Public Health Institute of Liberia, Harbel, Liberia

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### EVALUATION OF ENVIRONMENTAL POLIO SURVEILLANCE SYSTEM IN GREATER ACCRA REGION, GHANA, 2021

**Eunice Baiden Laryea**<sup>1</sup>, Joseph A. Frimpong<sup>1</sup>, Doreen Danso<sup>2</sup>, Dennis O. Laryea<sup>3</sup>, Paul Dsani-Aidoo<sup>1</sup>  
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### ASSESSING REALIZED AND POTENTIAL NICHE OF PATHOGENS OF PUBLIC HEALTH IMPORTANCE TO DESIGN SURVEILLANCE TOOL FOR ACUTE FEBRILE ILLNESS IN NIGERIA

**Claire A. A Quiner**<sup>1</sup>, Lauren Courtney<sup>2</sup>, Jean Kim<sup>2</sup>, Sarah Hatcher<sup>2</sup>, Emmanuel Oga<sup>2</sup>  
<sup>1</sup>RTI International, Raleigh, NC, United States, <sup>2</sup>RTI International, Durham, NC, United States

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### COMMUNITY-BASED SURVEILLANCE (CBS) FOR INFECTIOUS DISEASES AMONG DISPLACED POPULATIONS IN IRAQ: EXPANDING BEYOND THE COVID-19 RESPONSE

**Caitlin M. Wolfe**, Lara Abou Ammar, Mohammed N. Slebei, Nashwan Saour, Karwan Khuder, Farrah Ali, Tahsin Aziz, Catharina Chipman, Loubna Al Batlouni, Nellie Ghusayni  
 International Organization for Migration, Iraq Mission, Erbil, Iraq

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### SCALABLE DISTRIBUTED MANUFACTURING OF POINT-OF-CARE MOLECULAR DIAGNOSTICS IN THE GLOBAL SOUTH

**Hope Tianfeng Leng**, Anesta Kothari, Adam G. Larson, Abby Cummings, Smiti Mittal, Manu Prakash  
 Stanford University, Stanford, CA, United States

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### SOCIODEMOGRAPHIC, CLINICAL & PROGRESSIVE PROFILE OF CHILDREN FROM 06 TO 59 MONTHS HOSPITALIZED FOR SEVERE ACUTE MALNUTRITION AT THE THE REGIONAL HOSPITAL OF BOUNDIALI.FROM JANUARY TO SEPTEMBER 2022

**Kouyaté Yamourougbe**  
 DRSHPMU BAGOUÉ, Boundiali, Côte D'Ivoire

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### PREVALENCE AND FACTORS ASSOCIATED WITH MATERNAL AND NEONATAL SEPSIS IN SUB-SAHARAN AFRICA, A SYSTEMATIC REVIEW AND META-ANALYSIS

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### IMPACT OF COVID-19 INFECTION ON PREGNANCY AND NEONATAL OUTCOMES EVIDENCE FROM A SUB-COHORT OF PREGNANT WOMEN FROM THE AMANHI-COVID-19 STUDY

**Usma Mehmood**, Nadia Ansari, Farah Khalid, Fariha Shaheen, Shahiryar Khan, Aneeta Hotwani, Kehkashan Begum, Amina Barkat, Imran Nisar, Fyezah Jehan Aga Khan University, Karachi, Pakistan

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### DEVELOPING LABORATORY INFRASTRUCTURE AND TECHNICAL CAPACITY TO ADDRESS INFECTIOUS DISEASES IN EQUATORIAL GUINEA

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### USING SOCIAL LISTENING METHODS TO UNDERSTAND COVID-19 VACCINATION IN THE DEMOCRATIC REPUBLIC OF CONGO

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**GLOBAL HEALTH CHALLENGES OF INFLUENZA SENTINEL SURVEILLANCE COLLABORATION NETWORK**

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**COMPARISON OF PLAQUE REDUCTION NEUTRALIZATION TEST (PRNT) AND MULTIPLEX ARBOVIRUS IGG DETECTION TEST FOR DETECTION AND DIFFERENTIATION OF IGG RESPONSE TO ZIKV AND DENV**

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**US SURVEILLANCE OF NEGLECTED TROPICAL DISEASES - A MISSED OPPORTUNITY [CC1]OR NEGLECTED TROPICAL DISEASES**

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**SCALE UP FOR IMPACT IMPROVING COVID 19 ANTIGEN RAPID DIAGNOSTIC TESTING IN NIGERIA**

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**FILLING THE INFORMATION GAP: FIND MPOX TEST DIRECTORY AND PERFORMANCE EVALUATIONS**

**Devy M. Emperador**<sup>1</sup>, Victoria Aroworade<sup>1</sup>, Anna Mantsoki<sup>1</sup>, Camille Escadafal<sup>1</sup>, Laura Mazzola<sup>1</sup>, Audrey Albertini<sup>1</sup>, Juvenal Nkeramahame<sup>1</sup>, Pierre Olliaro<sup>2</sup>, Emmanuel Nakoune<sup>3</sup>, Hugo Kavunga-Membo<sup>4</sup>, Isabella Eckerle<sup>5</sup>, Jake Dunning<sup>2</sup>, Kavi Ramjeet<sup>1</sup>, Daniel Bausch<sup>1</sup>, Aurélie Vessière<sup>1</sup>

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**Arthropods/Entomology - Other**

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**PRELIMINARY INVESTIGATIONS OF THE MICROBIAL INTERACTIONS IN THE GUT OF POTENTIAL VECTORS OF LEISHMANIA CHANCEI IN GHANA**

**Priscilla Abena Ankamaa Opere**<sup>1</sup>, Fidelis Kojo Awotwe<sup>1</sup>, Evans Thompson<sup>1</sup>, Mary E. Wilson<sup>2</sup>, Godwin Kwakye-Nuako<sup>3</sup>

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**SAND FLY SURVEILLANCE IN LEISHMANIASIS ENDEMIC AREAS IN CENTRAL HONDURAS**

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**TOWARDS A HOST-TARGETED INSECTICIDE STRATEGY: TRYPANOSOMA CRUZI INFECTION AND HOST FEEDING PATTERNS OF TRIATOMA DIMIDIATA IN A REGION WITH PERSISTENT CHAGAS DISEASE**

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**ASSESSING KNOWLEDGE ABOUT TICKS AND TICK BORNE DISEASES AMONG INDIANA HEALTHCARE PROVIDERS AND EXTENSION PROFESSIONALS**

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**TICK AND INSECT CELL LINES FROM THE TICK CELL BIOBANK FACILITATE ISOLATION OF WOLBACHIA AND OTHER OBLIGATE INTRACELLULAR BACTERIA ORIGINATING FROM MULTIPLE VECTOR SPECIES**

Lesley Bell-Sakyi, Jing J. Khoo, Catherine S. Hartley, Alistair C. Darby, **Ben L. Makepeace**

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**IMPROVING DISTRIBUTION MODELS OF SPARSELY DOCUMENTED DISEASE VECTORS BY INCORPORATING INFORMATION ON RELATED SPECIES VIA JOINT MODELING**

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**ANALYSIS OF BLACK FLY ENTOMOLOGICAL SURVEILLANCE FOR ONCHOCERCIASIS ELIMINATION IN SEVEN NIGERIAN STATES**

**Jenna E. Coalson**<sup>1</sup>, Emeka Makata<sup>2</sup>, Nseobong Akpan<sup>2</sup>, Emmanuel Miri<sup>3</sup>, Emily Griswold<sup>1</sup>, Lindsay Rakers<sup>1</sup>, Emmanuel Emukah<sup>3</sup>, Abel Eigege<sup>3</sup>, Cephas Iyonzughul<sup>3</sup>, Adamu Sallau<sup>3</sup>, Andrew Obasi<sup>3</sup>, Njoku Chidiebere<sup>3</sup>, Gregory S. Noland<sup>1</sup>, Frank O. Richards, Jr.<sup>1</sup>

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**EFFICACY OF A PERSONAL INSECT REPELLENT KIT PERIMETER CONFIGURATION AGAINST IXODES SCAPULARIS FEMALE TICKS IN AN ENCLOSED PEET GRADY-STYLE CHAMBER**

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**ADAPTING VECTOR SURVEILLANCE SURVEYS USING BAYESIAN EXPERIMENTAL DESIGN: AN APPLICATION TO AN ONGOING TICK MONITORING PROGRAM IN THE SOUTHEASTERN UNITED STATES**

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**INDOOR RESIDUAL SPRAYING HAS REDUCED SANDFLY ABUNDANCE AND INCIDENCE OF VISCERAL LEISHMANIASIS IN THE INDIAN SUB-CONTINENT**

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**DISTRIBUTION OF FRESHWATER SNAILS VECTORS FOR THE TRANSMISSION OF URBAN SCHISTOSOMIASIS IN THE ABUJA, FEDERAL CAPITAL TERRITORY, ABUJA, NIGERIA**

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**Mosquitoes - Biology, Physiology and Immunity**

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**CLIP RNAI SCREEN: UNVEILING THE PROTEASE NETWORK THAT REGULATES HUMORAL IMMUNITY IN ANOPHELES GAMBIAE**

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**IMPACT OF ARBOVIRUS INFECTION ON THE HOST-SEEKING BEHAVIOUR OF Aedes Aegypti MOSQUITOES**

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**METATRANSCRIPTOMIC APPROACH TO CHARACTERIZE MICROBIOTA AND BLOODMEALS IN ANOPHELES DARLINGI FROM COLOMBIA**

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**CAN THE ANOPHELES FUNESTUS FEEDING RATE IMPROVE ON AN ARTIFICIAL MEMBRANE FEEDING SYSTEM?**

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**REVEALING FUNCTIONS OF HEMOCYTES AFFECTING PLASMODIUM FALCIPARUM INFECTION IN ANOPHELES GAMBIAE**

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**EFFECT OF SPERMATHECAL PROTEINS ON SPERM SURVIVAL AND FUNCTION IN THE YELLOW FEVER MOSQUITO Aedes Aegypti**

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**Thiago Luiz Alves e Silva**, Cindi Schwartz, Jose Marcos Chaves Ribeiro, Joel Vega-Rodriguez

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**ANALYSIS OF THE GENITALIA ROTATION IN THE MALE MOSQUITOES Culex pipiens**

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**IDENTIFICATION OF METABOLOMIC PROFILE OF MOSQUITOES ANOPHELES SPECIES DIET BY ULTRA HIGH PERFORMANCE LIQUID CHROMATOGRAPHY MASS SPECTROMETRY TECHNIQUE IN LIMA PERU**

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### DETERMINANTS OF *Aedes aegypti* & *Culex* SPECIES LANDING RATES IN NORTHERN ESMERALDAS PROVINCE, ECUADOR: HUMAN LANDING CATCH STUDY JUNE 2021 - JULY 2022

Ian A. Pshea-Smith<sup>1</sup>, Patricio Ponce<sup>2</sup>, Varsovia Cevallos<sup>2</sup>, Andrés Carrasco<sup>2</sup>, Amy C. Morrison<sup>3</sup>, Josefina Coloma<sup>4</sup>, Joseph N. S. Eisenberg<sup>1</sup>  
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### MALARIA VECTOR BIONOMICS AND PHENOTYPIC RESISTANCE STATUS TO INSECTICIDES USED IN VECTOR CONTROL IN NDOLA DISTRICT, ZAMBIA

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### A DIGITAL QUESTION-BASED ENTOMOLOGICAL SURVEILLANCE PLANNING TOOL INCREASES KNOWLEDGE ACQUISITION AND SELF-EFFICACY IN USERS

Steven Gowelo<sup>1</sup>, Charlotte Hemingway<sup>2</sup>, Edward Thomsen<sup>3</sup>, Mercy Opiyo<sup>1</sup>, Elodie Vajda<sup>1</sup>, Baltazar Candrinho<sup>4</sup>, Themba Mzilahowa<sup>5</sup>, Endalamaw Gadisa<sup>6</sup>, Bobby Farmer<sup>7</sup>, Michael Coleman<sup>8</sup>, Allison Tartasky<sup>1</sup>, Neil F. Lobo<sup>9</sup>  
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### FIRST DETECTION OF *Anopheles stephensi* IN ACCRA, GHANA, USING MOLECULAR SURVEILLANCE

Yaw Asare Afrane<sup>1</sup>, Abdul Rahim Mohammed<sup>1</sup>, Anisa Abdulai<sup>1</sup>, Yaw Akuamoah Boateng<sup>1</sup>, Christopher Mfum Owusu-Asenso<sup>1</sup>, Isaac Kwame Sraku<sup>1</sup>, Stephina A. Yanney<sup>1</sup>, Keziah Malm<sup>2</sup>, Neil F. Lobo<sup>3</sup>  
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### *ANOPHELES STEPHENSI* - SIGNIFICANCE OF ITS UBIQUITOUS PRESENCE IN URBAN AND RURAL SETTINGS; IMPACT ON VECTOR CONTROL AND MALARIA ELIMINATION IN INDIA

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Maria Anice Mureb Sallum<sup>1</sup>, Tatiane M. P. Oliveira<sup>1</sup>, Sara Bickersmith<sup>2</sup>, Jannet E. Conn<sup>2</sup>  
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Elias Niyituma<sup>1</sup>, Dunia Munyakanage<sup>2</sup>, Beatus Cyubahiro<sup>2</sup>, Xavier Misago<sup>2</sup>, Phocas Mazimpaka<sup>3</sup>, Kaendi Munguti<sup>3</sup>, Yemane Yihdego<sup>4</sup>, Aimable Mbituyumuremyi<sup>2</sup>, Emmanuel Hakizimana<sup>2</sup>  
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### ASSOCIATION BETWEEN LANDCOVER CHARACTERISTICS AND AQUATIC HABITATS OF THE MALARIA VECTORS, *ANOPHELES FUNESTUS* DURING THE DRY SEASON

Najat Feruzi Kahamba<sup>1</sup>, Fredros O. Okumu<sup>1</sup>, Mohammed O. Jumanne<sup>1</sup>, Betwel J. Msugupakulya<sup>1</sup>, Francesco Baldini<sup>2</sup>, Heather Ferguson<sup>2</sup>, Luca Neill<sup>2</sup>  
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### THE IMPACT OF POLARIZED LIGHT & PHYSICAL-CHEMICAL WATER BODIES PARAMETERS ON OVIPOSITION SITE SELECTION IN *ANOPHELINE* MOSQUITOES

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Justin Kumala<sup>1</sup>, Rob McCann<sup>2</sup>, Mark L. Wilson<sup>3</sup>, Themba Mzilahowa<sup>1</sup>, Don P. Mathanga<sup>1</sup>, Charles Mangani<sup>4</sup>  
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### NON-RESIDENTIAL SPACES AROUND HOUSES ARE IMPORTANT SOURCES OF *Ae. aegypti* MOSQUITO VECTORS IN WESTERN AND COASTAL KENYA

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### ENTOMOLOGICAL SURVEILLANCE AND COMMUNITY KNOWLEDGE ON MOSQUITOES AND DENGUE RISK IN THE GALAPAGOS ISLANDS, ECUADOR

Renato Leon<sup>1</sup>, Carolina Molina<sup>1</sup>, Leonardo Ortega<sup>2</sup>, William F. Waters<sup>1</sup>  
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**6640****DEFINING THE CONTRIBUTION OF COMPLEMENTAL MALARIA VECTOR *ANOPHELES COUSTANI* S.L. TO *PLASMODIUM FALCIPARUM* SPOOROZITE INFECTION IN A HIGHLY ENDEMIC REGION IN UGANDA.****Henry D. Maweje**, Brian K. Leetakubulidde, Maxwell Kilama, Francis Nyangabakye, Moses R. Kanya*Infectious Diseases Research Collaboration, Kampala, Uganda***6641****CHARACTERIZATION OF MOSQUITO BITE EXPOSURE IN HUMAN USING NOVEL BITE DIARY APP AS A NEW PARADIGM LINKING SOCIO-ENVIRONMENT AND MOSQUITO-BORNE DISEASE TRANSMISSION****Panpim Thongsripong***Florida Medical Entomology Laboratory, Institute of Food and Agricultural Sciences, University of Florida, Vero Beach, FL, United States***6642****DEVELOPMENT OF SEMI-AUTOMATED SYSTEMS TO GENERATE MOSQUITOES FOR VECTOR-BORNE DISEASE RESEARCH****Cecilia Kalthoff**, Zephyr Pitre, Tess Seltzer, Maria Benitez-Cortez, Conrad Yee, Elizabeth K.K. Glennon, Alexis Kaushansky*Center for Global Infectious Disease Research, Seattle Children's Research Institute, Seattle, WA, United States***6643****VECTOR PROFILES AND RISK FACTORS AMONG EARLY EVENING VERSUS OVERNIGHT MOSQUITO COLLECTIONS IN THE HIGH MALARIA TRANSMISSION SETTING OF NCHELENGE DISTRICT, ZAMBIA****Hannah L. Markle**<sup>1</sup>, Mary E. Gebhardt<sup>1</sup>, Erin E. Barnett<sup>1</sup>, David Mbewe<sup>2</sup>, Francis K. Mulenga<sup>2</sup>, James S. Lupiya<sup>2</sup>, Mbanga Muleba<sup>2</sup>, Mike Chaponda<sup>2</sup>, William J. Moss<sup>1</sup>, Jennifer C. Stevenson<sup>3</sup>, Douglas E. Norris<sup>1</sup><sup>1</sup>*Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States*, <sup>2</sup>*Tropical Diseases Research Centre, Ndola, Zambia*, <sup>3</sup>*Macha Research Trust, Choma, Zambia***6644****ANTIBODY RESPONSE TO Aedes spp. MOSQUITO SALIVARY PROTEINS AS A MARKER FOR EXPOSURE: A SYSTEMATIC REVIEW AND POOLED ANALYSIS****Veronique Etienne**<sup>1</sup>, Adriana Gallagher<sup>1</sup>, Rebecca C. Christofferson<sup>2</sup>, Michael K. McCracken<sup>3</sup>, Derek A.T. Cummings<sup>1</sup>, Maureen T. Long<sup>1</sup><sup>1</sup>*University of Florida, Gainesville, FL, United States*, <sup>2</sup>*Louisiana State University, Baton Rouge, LA, United States*, <sup>3</sup>*Walter Reed Army Institute of Research, Silver Spring, MD, United States***6645****INVESTIGATION OF MEDICALLY IMPORTANT ARBOVIRUSES AND INSECT-SPECIFIC VIRUSES IN THE SYLVATIC AND URBAN VECTORS OF YELLOW FEVER VIRUS COLLECTED IN THE BRAZILIAN AMAZON****Victoria Bernardi**<sup>1</sup>, Igor Teixeira<sup>1</sup>, Adam Hendy<sup>2</sup>, Joao Marques<sup>3</sup>, Maria Paula Mourão<sup>4</sup>, Marcus Vinicius Lacerda<sup>4</sup>, Kathryn Hanley<sup>5</sup>, Nikos Vasilakis<sup>2</sup>, **Livia Sacchetto**<sup>1</sup>, Mauricio Nogueira<sup>1</sup><sup>1</sup>*Faculdade de Medicina de Sao Jose do Rio Preto, Sao Jose do Rio Preto, Brazil*, <sup>2</sup>*The University of Texas Medical Branch, Galveston, TX, United States*, <sup>3</sup>*Universidade Federal de Minas Gerais, Belo Horizonte, Brazil*, <sup>4</sup>*Fundacao de Medicina Tropical Dr Heitor Vieira Dourado, Manaus, Brazil*, <sup>5</sup>*New Mexico State University, Las Cruces, NM, United States***6646****HUMAN BEHAVIORAL DETERMINANTS OF RISK OF EXPOSURE TO *ANOPHELES* AMONG SEASONAL MIGRANT WORKERS AND RESIDENT POPULATIONS IN LOWLANDS AND THE GENERAL POPULATION IN THE HIGHLANDS, NORTHWEST ETHIOPIA****Endashaw Esayas**<sup>1</sup>, Muluken Assefa<sup>1</sup>, Adam Bennett<sup>2</sup>, Asefaw Getachew<sup>3</sup>, Henry Ntuku<sup>4</sup>, Temesgen Ashine<sup>1</sup>, Lemu Golassa<sup>1</sup>, Neil Lobo<sup>5</sup>, Endalamaw Gadisa<sup>1</sup><sup>1</sup>*Armauer Hansen Research Institute, Addis Ababa, Ethiopia*, <sup>2</sup>*PATH, Seattle, WA, United States*, <sup>3</sup>*PATH, Addis Ababa, Ethiopia*, <sup>4</sup>*PATH, Geneva, Switzerland*, <sup>5</sup>*University of Notre Dame, South Bend, IN, United States***6647****CLOSE-KIN MARK-RECAPTURE METHODS TO ESTIMATE DEMOGRAPHIC AND DISPERSAL PARAMETERS OF MOSQUITOES****John M. Marshall**<sup>1</sup>, Yogita Sharma<sup>2</sup>, Jared B. Bennett<sup>1</sup>, Shuyi Yang<sup>1</sup>, Igor Filipović<sup>3</sup>, Gordana Rašić<sup>3</sup><sup>1</sup>*University of California, Berkeley, Berkeley, CA, United States*, <sup>2</sup>*University of Victoria, Victoria, BC, Canada*, <sup>3</sup>*QIMR Berghofer Medical Research Institute, Brisbane, Australia***6648****ADVANCEMENTS OF ARTIFICIAL INTELLIGENCE (AI) IMAGE RECOGNITION FOR USE IN VECTOR SURVEILLANCE OPERATIONS****Tristan Ford**, Sameerah Talafha, Thomas Jenkins, Roy Faiman, Jewell Brey, Sanket Padmanabhan, Autumn Goodwin*Vectech, Baltimore, MD, United States*

## Mosquitoes - Epidemiology and Vector Control

**6649****EVALUATION OF MYRISTICA FRAGRANS ESSENTIAL OIL AS A POTENTIAL BIOPESTICIDE FOR THE CONTROL OF Aedes MOSQUITOES IN JAMAICA****Mario Akeeno Joemaine Golding**, Nadia K. Khouri, Simone L. Sandiford*University of the West Indies, Mona, Kingston, Jamaica***6650****INTERIM EFFICACY REPORT OF ECO BIOTRAPS IN DHARAVI, MUMBAI, INDIA****Susanta Kumar Ghosh**<sup>1</sup>, Mrigendra Pal Singh<sup>2</sup>, Prasad Phadke<sup>3</sup>, Nitin Khope<sup>3</sup>, Chetan Vijay Choubal<sup>4</sup><sup>1</sup>*ICMR-National Institute of Malaria Research, Bangalore, India*, <sup>2</sup>*ICMR-National Institute of Malaria Research, New Delhi, India*, <sup>3</sup>*Ecobio Consulting Private Limited, Ahmedabad, India*, <sup>4</sup>*Brihanmumbai Municipal Corporation, Mumbai, India*

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**EVALUATION OF THE SYSTEMIC INSECTICIDAL EFFECTS OF IVERMECTIN TREATED CATTLE ON Aedes Aegypti, VECTOR OF ARBOVIRUSES**

**Sié Hermann Poda**<sup>1</sup>, Abdoul Malik Bandaogo<sup>2</sup>, Lamidi ZELA<sup>3</sup>, Ali Nourou Ramzi Kambou<sup>2</sup>, Angélique Porciani<sup>3</sup>, Anne-Laure Barbe<sup>4</sup>, Sophie Le Lamer-Déchamps<sup>4</sup>, Thibaut Deramoudt<sup>4</sup>, Christophe Roberge<sup>4</sup>, Ernest Salou<sup>5</sup>, Prudenciène Agboho<sup>2</sup>, André B. Sagna<sup>6</sup>, Fabrice A. Somé<sup>7</sup>, Nicolas Moiroux<sup>3</sup>, Cédric Pennetier<sup>6</sup>, Roch K. Dabiré<sup>7</sup>, Karine Mouline<sup>3</sup>

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**UNLEASHING NATURE'S SECRET WEAPON: TACKLING MOSQUITO MENACE WITH STREPTOMYCES SP. KSFT103**

**Amelia Zheng Hua Yap**, Pouya Hassandarvish, Van Lun Low  
University of Malaya, Kuala Lumpur, Malaysia

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**METHODS USED FOR MALARIA AND MOSQUITO CONTROL AT THE HOUSEHOLD LEVEL IN TANZANIA. THE SCHOOL MALARIA AND NUTRITION SURVEY**

**Mbaraka John Remiji**<sup>1</sup>, Tajiri Laizer<sup>1</sup>, Samson Kiware<sup>1</sup>, Frank Chacky<sup>2</sup>  
<sup>1</sup>Ifakara Health Institute, Dar es Salaam, United Republic of Tanzania, <sup>2</sup>Ministry of Health, National Malaria Control Programme, Dodoma, United Republic of Tanzania

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**IMPACT OF CLIMATE VARIABILITY ON VECTOR-BORNE DISEASES (MALARIA)**

**Christel Muteba Tshiteya**  
PNLP DRC, Kinshasa, Democratic Republic of the Congo

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**SPATIAL AND TEMPORAL DISTRIBUTION OF ANOPHELES SPECIES ACROSS THREE DIFFERENT ECOLOGICAL ZONES IN GHANA**

Terrel Sanders, **Shirley Nimo-Paintsil**  
US Naval Medical Research Unit No. 3, Bethesda, MD, United States

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**RELEVANT DENGUE TRANSMISSION RISK IN NON-HOUSEHOLD ENVIRONMENTS IN KENYAN CITIES CAN LEAD US TO RETHINK THE HOUSEHOLD AS THE FOCUS OF VECTOR CONTROL ACTIVITIES**

**Victor H. Peña-García**<sup>1</sup>, Francis M. Mutuku<sup>2</sup>, Bryson A. Ndenga<sup>3</sup>, Joel O. Mbakaya<sup>3</sup>, Samwel O. Ndire<sup>3</sup>, Paul S. Mutuku<sup>2</sup>, Said L. Malumbo<sup>2</sup>, Jason Andrews<sup>1</sup>, Erin Mordecai<sup>1</sup>, Desiree LaBeaud<sup>1</sup>

<sup>1</sup>Stanford University, Stanford, CA, United States, <sup>2</sup>Technical University of Mombasa, Diani, Kenya, <sup>3</sup>Kenya Medical Research Institute, Kisumu, Kenya

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**MEASURING THE LONG-TERM PUBLIC HEALTH IMPACT AFTER CITY-WIDE WMEI DEPLOYMENTS IN YOGYAKARTA**

**Citra Indriani**  
Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Sleman, Indonesia

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**MODELING THE EFFECTIVENESS OF ATTRACTIVE TARGETED SUGAR BAITS IN REDUCING CLINICAL MALARIA**

Lars Kamber, Aurelien Cavelan, Emma Fairbanks, Melissa Penny, **Nakul Chitnis**  
Swiss Tropical and Public Health Institute, Allschwil, Switzerland

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**INSECTICIDE TREATED RESTING STATIONS REDUCE PARITY RATE OF THE ENZOOTIC MOSQUITO VECTOR OF EEE VIRUS, CULISETA MELANURA**

**Edward D. Walker**, John B. Keven  
Michigan State University, East Lansing, MI, United States

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**IN WITH THE NEW OUT WITH THE OLD: INITIAL OBSERVATIONS OF THE EXTENT OF LONG-TERM USE OF OLD LLIN DESPITE THE AVAILABILITY OF NEW NETS DURING THE 2020 MASS CAMPAIGN IN BENIN**

**Martin Akogbéto**<sup>1</sup>, Bruno Akinro<sup>1</sup>, Saïd Chitou<sup>1</sup>, Moustapha Idrissou Souler<sup>1</sup>, Albert S. Salako<sup>1</sup>, Kéfilath Badirou<sup>1</sup>, Ramziath Agbanrin<sup>1</sup>, André Sominahouin<sup>1</sup>, Rock Aïkpon<sup>2</sup>, Cyriaque Affoukou<sup>2</sup>, Virgile Gnanguenon<sup>3</sup>, Patrick Condo<sup>3</sup>, Ahmed S. Hassani<sup>3</sup>, Daniel Impoinvil<sup>4</sup>, Germain G. Padonou<sup>1</sup>  
<sup>1</sup>CREC, Cotonou, Benin, <sup>2</sup>NMCP, Cotonou, Benin, <sup>3</sup>USAID, Cotonou, Benin, <sup>4</sup>CDC, Atlanta, GA, United States

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**INTEGRATED VECTOR MANAGEMENT IMPLEMENTED TO REDUCE DENV-1 POSITIVE CASES IN HUMANS AND MOSQUITOES IN MAYAGÜEZ, PUERTO RICO, 2022**

**Nexilianne Borrero**, Raiza Alvarado, Luis Doel Santiago, Joanelis Medina, Cristhian R. Sánchez-Rolón, Verónica Rodríguez-Quinonez, Jania P. Garcia, Luis Marrero, Tatiana Ortiz-Ortiz, Julieanne Miranda-Bermúdez, Grayson Brown  
Puerto Rico Vector Control Unit, Ponce, PR, United States

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**THE SPREAD OF CHIKUNGUNYA VECTORS: A POTENTIAL THREAT TO GLOBAL HEALTH**

Giorgia Tiozzo<sup>1</sup>, Amber Tiemes<sup>1</sup>, Gerard T. Vondeling<sup>2</sup>, **Adrianne de Roo**<sup>2</sup>  
<sup>1</sup>Department of Health Sciences, University Medical Center Groningen, Groningen, Netherlands, <sup>2</sup>Valneva, Vienna, Austria

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**HOST PREFERENCES OF ANOPHELES GAMBIAE S.L AND THEIR IMPLICATIONS FOR MALARIA TRANSMISSION IN FOUR (4) INDOOR RESIDUAL SPRAYING INTERVENTION DISTRICTS IN GHANA**

**Kwame Desewu**, Nicholas Ato Egyir, Gilbert Dossah, Grace Opong, Francis Ofori Amankwah, Joseph Mwinikubu Vulgate, Agyei Kumi, Matilda Kaabo, Ignatius Williams, Samuel Asiedu  
Anglogold Ashanti Malaria Control (AGAMa), Obuasi, Ghana

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**OPTIMAL CONTROL OF DENGUE WITH EXISTING AND FORTHCOMING INTERVENTIONS**

**Alex Perkins**<sup>1</sup>, Hannah Clapham<sup>2</sup>, Oliver Brady<sup>3</sup>  
<sup>1</sup>University of Notre Dame, Notre Dame, IN, United States, <sup>2</sup>National University of Singapore, Singapore, Singapore, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom

Saturday  
October 21

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### CHANGING ASSUMPTIONS ABOUT MOSQUITO HABITAT AVAILABILITY DRIVE VARIATION IN SEASONAL DENGUE DYNAMICS WHEN BEHAVIORAL CONTROL IS PRESENT

Marya L. Poterek<sup>1</sup>, Mauricio Santos-Vega<sup>2</sup>, T. Alex Perkins<sup>1</sup>

<sup>1</sup>University of Notre Dame, Notre Dame, IN, United States, <sup>2</sup>Universidad de los Andes, Bogotá, Colombia

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### INFLUENCE OF THERMAL AND INSECTICIDE GRADIENTS ON IMMATURE Aedes aegypti PERFORMANCE

Patrick M. Heffernan, Jason Rohr

University of Notre Dame, Notre Dame, IN, United States

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### FROM THE LAB TO THE FIELD: LONG-DISTANCE TRANSPORT OF STERILE MALE MOSQUITOES

Hamidou Maiga<sup>1</sup>, Mame Thierno Bakhoum<sup>2</sup>, Nanwintoum Séverin Bimbilé Somda<sup>3</sup>, Wadaka Mamai<sup>4</sup>, Jeremy Bouyer<sup>5</sup>

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### BACTERIAL COMMUNITIES ASSOCIATED WITH ANOPHELES GAMBIAE LARVAL HABITATS IN SOUTHERN GHANA.

Akua Obeng Forson<sup>1</sup>, Isaac Kwame Sraqu<sup>1</sup>, Idan Baah Banson<sup>2</sup>, Kwabena Obeng Duedu<sup>3</sup>, Yaw Asare Afrane<sup>1</sup>

<sup>1</sup>Centre for Vector-borne Diseases Research, Department of Medical Microbiology, University of Ghana Medical School, University of Ghana, Korle-Bu, Accra, Ghana, <sup>2</sup>Department of Biomedical Sciences, University of Health and Allied Sciences, Ho, Ghana, <sup>3</sup>Department of Biomedical Sciences, University of Health and Allied Sciences, Ho, Ghana

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### A VOLATILE PYRETHROID SPATIAL REPELLENT (VPSR) USING TRANSLUTHRIN AS AN INTERVENTION FOR REDUCING OUTDOOR MALARIA TRANSMISSION

Tim Burton<sup>1</sup>, Limonty Simubali<sup>2</sup>, Lewis Kabinga<sup>2</sup>, Lepa Syahrani<sup>3</sup>, Dendi Permana<sup>3</sup>, Ismael Rozi<sup>3</sup>, Jennifer Stevenson<sup>2</sup>, Monicah Mburu<sup>2</sup>, Edgar Simulundu<sup>2</sup>, Puji Asih<sup>3</sup>, Din Syafruddin<sup>3</sup>, Neil Lobo<sup>1</sup>

<sup>1</sup>University of Notre Dame, Notre Dame, IN, United States, <sup>2</sup>Macha Research Trust, Macha, Zambia, <sup>3</sup>Eijkman Institute, Jakarta, Indonesia

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### EVIDENCE-BASED DESIGN OF ENHANCED VECTOR SURVEILLANCE FOR LARVAL SOURCE MANAGEMENT ON BIKO ISLAND, EQUATORIAL GUINEA

David Galick<sup>1</sup>, Carlos A. Guerra<sup>2</sup>, Wolfgang Ekoko Eyisap<sup>1</sup>, Olivier Tresor Donfack<sup>1</sup>, Michael Von Fricken<sup>3</sup>, Nestor Rivas Bela<sup>1</sup>, Wonder P. Phiri<sup>1</sup>, David L. Smith<sup>4</sup>, Guillermo A. Garcia<sup>2</sup>

<sup>1</sup>MCD Global Health, Malabo, Equatorial Guinea, <sup>2</sup>MCD Global Health, Silver Spring, MD, United States, <sup>3</sup>George Mason University, Fairfax, VA, United States, <sup>4</sup>Institute of Health Metrics and Evaluation, University of Washington, Seattle, WA, United States

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### COMBINING A SCHOOL-BASED AND COMMUNITY-BASED EDUCATIONAL INTERVENTION IN URBAN KENYA FOR LARVAL SOURCE REDUCTION

Prathik Kalva<sup>1</sup>, Jenna E. Forsyth<sup>2</sup>, Arielle Kempinsky<sup>1</sup>, Helen O. Pitchik<sup>3</sup>, Catharina J. Alberts<sup>1</sup>, Francis M. Mutuku<sup>4</sup>, Lydia Kibe<sup>5</sup>, Nicole M. Ardoin<sup>2</sup>, Desiree A. LaBeaud<sup>1</sup>

<sup>1</sup>Stanford University School of Medicine, Stanford, CA, United States, <sup>2</sup>Stanford Woods

Institute for the Environment, Stanford, CA, United States, <sup>3</sup>University of California at Berkeley School of Public Health, Berkeley, CA, United States, <sup>4</sup>Technical University of Mombasa, Mombasa, Kenya, <sup>5</sup>Kenya Medical Research Institute, Nairobi, Kenya

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### ADVANCEMENTS TOWARD COMMERCIAL-SCALE PRODUCTION OF YEAST RNAI INSECTICIDES FOR MOSQUITO CONTROL

Majidah Hamid-Adiamoh<sup>1</sup>, Corey Brizzee<sup>2</sup>, Teresia Njoroje<sup>1</sup>, Akilah Stewart<sup>1</sup>, Jack Crawford<sup>2</sup>, Keshava Mysore<sup>1</sup>, Molly Duman-Scheel<sup>1</sup>

<sup>1</sup>Indiana University School of Medicine, South Bend, IN, United States, <sup>2</sup>DeMeetra AgBio, Lexington, KY, United States

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### SHOULD WE BE SPRAYING 80% OF THE HOUSES? AN OPERATIONAL, CLUSTER RANDOMIZED TRIAL ON BIKO ISLAND TESTING THE NON-INFERIORITY OF A LOWER COVERAGE

Carlos A. Guerra<sup>1</sup>, David Galick<sup>2</sup>, Liberato Motobe Vaz<sup>2</sup>, Lucas Ondo Nze<sup>2</sup>, Jeremias Nzamio Mba Eyono<sup>2</sup>, Restituto Mba Nguema Avue<sup>2</sup>, Teresa Ayingono Ondo Mfumu<sup>2</sup>, Matilde Riloha Rivas<sup>3</sup>, Olivier Tresor Donfack<sup>2</sup>, Wonder P. Phiri<sup>2</sup>, David L. Smith<sup>4</sup>, Guillermo A. Garcia<sup>1</sup>

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### CHARACTERIZATION OF ANOPHELES WARMES DURING THE DRY SEASON ALONG THE NIGER RIVER, MALI

Moussa KEITA, Nafomon SOGOBA, Ibrahim SISSOKO, Allassane dit Assitoun, Daouda OUOLOGUEM, Mahamadou DIAKITE, Seydou DOUMBIA  
Malaria Research and Training Center(MRTC), Bamako, Mali

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### FORECASTING WEST NILE VIRUS WITH GRAPH NEURAL NETWORKS: HARNESSING SPATIAL DEPENDENCE IN IRREGULARLY SAMPLED GEOSPATIAL DATA

Adam Tonks<sup>1</sup>, Trevor Harris<sup>2</sup>, Bo Li<sup>1</sup>, William Brown<sup>1</sup>, Rebecca Smith<sup>1</sup>

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### TARGETING OF VECTOR CONTROL INTERVENTIONS TO MOBILE, MIGRANT, ETHNIC, AND VULNERABLE POPULATIONS IN MALARIA ELIMINATION SETTINGS: A COMPARISON OF APPROACHES IN THE GREATER MEKONG SUBREGION AND MESOAMERICA REGION

Yang Hu<sup>1</sup>, Edric Luo<sup>2</sup>, Tara Seethaler<sup>3</sup>, Elijah Filip<sup>1</sup>, Julia Dunn<sup>4</sup>, Lucia Fernandez Montoya<sup>5</sup>

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**EFFECTIVENESS OF DUAL-ACTIVE INGREDIENT LONG-LASTING INSECTICIDAL NETS (LLINS) ON PRIMARY MALARIA VECTORS: A SECONDARY ANALYSIS OF A THREE-YEAR CLUSTER-RANDOMIZED CONTROLLED TRIAL IN RURAL TANZANIA**

**Nancy S. Matowo<sup>1</sup>**, Manisha A. Kulkarni<sup>2</sup>, Louisa A. Messenger<sup>1</sup>, Mohamed Jumanne<sup>3</sup>, Jackline Martin<sup>3</sup>, Franklin W. Mosha<sup>4</sup>, Natacha Protopopoff<sup>1</sup>

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**Ectoparasite-Borne Disease - Other**

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**HOT SPOTS AND BLIND SPOTS - ESTABLISHING A SURVEILLANCE BASELINE FOR TICKS AND TICK-BORNE PATHOGENS OF WEST AFRICA FROM 1901 TO 2022**

**David B. Pecor<sup>1</sup>**, Alexander M. Potter<sup>1</sup>, Abigail Lilak<sup>2</sup>, Graham Matulis<sup>2</sup>, Dustin Rodriguez<sup>2</sup>, Regina M. Jobson<sup>2</sup>, Liberty A. Wood<sup>3</sup>, Kenna Stone<sup>4</sup>, Kathleen Butler<sup>5</sup>, Nora Clearly<sup>2</sup>, Michael E. von Fricken<sup>2</sup>, Yvonne-Marie Linton<sup>1</sup>

<sup>1</sup>Walter Reed Biosystematics Unit (WRBU), Smithsonian Institution Museum Support Center, Suitland, MD, United States, <sup>2</sup>George Mason University, College of Public Health, Fairfax, VA, United States, <sup>3</sup>Columbia University, Mailman School of Public Health, New York City, NY, United States, <sup>4</sup>Smithsonian Institution Natural History Research Experiences (NHRE), Washington, DC, United States, <sup>5</sup>George Mason University, Fenwick Library, Fairfax, VA, United States

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**SPOTLIGHT REPORT: TICK SURVEILLANCE IN NIGERIA**

**Graham Matulis<sup>1</sup>**, Abigail Lilak<sup>1</sup>, David B. Pecor<sup>2</sup>, Alexander M. Potter<sup>2</sup>, Dustin Rodriguez<sup>2</sup>, Regina M. Jobson<sup>1</sup>, Michael E. von Fricken<sup>1</sup>, Yvonne-Marie Linton<sup>2</sup>

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**SPOTLIGHT REPORT: TICKS AND TICK-BORNE DISEASE THREATS IN TUNISIA**

**Regina M. Jobson<sup>1</sup>**, Abigail Lilak<sup>1</sup>, Graham Matulis<sup>1</sup>, David B. Pecor<sup>2</sup>, Alexander M. Potter<sup>2</sup>, Dustin Rodriguez<sup>2</sup>, Michael E. von Fricken<sup>1</sup>, Yvonne-Marie Linton<sup>2</sup>

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**SUCCESSFUL BARTONELLA HENSELAE INFECTION BY AN INCIDENTAL VECTOR IN IMMUNOCOMPROMISED AND IMMUNOCOMPETENT MOUSE MODELS**

**Rebekah Bullard<sup>1</sup>**, Monica Embers

<sup>1</sup>Tulane National Primate Research Center, Covington, LA, United States

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**SPOTLIGHT REPORT: HISTORICAL RECORD OF TICK DIVERSITY IN ALGERIA**

**Abigail Lilak<sup>1</sup>**, Graham Matulis<sup>1</sup>, David B. Pecor<sup>2</sup>, Alexander M. Potter<sup>2</sup>, Dustin Rodriguez<sup>2</sup>, Regina M. Jobson<sup>1</sup>, Michael E. von Fricken<sup>1</sup>, Yvonne-Marie Linton<sup>2</sup>

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**SPOTLIGHT REPORT: TICKS AND TICK-BORNE DISEASES OF NIGER**

**Dustin Rodriguez<sup>1</sup>**, David B. Pecor<sup>2</sup>, Alexander M. Potter<sup>2</sup>, Graham Matulis<sup>3</sup>, Abigail Lilak<sup>3</sup>, Regina M. Jobson<sup>3</sup>, Michael E. von Fricken<sup>3</sup>, Yvonne-Marie Linton<sup>2</sup>

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**ECTOPARASITES OF DOGS IN RURAL GUATEMALA COMMUNITIES AND INFECTION WITH ZOONOTIC AGENTS**

**Yuexun Tian<sup>1</sup>**, Francisco C. Ferreira<sup>1</sup>, Andrea M. Moller-Vasquez<sup>2</sup>, María Granados-Presa<sup>2</sup>, Jose G. Juarez<sup>2</sup>, Pamela M. Pennington<sup>2</sup>, Norma Padilla<sup>2</sup>, Gabriel L. Hamer<sup>1</sup>, Sarah A. Hamer<sup>1</sup>

<sup>1</sup>Texas A&M University, College Station, TX, United States, <sup>2</sup>Universidad del Valle de Guatemala, Ciudad de Guatemala, Guatemala

6685

**ENHANCING EHRLICHIOSIS RISK DETERMINATION THROUGH THE SOUTHEASTERN TICK-BORNE EMERGENT PATHOGEN SURVEILLANCE (STEPS) PROGRAM IN TENNESSEE**

**Abelardo C. Moncayo<sup>1</sup>**, Jeff Gruntmeir<sup>2</sup>, Rhoel Dinglasan<sup>2</sup>

<sup>1</sup>Tennessee Department of Health, Nashville, TN, United States, <sup>2</sup>University of Florida, Gainesville, FL, United States

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**EFFECTIVENESS OF FLURALANER TREATMENT REGIMENS FOR THE CONTROL OF CANINE CHAGAS DISEASE. A MATHEMATICAL MODELING STUDY**

**Edem Fiatsonu<sup>1</sup>**, Rachel E. Busselman<sup>1</sup>, Gabriel L. Hamer<sup>1</sup>, Sarah A. Hamer<sup>1</sup>, Martial L. Ndeffo-Mbah<sup>2</sup>

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**FLEA-BORNE PATHOGENS IN FLEAS FROM NATURALLY INFESTED DOGS AND CATS IN PRIVATE HOMES IN FLORIDA, USA**

**Erin W. Lashnits<sup>1</sup>**, Taylor Gin<sup>2</sup>, Trey Tomlinson<sup>3</sup>, Grace Wilson<sup>3</sup>, Amiah Gray<sup>4</sup>, Cameron Sutherland<sup>5</sup>, Kamilyah Miller<sup>5</sup>, Yiyao (Krista) Li<sup>1</sup>, Michael Canfield<sup>5</sup>, Brian Herrin<sup>5</sup>

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**MOLECULAR DETECTION OF YERSINIA PESTIS AND BARTONELLA SPP. IN RODENT FLEAS FROM PIURA, PERU**

**Magdalena Mallqui<sup>1</sup>**, Diego Cuicapuza<sup>2</sup>, Cusi Ferradas<sup>1</sup>, Marco Risco<sup>1</sup>, Luis Mosto<sup>1</sup>, Victor Pacheco<sup>3</sup>, Andres G. Lescano<sup>1</sup>, Winnie Contreras<sup>1</sup>

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Saturday  
October 21

## Viruses - Emerging Viral Diseases

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### CHARACTERIZATION OF EPSTEIN BARR VIRUS INFECTION IN TONSILS OF CHILDREN RESIDING IN MALARIA HOLOENDEMIC REGION OF WESTERN KENYA

Emmily Jepkemboi Koech

Kenya Medical Research Institute, Kisumu, Kenya

(ACMCIP Abstract)

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### RECONCILIATION OF ADVERSE PREGNANCY OUTCOME RISKS BETWEEN FOUR ZIKA VIRUS COHORTS IN LATIN AMERICA

Olivia Pluss<sup>1</sup>, Vivian Avelino Silva<sup>2</sup>, André Cabie<sup>3</sup>, Benoit Tressieres<sup>4</sup>, Mathieu Nacher<sup>5</sup>, Patricia Brasil<sup>6</sup>, Leo Pomar<sup>7</sup>, Mauricio Lacerda Nogueira<sup>8</sup>, Thomas Jaenisch<sup>1</sup>, Anna Funk<sup>2</sup>  
<sup>1</sup>Center for Global Health, Colorado School of Public Health, Aurora, CO, United States, <sup>2</sup>Faculdade de Medicina FMUSP, Universidade de São Paulo, São Paulo, Brazil, <sup>3</sup>Centre Hospitalier Universitaire de la Martinique, Fort-de-France, Martinique, <sup>4</sup>Centre d'Investigation Clinique Antilles-Guyane, Institut national de la santé et de la recherche médicale, Pointe-à-Pitre, Guadeloupe, France, <sup>5</sup>Centre Hospitalier de Cayenne - Centre d'Investigation Clinique Institut national de la santé et de la recherche médicale, CIE1424, Cayenne, CEDEX Guyane, France, <sup>6</sup>Evandro Chagas National Institute of Infectious Diseases, Oswaldo Cruz Foundation, Rio de Janeiro, Brazil, <sup>7</sup>Materno-fetal and Obstetrics Research Unit, Department "Woman-Mother-Child", University Hospital, 1011 Lausanne, Switzerland, <sup>8</sup>Virology Research Laboratory, São José do Rio Preto School of Medicine (FAMERP), São José do Rio Preto, Brazil

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### EVALUATING BARRIERS AND FACILITATING FACTORS AROUND COVID-19 VACCINATION IN WESTERN UGANDA: A SURVEY OF COMMUNITY MEMBERS

Stephen Asiimwe<sup>1</sup>, Mastulah Nakalule<sup>1</sup>, Azfar D. Hossain<sup>2</sup>, Amir M. Mohareb<sup>3</sup>, Louise C. Ivers<sup>4</sup>, Kilande Esther Joan<sup>5</sup>, Richard Hasunira<sup>6</sup>, Cliff Abenaitwe<sup>5</sup>, Kenneth Mwehonge<sup>5</sup>  
<sup>1</sup>Mbarara University of Science and Technology, Mbarara, Uganda, <sup>2</sup>Harvard Medical School, Boston, MA, United States, <sup>3</sup>Massachusetts General Hospital, Boston, MA, United States, <sup>4</sup>Harvard Global Health Institute, Harvard University, Boston, MA, United States, <sup>5</sup>Coalition for Health Promotion and Social Development (HEPS-Uganda), Kampala, Uganda

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### DEVELOPMENT OF A SURFACE PROTEIN-BASED MULTIPLEX IMMUNOASSAY FOR MPOX SEROLOGICAL TESTING AND SURVEILLANCE

McKenna D. Roe<sup>1</sup>, Keersten M. Ricks<sup>2</sup>, Joseph Mattapallil<sup>1</sup>, Gary H. Cohen<sup>3</sup>, Stuart N. Isaacs<sup>4</sup>, Roselyn J. Eisenberg<sup>3</sup>, Christopher C. Broder<sup>1</sup>, Eric D. Laing<sup>1</sup>  
<sup>1</sup>Department of Microbiology and Immunology, Uniformed Services University, Bethesda, MD, United States, <sup>2</sup>Applied Diagnostics Branch, United States Army Medical Research Institute for Infectious Diseases, Frederick, MD, United States, <sup>3</sup>Department of Microbiology, University of Pennsylvania, Philadelphia, PA, United States, <sup>4</sup>Department of Medicine, University of Pennsylvania, Philadelphia, PA, United States

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### A SCOPING LITERATURE REVIEW OF GLOBAL DENGUE AGE-STRATIFIED SEROPREVALENCE: ESTIMATING DENGUE FORCE OF INFECTION IN ENDEMIC COUNTRIES

Anna Vicco<sup>1</sup>, Clare McCormack<sup>2</sup>, Belen Pedrique<sup>3</sup>, Isabela Ribeiro<sup>3</sup>, Neelika Malavige<sup>3</sup>, Ilaria Dorigatti<sup>2</sup>  
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### DETERMINATION OF REQUIREMENTS TO ENSURE EFFECTIVE INACTIVATION OF POWASSAN VIRUS AS A SURROGATE BIOLOGICAL SELECT AGENTS AND TOXINS (BSAT)

Beth A. Flores<sup>1</sup>, Jennifer Gibbons-Kincaid<sup>1</sup>, Sujatha Rashid<sup>1</sup>, Rebecca Bradford<sup>1</sup>, Timothy Stedman<sup>2</sup>, David Einfeld<sup>1</sup>, Helen Navin<sup>1</sup>, Michael Parker<sup>1</sup>, Ciera Albrecht<sup>1</sup>  
<sup>1</sup>American Type Culture Collection, Manassas, VA, United States, <sup>2</sup>Stedman Safety Consultants, LLC, Gainesville, VA, United States

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### ASSOCIATION OF FOREST RELATED ACTIVITIES WITH MADARIAGA VIRUS INFECTION IN THE COMMUNITY OF ARUZA IN PANAMA

Josefrancisco Galue<sup>1</sup>, Yaneth Pitti<sup>1</sup>, Isela Guerrero<sup>1</sup>, Andres G. Lescano<sup>2</sup>, Anayansi Valderrama<sup>3</sup>, Jean-Paul Carrera<sup>1</sup>

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### DESCRIBING THE IMPLICATIONS OF TEMPERATURE ON THE TRANSMISSION POTENTIAL OF RIFT VALLEY FEVER VIRUS IN CULEX TARSALIS AND Aedes Aegypti MOSQUITOES

Shelby Cagle, Arielle Glass, Corey Campbell, Olivia Martinez, Emma Harris, Rebekah C. Kading

Colorado State University, Fort Collins, CO, United States

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### PERSISTENCE OF VIRAL RNA IN HOSPITALIZED PATIENTS WITH LASSA FEVER IN LIBERIA

Carwolo Pewu<sup>1</sup>, Emmanuel Kerkula<sup>1</sup>, Martha Gayflowu<sup>1</sup>, Nukal Doetein<sup>1</sup>, Alfred Flomo<sup>1</sup>, Amara Fofana<sup>1</sup>, Stanley Kerkula<sup>1</sup>, Thomas Sumo<sup>1</sup>, Rosie Watts<sup>1</sup>, Marta Zizek<sup>1</sup>, Catherine Nimley<sup>1</sup>, McKenzie Colt<sup>1</sup>, David A. Wohl<sup>1</sup>, William A. Fischer<sup>1</sup>, Jefferson Sibley<sup>2</sup>  
<sup>1</sup>The University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>2</sup>Phebe Hospital, Bong County, Liberia

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### SIGNIFICANT GAPS IN KNOWLEDGE AND ATTITUDES TOWARDS VACCINATION IN A HIGHLY AFFECTED POPULATION BY THE MONKEYPOX EPIDEMIC: CASE OF KUMBA HEALTH DISTRICT, CAMEROON, SEPTEMBER 2022

Akenji B. Mboringong<sup>1</sup>, Hervé Gaël Ndalle<sup>1</sup>, Wafo Tochie Elvis<sup>1</sup>, Pauline Akosung<sup>2</sup>, Emah Ines Nguidjoli<sup>3</sup>, Audrey Lacroix<sup>4</sup>, Nadine Lamare<sup>5</sup>, Mba Flaubert Djonzo<sup>6</sup>, Makang Severine Ndifor<sup>6</sup>, Linda Easo<sup>3</sup>, Etoundi Alain Mballa<sup>3</sup>, Arnel Evouna<sup>1</sup>  
<sup>1</sup>Cameroon Field Epidemiology Program, Yaounde, Cameroon, <sup>2</sup>Regional Delegation for Health, South-West Region, Cameroon, Buea, Cameroon, <sup>3</sup>Directorate for the Control of Disease, Epidemics and Pandemics, MOH, Cameroon, Yaounde, Cameroon, <sup>4</sup>University of Montpellier, France, Montpellier, France, <sup>5</sup>Centre de Recherches sur les maladies Emergentes et Ré-émergentes, MINRESI, Cameroon, Yaounde, Cameroon, <sup>6</sup>Kumba District Health Service, MOH, Cameroon, Kumba, Cameroon

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### EVALUATION OF THE LEVEL OF KNOWLEDGE, ATTITUDES, PRACTICES OF PREVENTIVE MEASURES AGAINST COVID 19 DISEASE AMONG MEDICAL STUDENTS AT THE UNIVERSITY OF HEALTH SCIENCES IN GABON

Ornella Anaïse Mbang Nguema

Université des Sciences de la Santé, Gabon, Owendo, Gabon

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**SARS COV 2 SEROPREVALENCE AMONG INTERNATIONAL TRAVELERS FROM SELECTED DISTRICTS OF THE COPPERBELT PROVINCE OF ZAMBIA**

Sydney Mwanza, Inonge Mukubuta, Samson Mwale, Jay Sikalima, Justin Chileshe  
*Tropical Diseases Research Centre, Ndola, Zambia*

(ACMCIP Abstract)

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**DEVELOPMENT AND VALIDATION OF A REAL TIME QPCR FOR YELLOW FEVER VIRUS DETECTION**

Julio Evangelista, Maria Silva, Roger Castillo, Megan Schilling  
*NAMRU-6, Lima, Peru*

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**ENDEMIC VENEZUELAN EQUINE ENCEPHALITIS VIRUS ACTIVITY IN RURAL AND URBAN SETTINGS OF PANAMA**

Carlos A. Lezcano, Josefrancisco Jose Galue, Xacdiel Rodríguez, Yelissa Nicole Juarez, Jean Paul Carrera  
*Gorgas Memorial Institute of Health Studies, Panama, Panama*

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**TWO-DOSE VACCINE EFFECTIVENESS FOLLOWING THE FIRST REACTIVE MASS VACCINATION CAMPAIGN AGAINST HEPATITIS E IN BENTIU, SOUTH SUDAN**

Robin Nesbitt<sup>1</sup>, John Rumunu<sup>2</sup>, Vincent Kinya Asilaza<sup>3</sup>, Priscillah Gitahi<sup>3</sup>, Patrick Nkemenang<sup>3</sup>, Melat Haile<sup>4</sup>, Jetske Duncker<sup>3</sup>, Zelie Antier<sup>3</sup>, Etienne Gignoux<sup>1</sup>, Manuel Albela<sup>4</sup>, Primitivo Gakima<sup>4</sup>, Joseph F. Wamala<sup>5</sup>, Kediende Chong<sup>3</sup>, Catia M. Alvarez<sup>2</sup>, Isabella Eckerle<sup>6</sup>, Monica Rull<sup>6</sup>, Iza Ciglenecki<sup>4</sup>, **Andrew S. Azman**<sup>7</sup>  
<sup>1</sup>*Epicentre, Paris, France*, <sup>2</sup>*South Sudan Ministry of Health, Juba, South Sudan*, <sup>3</sup>*Médecins Sans Frontières, Juba, South Sudan*, <sup>4</sup>*Médecins Sans Frontières, Geneva, Switzerland*, <sup>5</sup>*World Health Organization, Juba, South Sudan*, <sup>6</sup>*Geneva Centre for Emerging Viral Diseases, Geneva University Hospitals, Geneva, Switzerland*, <sup>7</sup>*Johns Hopkins University, Baltimore, MD, United States*

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**DIAGNOSTIC ACCURACY OF THE ZIKV DETECT™ 2.0 IGM CAPTURE ELISA AND THE ZIKA IGM RAPID TEST PROTOTYPE FROM INBIO INTERNATIONAL INC**

Moyra Machado Portilho<sup>1</sup>, Julia Gois Costa<sup>1</sup>, Carolina Sacramento Gomes<sup>1</sup>, Patricia Moreira<sup>1</sup>, Leile Camila Jacob-Nascimento<sup>1</sup>, Rosangela Oliveira Anjos<sup>1</sup>, Mariana Kikuti<sup>1</sup>, Laura Tauró<sup>1</sup>, Mitermayer Galvão Reis<sup>2</sup>, Guilherme Sousa Ribeiro<sup>2</sup>  
<sup>1</sup>*Instituto Gonçalo Moniz, Salvador, Brazil*, <sup>2</sup>*Instituto Gonçalo Moniz; Universidade Federal da Bahia, Salvador, Brazil*

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**EPIDEMIC TRANSMISSION OF CHIKUNGUNYA VIRUS DURING COVID-19 PANDEMIC LOCKDOWN MEASURES: A COHORT STUDY IN AN URBAN INFORMAL SETTLEMENT IN BRAZIL**

Jaqueline Silva Cruz<sup>1</sup>, Meng Xiao<sup>2</sup>, Juan Aguilar<sup>3</sup>, Nivison Nery Jr<sup>3</sup>, Emília M. M. Belitardo<sup>1</sup>, Daiana de Oliveira<sup>3</sup>, Mitermayer Reis<sup>1</sup>, Albert Ko<sup>2</sup>, Guilherme Ribeiro<sup>1</sup>, Frederico Costa<sup>3</sup>  
<sup>1</sup>*Gonçalo Moniz institute - Fiocruz, Salvador, Brazil*, <sup>2</sup>*Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT, United States*, <sup>3</sup>*Instituto de Saúde Coletiva, Universidade Federal da Bahia, Salvador, Brazil*

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**ANTIBODY DYNAMICS TO MPOX INFECTION AND MVA-BN VACCINATION**

Claire E. Munroe<sup>1</sup>, Abel Gonzalez<sup>1</sup>, Polina Kamenskaya<sup>1</sup>, Caitlin Marino<sup>2</sup>, Julie Boucau<sup>2</sup>, Regina C. LaRocque<sup>1</sup>, Edward T. Ryan<sup>1</sup>, Amy Barczak<sup>1</sup>, Pritha Sen<sup>3</sup>, **Richelle Charles**<sup>1</sup>  
<sup>1</sup>*Massachusetts General Hospital, Boston, MA, United States*, <sup>2</sup>*Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, United States*, <sup>3</sup>*Brigham and Women's Hospital, Boston, MA, United States*

**Viruses - Epidemiology**

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**SARS-COV-2 SEROPREVALENCE AND PREECLAMPSIA MARKERS AMONG UNVACCINATED MOZAMBICAN PREGNANT WOMEN WITH FETAL LOSS**

Maureen Chileshe<sup>1</sup>, Tacilta Nhampossa<sup>2</sup>, Carla Carrilho<sup>3</sup>, Anete Mendes<sup>2</sup>, Elvira Luis<sup>4</sup>, Jahit Sacarlal<sup>5</sup>, Jaumeordi<sup>1</sup>, Natalia Rakislowa<sup>1</sup>, Clara Menendez<sup>1</sup>, Raquel González<sup>1</sup>  
<sup>1</sup>*Barcelona Institute for Global Health, Hospital Clínic-Universitat de Barcelona, Barcelona, Spain*, <sup>2</sup>*Manhiça Health Research Center (CISM), Maputo, Mozambique*, <sup>3</sup>*Department of Anatomic-pathology, Maputo Central Hospital, Maputo, Mozambique*, <sup>4</sup>*Obstetrics and Gynecology Department, Maputo Central Hospital, Barcelona, Spain*, <sup>5</sup>*Edoardo Mondlane University, Maputo, Mozambique*

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**MORTALITY FROM CHRONIC HEPATITIS C IN BRAZIL ANALYSIS OF THE MULTIPLE CAUSES OF DEATH IN THE PERIOD 2000 TO 2019**

Larissa Festa, Gerusa Maria Figueiredo  
*University of São Paulo, São Paulo, Brazil*

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**KNOWLEDGE, ATTITUDE AND PRACTICE OF THE POPULATION REGARDING THE COVID 19 PANDEMIC IN THE LARGEST MARKET OF THE DISTRICT OF BAMAKO IN 2021**

Moulaye Berthe, Mountaga Diallo, Yacouba Toloba, Mahamadou Diakite  
*International Centre for Excellence in Research (ICER-Mali), Bamako, Mali*

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**WORLD HEPATITIS DAY, 2023 - COMMUNITY ENGAGEMENT ACTIVITIES**

Diana Asandem<sup>1</sup>, Philip S. Segbefia<sup>2</sup>, Luttrud Bentum-Enin<sup>2</sup>, Rawdat Baba-Adam<sup>2</sup>, Bright Asare<sup>2</sup>, Frank Osei<sup>2</sup>, Georgina Agyekum<sup>2</sup>, Linda E. Amoah<sup>2</sup>, Kwadwo A. Kusi<sup>2</sup>, Joseph H.K. Bonney<sup>3</sup>  
<sup>1</sup>*West African Centre for Cell Biology of Infectious Pathogens (WACCBIP), Accra, Ghana*, <sup>2</sup>*Immunology Department, Noguchi Memorial Institute for Medical Research, Accra, Ghana*, <sup>3</sup>*Virology Department, Noguchi Memorial Institute for Medical Research, Accra, Ghana*

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**WHO ZIKV INDIVIDUAL PARTICIPANT DATA META-ANALYSIS: PRELIMINARY FINDINGS FROM A CONSORTIUM-WIDE INITIATIVE**

Ronaldo Silva, ZIKV IPDMA Consortium  
*World Health Organization, Geneva, Switzerland*

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**SEROEPIDEMIOLOGY OF DENGUE AND CHIKUNGUNYA INFECTIONS IN GHANA\_A SECONDARY DATA ANALYSIS, 2021.**

JH Kofi Bonney<sup>1</sup>, Stephen Ofori Nyarko<sup>1</sup>, Deborah Pratt<sup>1</sup>, Esinam Agbosu<sup>1</sup>, Yaw Awuku Larbi<sup>1</sup>, Abigail Abankwa<sup>1</sup>, Takaya Hayashi<sup>2</sup>  
<sup>1</sup>*Noguchi Memorial Institute for Medical Research, Accra, Ghana*, <sup>2</sup>*Tokyo Medical and Dental University, Tokyo, Japan*

Saturday  
October 21

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### DENGUE VIRUS SEROEPIDEMIOLOGY IN KINSHASA, DEMOCRATIC REPUBLIC OF CONGO

Rachel Sendor<sup>1</sup>, Daniel O. Espinoza<sup>2</sup>, Kristin Banek<sup>1</sup>, Melchior M. Kashamuka<sup>3</sup>, Joseph A. Bala<sup>2</sup>, Marthe Nkalanji<sup>3</sup>, Georges E. Mahilu<sup>3</sup>, Georges Kihuma<sup>3</sup>, Joseph Atibu<sup>3</sup>, Sam J. White<sup>1</sup>, Kyaw L. Thwai<sup>1</sup>, Theirry L. Bobanga<sup>3</sup>, Tommy Nseka<sup>3</sup>, Jeffrey A. Bailey<sup>4</sup>, Michael Emch<sup>1</sup>, Rhoel Dinglasan<sup>5</sup>, Jonathan J. Juliano<sup>1</sup>, Matthew H. Collins<sup>2</sup>, Antoinette K. Tshefu<sup>3</sup>, Jonathan B. Parr<sup>1</sup>

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### CLINICAL FEATURES OF RESURGENT DENGUE 2 AS A MAJOR CAUSE OF ACUTE FEBRILE ILLNESS IN NICARAGUA FOLLOWING THE ZIKA EPIDEMIC

Alexis Domeracki<sup>1</sup>, Armando Matute<sup>2</sup>, Hernán Vargas<sup>3</sup>, Elana Horwitz<sup>1</sup>, Edwing Cuadra<sup>4</sup>, Omar Zepeda<sup>5</sup>, Tianchen Sheng<sup>6</sup>, Demetrios L. Samaras<sup>1</sup>, Lakshmanane Premkumar<sup>6</sup>, Aravinda de Silva<sup>6</sup>, Filemón Bucardo<sup>3</sup>, Megan Reller<sup>7</sup>

<sup>1</sup>Duke University School of Medicine, Durham, NC, United States, <sup>2</sup>Hospital Escuela Oscar Danilo Rosales Arguello, National Autonomous University of Nicaragua at León, León, Nicaragua, <sup>3</sup>National Autonomous University of Nicaragua at León, Nicaragua, León, Nicaragua, <sup>4</sup>University of North Carolina, Chapel Hill, NC, United States, <sup>5</sup>Duke Global Health Institute, Durham, NC, United States, <sup>6</sup>University of North Carolina School of Medicine, Chapel Hill, NC, United States, <sup>7</sup>Duke Global Health Institute; Division of Infectious Diseases and International Health, Department of Medicine; Durham Veterans Affairs Health Care System, Durham, NC, United States

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### PERSISTENT, CONSISTENT, AND NEGLECTED: INVESTIGATING THE GEOGRAPHIC CLUSTERING AND PREDICTORS OF LA CROSSE VIRUS DISEASE IN APPALACHIA

Corey A. Day<sup>1</sup>, Rebecca Trout Fryxell<sup>1</sup>, Agrícola Odoi<sup>1</sup>, Brian D. Byrd<sup>2</sup>, Abelardo Moncayo<sup>3</sup>, Michael Doyle<sup>4</sup>, Carl Williams<sup>4</sup>

<sup>1</sup>University of Tennessee, Knoxville, Knoxville, TN, United States, <sup>2</sup>Western Carolina University, Cullowhee, NC, United States, <sup>3</sup>Tennessee Department of Health, Nashville, TN, United States, <sup>4</sup>North Carolina Department of Health and Human Services, Raleigh, NC, United States

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### MULTIPLEX SAMPLE-SPARING IMMUNOASSAY TO MEASURE SEROPREVALENCE OF CHIKUNGUNYA, DENGUE, AND ZIKA VIRUSES

Izabella N. Castillo<sup>1</sup>, Edwing C. Cuadra<sup>1</sup>, Yerun Zhu<sup>2</sup>, Sharon Taft-Benz<sup>1</sup>, Filemon Bucardo<sup>3</sup>, Aravinda M. de Silva<sup>1</sup>, Mark Heise<sup>1</sup>, Matthew H. Collins<sup>4</sup>, Lakshmanane Premkumar<sup>1</sup>

<sup>1</sup>University of North Carolina, Chapel Hill, NC, United States, <sup>2</sup>Emory University, Atlanta, GA, United States, <sup>3</sup>National Autonomous University of Nicaragua, León, Nicaragua, <sup>4</sup>Emory University, Atlanta, NC, United States

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### EPIDEMIOLOGICAL CHARACTERISTICS OF MEASLES CASES IN LIBERIA IN LIBERIA, 2018-2021

Bode I. Shobayo<sup>1</sup>, Julius S M Gilayeneh<sup>1</sup>, Emmanuel Dwalu<sup>1</sup>, Sumor L. Flomo<sup>1</sup>, Ralph W. Jetoh<sup>1</sup>, Alberta B. Corvah<sup>1</sup>, Momo Tegli<sup>1</sup>, Fahn M. Tarweh<sup>1</sup>, Obafemi J. Babalola<sup>2</sup>, Chukwuma D. Umeokonkwo<sup>2</sup>, Jane A. MaCauley<sup>1</sup>

<sup>1</sup>National Public Health Institute of Liberia, Monrovia, Liberia, <sup>2</sup>Africa Field Epidemiology Network, Monrovia, Liberia

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### SARSCOV2 INFECTION IN BROWN-HEADED SPIDER MONKEYS (ATELES FUSCICEPS) AT A WILDLIFE RESCUE CENTER ON THE COAST OF ECUADOR SOUTH AMERICA

Veronica Barragan

Universidad San Francisco de Quito, Quito, Ecuador

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### MEASLES SURVEILLANCE SYSTEM EVALUATION IN THE FATICK REGION IN 2022

Ndiaye Faly DIOP<sup>1</sup>, Mamadou Sarifou BA<sup>2</sup>, Bouna NDIAYE<sup>2</sup>, Babacar NDOYE<sup>3</sup>, Assane NDIAYE<sup>4</sup>

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### THE EFFECT OF PRIOR ZIKA VIRUS INFECTION ON MARKERS OF MALE FERTILITY

Filemon Bucardo<sup>1</sup>, Viviana Pinedo Cancino<sup>2</sup>, Gustavo Nativio<sup>3</sup>, Jayrintzina Palacios<sup>1</sup>, Hernan Vanegas<sup>1</sup>, Donayre Marilly<sup>2</sup>, Rafael Saavdra Langer<sup>2</sup>, Maria Vasquez Chasnamote<sup>2</sup>, Oksana Kharabora<sup>2</sup>, Brenda Vasquez Martinez<sup>2</sup>, Ayla Bullock<sup>3</sup>, Edwing C Cuadra<sup>2</sup>, Lakshmanane Premkumar<sup>3</sup>, Aravinda de Silva<sup>3</sup>, R. Matthew Coward<sup>4</sup>, Natalie M. Bowman<sup>3</sup>

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### CLINICAL AND EPIDEMIOLOGICAL DIFFERENCES BETWEEN THE FIRST AND SECOND COVID-19 WAVES IN PATIENTS OF A HOSPITAL IN NORTHERN PERU

Virgilio E. Failoc-Rojas<sup>1</sup>, Mario J. Valladares-Garrido<sup>2</sup>, Alicia Torres-Mera<sup>3</sup>, Rubi Plasencia-Dueñas<sup>3</sup>, Jorge Hernandez-Cordova<sup>4</sup>

<sup>1</sup>Universidad Cesar Vallejo, Piura, Peru, <sup>2</sup>Universidad San Martin de Porres, Chiclayo, Peru, <sup>3</sup>Universidad Nacional Pedro Ruiz Gallo, Lambayeque, Peru, <sup>4</sup>Universidad Privada Norbert Wiener, Lima, Peru

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### SUPPORT OF SENTINEL SYNDROMIC SURVEILLANCE IN IMPROVING THE DETECTION OF RIFT VALLEY FEVER AND CRIMEAN CONGO HEMORRHAGIC FEVER VIRUSES IN HUMANS IN SENEGAL

Gamou Fall<sup>1</sup>, Aliou Barry<sup>2</sup>, Ndeye Sakha Bob Niang<sup>2</sup>, Ousmane Faye<sup>2</sup>

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## Viruses - Field and ecological studies of viruses, including surveillance and spillover risk and emergence

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### EVALUATION OF THE SURVEILLANCE SYSTEM FOR ACUTE FLACCID PARALYSIS BEFORE AND DURING COVID19 IN PALESTINE, 2014-2021

Ayham A. Sawalmeh<sup>1</sup>, Kostas Danis<sup>2</sup>, Emily White Johannson<sup>2</sup>, Dia'ah Hjaijeh<sup>3</sup>

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### INNOVATIONS FOR ENCOURAGING MEMBERS OF THE LOCAL COMMUNITY TO LIVE SAFELY WITH BATS IN THE MOUNTAIN ELGON AREA, EASTERN UGANDA

Lillian Nalukenge<sup>1</sup>, Robert M. Kityo<sup>1</sup>, Betty Nalikka<sup>1</sup>, Benard Matovu<sup>1</sup>, Michael J. Mutebi<sup>1</sup>, Siiya Aggrey<sup>2</sup>, Rebekah Kading<sup>2</sup>, Natalie Wickenkamp<sup>2</sup>, Kalani Williams<sup>2</sup>, Emma Harris<sup>2</sup>, Tanya Dewey<sup>2</sup>, Kevin Castle<sup>3</sup>

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**OPTIMIZING TRAP PLACEMENT TO PREDICT WEST NILE VIRUS**

Anwasha Chakravarti<sup>1</sup>, Rebecca Smith<sup>1</sup>, Bo Li<sup>1</sup>, Dan Bartlett<sup>2</sup>, Patrick Irwin<sup>2</sup>  
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**GENETIC & PHYLOGENETIC ANALYSIS OF INFLUENZA A VIRUSES & EVIDENCE OF AVIAN INFLUENZA INFECTION IN PIGS IN SENEGAL**

Mamadou Malado Jallow<sup>1</sup>, Ndiendé Koba Ndiaye<sup>1</sup>, Mamadou Aliou Barry<sup>2</sup>, Amary Fall<sup>1</sup>, Marie Pedepa Mendy<sup>1</sup>, Sara Sy<sup>1</sup>, Déborah Goudiaby<sup>1</sup>, Mbayame Ndiaye Niang<sup>1</sup>, Malick Fall<sup>3</sup>, Ndongo Dia<sup>1</sup>  
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**SOCIOECONOMIC VALUES ATTACHED TO CAVES AND BATS IN ELGON REGION OF UGANDA: IMPLICATIONS FOR BAT-BORNE PATHOGEN SPILLOVER**

Aggrey Siya<sup>1</sup>, Robert M. Kityo<sup>1</sup>, Nalikka Betty<sup>1</sup>, Matovu Wamala Benard<sup>1</sup>, Nalukenge P. Lilian<sup>1</sup>, Mutebi J. Micheal<sup>1</sup>, Natalie Wickenkamp<sup>2</sup>, Kalani Williams<sup>2</sup>, Emma Harris<sup>2</sup>, Kevin Castle<sup>3</sup>, Tanya Dewey<sup>4</sup>, Rebekah C. Kading<sup>2</sup>  
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**WEST NILE VIRUS SEROPREVALENCE IN HUMANS LIVING IN THE TAMPA BAY REGION OF FLORIDA**

Emma C. Underwood  
 University of South Florida, Tampa, FL, United States

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**IDENTIFYING THE VERTEBRATE HOSTS WITH POSSIBLE ASSOCIATION TO JAPANESE ENCEPHALITIS VIRUS DISPERSAL IN NATURE BY BLOOD MEAL SOURCE IDENTIFICATION AND RNA VIROME DETERMINATION IN JAPANESE ENCEPHALITIS VIRUS VECTORS**

Astri N. Faizah, Daisuke Kobayashi, Ryo Matsumura, Mamoru Watanabe, Yukiko Higa, Kyoko Sawabe, Haruhiko Isawa  
 National Institute of Infectious Diseases, Shinjuku, Japan

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**DENGUE SEROTYPE DYNAMICS AT THE KENYAN COAST**

Josphat N. Nyataya, Kimita Gathii, Erick Muthanje, John Njenga  
 Kenya Medical Research Institute/Medical Research Unit, Kisumu, Kenya

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**SEROLOGICAL EVIDENCE OF ZIKA VIRUS CIRCULATION WITH DENGUE AND CHIKUNGUNYA INFECTIONS IN SRI LANKA**

Harshi Abeygoonawardena<sup>1</sup>, Namal Wijesinghe<sup>2</sup>, Varuna Navaratne<sup>3</sup>, Aindralal Balasuriya<sup>3</sup>, Thi T N Nguyen<sup>4</sup>, Meng Ling Moi<sup>5</sup>, Aruna Dharshan De Silva<sup>1</sup>  
<sup>1</sup>Bio Medical Laboratory -02, Faculty of Medicine, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka, <sup>2</sup>Department of Clinical Sciences, Faculty of Medicine, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka, <sup>3</sup>Department of Paraclinical Sciences, Faculty of Medicine, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka, <sup>4</sup>Department of Virology, Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan, <sup>5</sup>School of International Health, Graduate School of Medicine, the University of Tokyo, Tokyo, Japan

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**DENGUE VIRUS SURVEILLANCE IN Aedes aegypti**

David P. Tchouassi, Josephine Osalla, Gilbert Rotich  
 International Centre of Insect Physiology and Ecology (icipe), Nairobi, Kenya

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Laís Picinini Freitas<sup>1</sup>, Dirk Douwes-Schultz<sup>2</sup>, Alexandra M. Schmidt<sup>2</sup>, Mabel Carabali<sup>2</sup>, Gloria I. Jaramillo-Ramirez<sup>3</sup>, César García-Balaguera<sup>3</sup>, Berta N. Restrepo<sup>4</sup>, Brayan Ávila Monsalve<sup>3</sup>, Jorge Emilio Salazar Flórez<sup>4</sup>, Kate Zinszer<sup>1</sup>  
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**VIRSCAN SEROLOGICAL PROFILING OF THE PENAN TRIBE, AN INDIGENOUS GROUP IN SARAWAK, MALAYSIA**

Charles Kevin Dee Tiu<sup>1</sup>, Ivan Yap<sup>2</sup>, Mong How Ooi<sup>3</sup>, Kiing Aik Wong<sup>4</sup>, Anand Mohan<sup>5</sup>, Samuel Leong Kheng Wong<sup>6</sup>, David Perera<sup>7</sup>, Lin-Fa Wang<sup>1</sup>  
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**SEROPREVALENCE OF ARBOVIRUSES IN SLOTS FROM A RURAL ZONE WITH FAST URBANIZATION CLOSE TO PANAMA CITY**

Sandra Laurence Lopez-Verges<sup>1</sup>, Rita Corrales<sup>1</sup>, Vanessa Pineda<sup>1</sup>, Yamilka Diaz<sup>1</sup>, Yaneth Pitti<sup>1</sup>, Maria Chen<sup>1</sup>, Lisseth Saenz<sup>1</sup>, Jean Paul Carrera<sup>1</sup>, Azael Saldaña<sup>2</sup>  
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**WHEN CASE REPORTING BECOMES UNTENABLE: CAN SEWER NETWORKS TELL US WHERE COVID-19 TRANSMISSION OCCURS?**

Yuke Wang<sup>1</sup>, Pengbo Liu<sup>1</sup>, Jamie VanTassell<sup>1</sup>, Stephen Hilton<sup>1</sup>, Lizheng Guo<sup>1</sup>, Orlando Sablon<sup>1</sup>, Marlene Wolfe<sup>1</sup>, Lorenzo Freeman<sup>2</sup>, Wayne Rose<sup>2</sup>, Carl Holt<sup>2</sup>, Mikita Browning<sup>2</sup>, Michael Bryan<sup>3</sup>, Lance Waller<sup>1</sup>, Peter Teunis<sup>1</sup>, Christine Moe<sup>1</sup>  
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**Viruses - Immunology**

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**T-CELL RESPONSES AS CORRELATES OF DIFFERENT DISEASE OUTCOMES OF DENGUE VIRUS INFECTION**

Rosa Isela Gálvez<sup>1</sup>, E Alexander Escarrega<sup>1</sup>, Tulika Singh<sup>2</sup>, Angel Balmaseda<sup>3</sup>, Eva Harris<sup>2</sup>, Daniela Weiskopf<sup>4</sup>  
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**6738****METABOLIC SYNDROME CONTRIBUTES TO ENHANCED DISEASE SEVERITY FOLLOWING EMERGING VIRAL INFECTIONS**Amelia K. Pinto, Rebekkah Smither, Elizabeth Geerling  
Saint Louis University, Saint Louis, MO, United States**6739****ACUTE IMMUNOLOGICAL PROFILE AND PROGNOSTIC BIOMARKERS OF PERSISTENT JOINT PAIN IN THE CHIKUNGUNYA FEVER: A SYSTEMATIC REVIEW**Anyela Lozano-Parra<sup>1</sup>, Víctor Herrera<sup>2</sup>, Silvio Urcuqui-Inchima<sup>3</sup>, Rosa Margarita Gélvez Ramírez<sup>4</sup>, Luis Ángel Villar Centeno<sup>5</sup><sup>1</sup>Centro de investigaciones Epidemiológicas, Universidad Industrial de Santander, BUCARAMANGA, Colombia, <sup>2</sup>Department of Public Health, Universidad Industrial de Santander, BUCARAMANGA, Colombia, <sup>3</sup>Departamento de Microbiología y Parasitología, Universidad de Antioquia, MEDELLIN, Colombia, <sup>4</sup>Centro de Atención y Diagnóstico de Enfermedades Infecciosas-CDI, Fundación INFOVIDA, BUCARAMANGA, Colombia, <sup>5</sup>4. Centro de Atención y Diagnóstico de Enfermedades Infecciosas-CDI, Fundación INFOVIDA, Colombia, BUCARAMANGA, Colombia**6740****EBOV-SPECIFIC NEUTRALIZING ANTIBODY PERSISTS AT HIGH LEVELS IN EBOLAVIRUS DISEASE SURVIVORS TWO YEARS AFTER RESOLUTION OF DISEASE IN A SIERRA LEONEAN COHORT**Nell G. Bond<sup>1</sup>, Kayla R. Shore<sup>2</sup>, Emily J. Engel<sup>1</sup>, Erin E. Coonan<sup>1</sup>, Foday Alhasan<sup>3</sup>, Michael A. Gbakie<sup>3</sup>, Fatima K. Kamara<sup>3</sup>, Lansana Kanneh<sup>3</sup>, Mambu Momoh<sup>3</sup>, Ibrahim M. Kanneh<sup>3</sup>, John D. Sandi<sup>3</sup>, Debra H. Elliott<sup>1</sup>, Samuel C. Ficenec<sup>1</sup>, Ashley R. Smira<sup>1</sup>, William A. Fischer<sup>4</sup>, David Wohl<sup>4</sup>, James E. Robinson<sup>1</sup>, Jeffery G. Shaffer<sup>2</sup>, Robert F. Garry<sup>1</sup>, Robert Samuels<sup>3</sup>, Donald S. Grant<sup>3</sup>, John S. Schieffelin<sup>1</sup><sup>1</sup>Tulane University SOM, New Orleans, LA, United States, <sup>2</sup>Tulane University School of Public Health, New Orleans, LA, United States, <sup>3</sup>Kenema Government Hospital, Kenema, Sierra Leone, <sup>4</sup>UNC School of Medicine, Chapel Hill, NC, United States**6741****PREVALENCE OF DENGUE AND CHIKUNGUNYA ANTIBODIES AMONG CHILDREN IN GRENADA, WEST INDIES**Melanie Kiener<sup>1</sup>, Roberta Evans<sup>2</sup>, Nikita Cudjoe<sup>2</sup>, Calum MacPherson<sup>2</sup>, Trevor Noel<sup>2</sup>, Randall Waechter<sup>2</sup>, A. Desiree LaBeaud<sup>1</sup><sup>1</sup>Stanford University School of Medicine, Stanford, CA, United States, <sup>2</sup>Windward Islands Research and Education Foundation WINDREF at St. George's University, True Blue, Grenada**6742****ANTIBODY INDUCED RESPONSE AGAINST SARS-COV-2 OMICRON SUBLINEAGES IN A COHORT VACCINATED WITH CORONAVAC FOLLOWED BY A TWO BOOSTER DOSES PROTOCOL WITH BNT162B2 AND AD26.COV2.S**Guilherme R. F. Campos<sup>1</sup>, Nathalie B. F. Almeida<sup>2</sup>, Priscilla S. Filgueiras<sup>2</sup>, Camila A. Corsini<sup>2</sup>, Sarah V. C. Gomes<sup>2</sup>, Daniel A. P. Miranda<sup>3</sup>, Jéssica V. de Assis<sup>3</sup>, Thaís Bárbara S. Silva<sup>4</sup>, Pedro Augusto Alves<sup>4</sup>, Gabriel R. Fernandes<sup>2</sup>, Jaqueline G. de Oliveira<sup>5</sup>, Paula Rahal<sup>6</sup>, Rafaella F. Q. Grenfell<sup>2</sup>, Maurício L. Nogueira<sup>1</sup><sup>1</sup>Faculdade de Medicina de São José do Rio Preto (FAMERP), Sao Jose do Rio Preto, Brazil, <sup>2</sup>Diagnosis and Therapy of Infectious Diseases and Cancer, Oswaldo Cruz Foundation (Fiocruz), Belo Horizonte, Brazil, <sup>3</sup>Faculdade de Medicina de São José do Rio Preto, Sao Jose do Rio Preto, Brazil, <sup>4</sup>Laboratório de Imunologia de Doenças Virais, Instituto Rene Rachou - Fundação Oswaldo Cruz, Belo Horizonte, Brazil, <sup>5</sup>Laboratório de Imunologia Celular e Molecular, Instituto Rene Rachou-Fundação Oswaldo Cruz, Belo Horizonte, Brazil, <sup>6</sup>Laboratório de Estudos Genômicos, Departamento de Biologia, Instituto de Biociências Letras e Ciências Exatas (IBILCE), Universidade Estadual Paulista (Unesp), Sao Jose do Rio Preto, Brazil**6743****ENGINEERING THE SURFACE OF DENGUE VIRUS 2 ENVELOPE PROTEIN TO SELECTIVELY ELICIT DIMER-SPECIFIC ANTIBODIES**Thanh Thanh N. Phan, Devina J. Thiono, Shaomin Tian, Aravinda M. de Silva, Brian Kuhlman  
UNC Chapel Hill, Chapel Hill, NC, United States**6744****CHARACTERIZING THE IMMUNE RESPONSE TO ZIKA VIRUS USING EPITOPE MAPPING, REPORTER VIRUS PARTICLES, AND ANTI-ZIKV ANTIBODIES**Edgar Davidson<sup>1</sup>, J. Charles Whitbeck<sup>1</sup>, Lewis J. Stafford<sup>1</sup>, Ross Chambers<sup>1</sup>, James E. Crowe Jr<sup>2</sup>, Benjamin J. Doranz<sup>1</sup><sup>1</sup>Integral Molecular, Inc., Philadelphia, PA, United States, <sup>2</sup>Vanderbilt University, Nashville, TN, United States**6745****COMPREHENSIVE MUTAGENESIS OF DENGUE VIRUS ENVELOPE PROTEINS TO MAP ANTIBODY EPITOPES AND IDENTIFY RESIDUES ESSENTIAL FOR FUNCTION**Edgar Davidson, Benjamin J. Doranz  
Integral Molecular, Inc., Philadelphia, PA, United States**6746****IMMUNOLOGICAL INSIGHTS FROM EPITOPE MAPPING ON THE CHIKUNGUNYA VIRUS ENVELOPE**Edgar Davidson<sup>1</sup>, Fong H. Rachel<sup>1</sup>, Rebecca Wright<sup>1</sup>, Lewis J. Stafford<sup>1</sup>, Jing Jin<sup>2</sup>, Graham Simmons<sup>2</sup>, Michael Diamond<sup>3</sup>, James E. Crowe Jr<sup>4</sup>, Benjamin J. Doranz<sup>1</sup><sup>1</sup>Integral Molecular, Inc., Philadelphia, PA, United States, <sup>2</sup>Vitalant Research Institute, San Francisco, CA, United States, <sup>3</sup>Washington University, St Louis, MO, United States, <sup>4</sup>Vanderbilt University, Nashville, TN, United States**6747****COMPARISON OF TRADITIONAL PLAQUE ASSAY TO IMMUNOFOCUS ASSAY FOR QUANTIFICATION OF CLINICAL (WILD-TYPE) YELLOW FEVER VIRUSES**Courtney A. Micheletti, Felicity J. Coulter, Bettie W. Kareko, William B. Messer  
Oregon Health & Science University, Portland, OR, United States**6748****A PANEL OF WILD-TYPE YELLOW FEVER VIRUSES REVEAL NEW INSIGHTS INTO THE POTENCY AND BREADTH OF 17D-ELICITED NEUTRALIZING ANTIBODIES IN A VACCINATED COHORT**Felicity Jane Coulter  
Oregon Health & Science University, Portland, OR, United States**6749****CHARACTERIZATION OF MBC-DERIVED MABS FROM AN INDIVIDUAL WITH SEQUENTIAL DENGUE AND ZIKA VIRUS INFECTIONS**D. Ryan Bhowmik<sup>1</sup>, Benjamin D. Mcelvany<sup>2</sup>, Nancy R. Graham<sup>2</sup>, Aravinda M. de Silva<sup>1</sup>, Sean A. Diehl<sup>2</sup>, Alena Janda Markmann<sup>1</sup><sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>2</sup>University of Vermont, Burlington, VT, United States**6750****TARGETS OF DENGUE CROSS-NEUTRALIZING POLYCLONAL SERA**

D. Ryan Bhowmik, Matthew G. Hvasta, Devina J. Thiono, Brian Kuhlman, Aravinda M. de Silva, Alena J. Markmann

University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

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**DETERMINANTS OF IMMUNIZATION IN POLIO SUPER HIGH-RISK UNION COUNCILS OF PAKISTAN**

Sajid Bashir Soofi, Imtiaz Hussain, Muhammad Umer, Shabina Ariff  
Aga Khan University, Karachi, Pakistan

**Viruses - Transmission Biology**

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**IDENTIFYING SOURCES OF HEPATITIS E VIRUS TRANSMISSION DURING OUTBREAKS THROUGH MODEL-DRIVEN ESTIMATION**

Sophia Tan<sup>1</sup>, Shahzar Rizvi<sup>1</sup>, Nila Cibu<sup>1</sup>, Benjamin J. Singer<sup>1</sup>, Andrew S. Azman<sup>2</sup>, Nathan C. Lo<sup>1</sup>

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**ALTERNATIVE MODALITIES AMPLIFYING TRANSMISSION OF EASTERN EQUINE ENCEPHALITIS VIRUS IN AVIAN HOSTS, THE FACTS ARE IN THE FECES**

Kristi M. Miley, Kelli Barr, Thomas Unnasch  
University of South Florida, Tampa, FL, United States

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**MUTATIONS OF THE FLAVIVIRUS CONSERVED RESIDUES IN THE ENVELOPE PROTEIN DOMAIN I-DOMAIN III LINKER ATTENUATE THE MOUSE NEUROINVASIVE PHENOTYPE OF WEST NILE VIRUS**

Bailey E. Maloney<sup>1</sup>, Adrienne E. Pohl<sup>1</sup>, Natalia C. Ball<sup>1</sup>, So Lee Park<sup>1</sup>, Emily K. Mantlo<sup>1</sup>, Alexis D. Schlieper<sup>1</sup>, Claire Y. Huang<sup>2</sup>, Alan D. Barrett<sup>3</sup>, Stephen Higgs<sup>1</sup>, Dana L. Vanlandingham<sup>1</sup>, Yan-Jang Huang<sup>1</sup>

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**INFLUENCE OF BREEDING SITES MICROBIOTA AND NUTRIMENT CONTENT ON Aedes aegypti MICROBIOTA AND VECTOR COMPETENCE FOR ARBOVIRUSES**

Elodie Calvez, Lyza Hery, Caitlin Gaete, Isaure Quetel, Aicha Loial, Christelle Dollin, Sébastien Breurec, Anubis Vega-Rúa

Institut Pasteur de la Guadeloupe, Les Abymes, Guadeloupe

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**THE EFFECT OF ENVIRONMENTAL TEMPERATURE ON TRANSMISSION DYNAMICS AND VIRAL GENETICS AMONG Culex tarsalis MOSQUITOES INFECTED WITH RIFT VALLEY FEVER VIRUS (RVFV)**

Arielle W. Glass  
Colorado State University, Fort Collins, CO, United States

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**VECTOR COMPETENCE OF Aedes aegypti TO DENGUE SEROTYPES TWO AND THREE IN AYAWASO WEST DISTRICT IN GHANA**

Deborah Pratt<sup>1</sup>, Michael Amo-Bosompem<sup>2</sup>, Christian Obirikorang<sup>3</sup>, Eudisia E. Agbosu<sup>4</sup>, Gideon Aning Boateng<sup>5</sup>, Patience L. Adams<sup>1</sup>, Mufeez Abudu<sup>6</sup>, Kwaku A. Osei<sup>6</sup>, Christopher N.L.T. Mensah<sup>6</sup>, Joseph Osei<sup>6</sup>, Samuel Dadzie<sup>6</sup>, Joseph H. K. Bonney<sup>1</sup>  
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**CELLULAR MECHANISMS INVOLVED IN THE VIRAL INTERFERENCE OF INFECTION BETWEEN DENGUE AND YELLOW FEVER VIRUSES IN Aedes mosquito cells**

Jhefferson B. Guimarães, Vitor G. Floriano, Carlos F. Capato, Benedito Antonio Lopes da Fonseca

School of Medicine of Ribeirão Preto, Ribeirão Preto, Brazil

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**Aedes aegypti MOSQUITO BITES ENHANCE INFECTION OF MYELOID CELLS WITH DENGUE VIRUS IN HUMAN SKIN**

Priscila M. Da Silva Castanha<sup>1</sup>, Sasha Azar<sup>2</sup>, Jason Yeung<sup>3</sup>, Megan Wallace<sup>1</sup>, Gwenddolen Kettenburg<sup>1</sup>, Simon Watkins<sup>1</sup>, Ernesto T A Marques Jr.<sup>1</sup>, Nikos Vasilakis<sup>4</sup>, Simon M. Barratt-Boyes<sup>1</sup>

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**VECTOR COMPETENCE OF US BORDER Aedes aegypti MOSQUITOES FOR DENGUE VIRUS SEROTYPE 1 ISOLATED FROM A MEXICO BORDER COMMUNITY**

Pedro M. Palermo, Jeanette Orbegozo, Douglas Watts  
University of Texas at El Paso, El Paso, TX, United States

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**EXPLORING POSSIBILITIES FOR BUNYAMWERA VIRUS MAINTENANCE CYCLE TRANSMISSION**

Erik Turner, Rebecca C. Christofferson  
Louisiana State University, Baton Rouge, LA, United States

Saturday  
October 21

## Viruses - Vaccine Clinical Trials

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### EFFICACY AND SAFETY OF AN INACTIVATED WHOLE-VIRION SARS-COV-2 VACCINE (CORONAVAC) IN BRAZILIAN HEALTHCARE PROFESSIONALS: THE PROFISCOV STUDY

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### PRIOR VACCINATION ALTERS THE DYNAMICS OF THE EVOLVING T CELL RESPONSE IN HUMANS UNDERGOING CONTROLLED CHALLENGE WITH DENGUE VIRUS 1

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### CHARACTERIZING A NOVEL DENGUE VACCINE BY LEVERAGING CLINICAL TRIAL DATA WITH A MULTI-LEVEL MODEL

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### DURABLE B AND T CELL IMMUNITY 10 YEARS AFTER DENGUE VACCINATION OF FLAVI-NAIVE PEOPLE

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### CONDUCTING AN EBOLA VACCINE TRIAL IN A REMOTE AREA OF THE DEMOCRATIC REPUBLIC OF THE CONGO: CHALLENGES, MITIGATIONS, AND LESSONS LEARNED

Ynke Larivière<sup>1</sup>, Trésor M. Zola<sup>2</sup>, Gwen Lemey<sup>1</sup>, Bernard Osangir<sup>1</sup>, Paul P. Vermeiren<sup>1</sup>, Solange Milolo<sup>2</sup>, Rachel Meta<sup>2</sup>, Emmanuel Esanga<sup>2</sup>, Junior Matangila<sup>2</sup>, Jean-Pierre Van geertruyden<sup>1</sup>, Pierre Van Damme<sup>1</sup>, Vivi Maketa<sup>2</sup>, Patrick Mitashi<sup>2</sup>, Hypolite Muhindo-Mavoko<sup>2</sup>

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### THE IMMUNOGENICITY OF A TETRAVALENT LIVE DENGUE VACCINE (DENVAXIA) ADMINISTERED TO CHILDREN IN THE PHILIPPINES WITH BASELINE IMMUNITY TO ONE DENGUE VIRUS SEROTYPE

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### CHARACTERISING THE IMMUNOGENICITY AND EFFICACY OF SECOND-GENERATION DENGUE VACCINE

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### SAFETY AND IMMUNOGENICITY OF A 40 MG ADJUVANTED DOSE OF A CHIKUNGUNYA VIRUS VIRUS-LIKE PARTICLE (CHIKV VLP) VACCINE: RESULTS FROM THREE PHASE 2 CLINICAL TRIALS

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## Malaria - Antimalarial Resistance and Chemotherapy

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### IN VIVO EFFICACY OF SULFADOXINE PYRIMETHAMINE IN PREGNANT WOMEN INFECTED WITH PLASMODIUM FALCIPARUM IN MALI

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### TRANSCRIPTOMIC APPROACH TOWARDS UNDERSTANDING THE MOLECULAR MECHANISMS OF IMIDAZOLOPIPERAZINE (IPZ) IN THE MALARIA PARASITE PLASMODIUM FALCIPARUM

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### INVESTIGATION OF MARKERS OF ARTEMISININ RESISTANCE AT SELECTED INTERVALS DURING THE 72-HOUR PERIOD AFTER ARTEMISININ BASED COMBINATION THERAPY DOSING IN KISUMU WESTERN KENYA



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**INSIGHTS INTO THE EMERGENCE OF THE 431V RESISTANCE MUTATION IN *PLASMODIUM FALCIPARUM*; LINKAGE WITH A NOVEL INTRON MUTATION**Emma F. Hocke<sup>1</sup>, Colin J. Sutherland<sup>2</sup>, Helle S. Hansson<sup>1</sup>, Adebajo J. Adegbola<sup>3</sup>, Peter TN Niba<sup>4</sup>, Innocent M. Ali<sup>5</sup>, Andria Mousa<sup>2</sup>, Ana Chopo-Pizarro<sup>2</sup>, Wilfred F. Mbacham<sup>6</sup>, Michael Alifrangis<sup>1</sup>, Cally Roper<sup>2</sup><sup>1</sup>Centre for Medical Parasitology, University of Copenhagen, Copenhagen, Denmark, <sup>2</sup>Faculty of Infectious and Tropical Diseases, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy, Obafemi Awolowo University, Ile-Ife, Nigeria, <sup>4</sup>Department of Biochemistry, Faculty of Science, University of Yaounde I, Yaounde, Cameroon, <sup>5</sup>The Biotechnology Centre, University of Yaounde I & Department of Biochemistry, University of Dschang, Yaounde, Cameroon, <sup>6</sup>The Biotechnology Centre, University of Yaounde I & The Fobang Institutes for Innovations in Science and Technology (FINISTECH), Yaounde, Cameroon

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**MALARIA PREVALENCE, TRANSMISSION POTENTIAL AND EFFICACY OF ARTEMISININ COMBINATION THERAPY IN THE KENYAN CENTRAL HIGHLANDS - AN EMERGING ZONE PREVIOUSLY CHARACTERIZED AS MALARIA FREE**

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**THERE IS NO TIME TO WASTE - WE NEED TO UNDERSTAND THE PROPHYLACTIC ACTION OF SULFADOXINE-PYRIMETHAMINE AGAINST MALARIA CLINICAL CASES FOR PREVENTION**Thierry Masserey<sup>1</sup>, Lydia Braunack-Mayer<sup>2</sup>, R Scott Miller<sup>2</sup>, Jörg J. Möhrle<sup>3</sup>, Melissa A. Penny<sup>1</sup><sup>1</sup>Swiss TPH, Allschwil, Switzerland, <sup>2</sup>Bill & Melinda Gates Medical Research Institute, Cambridge, MA, United States, <sup>3</sup>Medicines for Malaria Venture, Geneva, Switzerland

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**PHENOTYPIC VALIDATION OF MOLECULAR MARKERS ASSOCIATED WITH SEASONAL MALARIA CHEMOPREVENTION AND ONGOING SELECTIVE SWEEPS IN SENEGAL**Yaye Dié Ndiaye<sup>1</sup>, Katelyn Brenneman<sup>2</sup>, Wesley Wong<sup>2</sup>, Stephen Schaffner<sup>3</sup>, Abdoulaye Tine<sup>1</sup>, Mouhammad Sy<sup>1</sup>, Tolla Ndiaye<sup>1</sup>, Amy Gaye<sup>1</sup>, Mame Fama Ndiaye<sup>1</sup>, Mariama Toure<sup>1</sup>, Nogaye Gadiaga<sup>1</sup>, Aita Sene<sup>1</sup>, Awa Bineta Deme<sup>1</sup>, Baba Dieye<sup>1</sup>, Mamadou Samb Yade<sup>1</sup>, Khadim Diongue<sup>1</sup>, Fatou Ba Fall<sup>4</sup>, Doudou Sene<sup>1</sup>, Medoune Ndiop<sup>1</sup>, Ibrahima Diallo<sup>1</sup>, Mame Cheikh Seck<sup>1</sup>, Aida Sadikh Badiane<sup>1</sup>, Jules François Gomis<sup>1</sup>, Mouhamadou Ndiaye<sup>1</sup>, Mamadou Alpha Diallo<sup>1</sup>, Ibrahima Mbaye Ndiaye<sup>1</sup>, Bronwyn MacInnis<sup>5</sup>, Sarah Volkman<sup>2</sup>, Dyann Wirth<sup>2</sup>, Daouda Ndiaye<sup>1</sup><sup>1</sup>CIGASS/Cheikh Anta Diop University, Dakar, Senegal, <sup>2</sup>Harvard T.H. Chan School of Public Health, Boston, MA, United States, <sup>3</sup>The Broad Institute, MA, USA, Cambridge, MA, United States, <sup>4</sup>Senegal National Malaria Control Program, Dakar, Senegal, <sup>5</sup>The Broad Institute, Cambridge, MA, United States

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**DEVELOPMENT AND EVALUATION OF A NOVEL PROTOCOL TO ASSESS THE EFFICACY OF SEASONAL MALARIA CHEMOPREVENTION (SMC) USING SULFADOXINE, PYRIMETHAMINE AND AMODIAQUINE IN AN AREA OF HIGH ANTIMALARIAL DRUG RESISTANCE IN NAMPULA, MOZAMBIQUE.**Craig Bonnington<sup>1</sup>, Sonia Enosse<sup>2</sup>, Mercia Siteo<sup>2</sup>, Ivan Alejandro Pulido Tarquino<sup>2</sup>, Joel Tarning<sup>3</sup>, Mallika Imwong<sup>4</sup>, Francois H. Nosten<sup>5</sup>, Nicholas J. White<sup>3</sup>, Baltazar Candrinho<sup>6</sup> <sup>1</sup>Malaria Consortium, London, UK & Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom, <sup>2</sup>Malaria Consortium, Maputo, Mozambique, <sup>3</sup>Mahidol Oxford Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand & Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom, <sup>4</sup>Department of Molecular Tropical Medicine and Genetics, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand, <sup>5</sup>Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom & Shoklo Malaria Research Unit, Faculty of Tropical Medicine, Mahidol University, Mae Sot, Thailand, <sup>6</sup>National Malaria Control Programme, Ministry of Health, Maputo, Mozambique, Maputo, Mozambique

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**EVIDENCE OF CHLOROQUINE SUSCEPTIBLE *PLASMODIUM FALCIPARUM* MALARIA IN AN URBAN MEDIUM TRANSMISSION ZONE IN ZAMBIA**Bertha Kasonde<sup>1</sup>, Sydney Mwanza<sup>1</sup>, Victor Daka<sup>2</sup>, Michael Nambozi<sup>1</sup>, Phidelis Malunga<sup>1</sup> <sup>1</sup>Tropical diseases research centre, 71769, Zambia, <sup>2</sup>Copperbelt University, Ndola, Zambia

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**INSIGHTS INTO THE MODE OF ACTION AND A NOVEL MUTANT PFCRT-MEDIATED MECHANISM OF RESISTANCE TO THE ANTIMALARIAL CLINICAL CANDIDATE ZY-19489**John Okombo<sup>1</sup>, Laura Hagenah<sup>1</sup>, Jess Bridgford<sup>1</sup>, Tarrick Qahash<sup>2</sup>, Kurt Ward<sup>1</sup>, Eva Gil-Turbe<sup>1</sup>, Tomas Yeo<sup>1</sup>, Matthias Quick<sup>1</sup>, Sachel Mok<sup>1</sup>, Manuel Llinas<sup>2</sup>, David Fidock<sup>1</sup><sup>1</sup>Columbia University Irving Medical Center, New York, NY, United States, <sup>2</sup>Pennsylvania State University, State College, PA, United States

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**MOLECULAR SURVEILLANCE OF *PLASMODIUM FALCIPARUM* DRUG RESISTANCE REVEALS PRESENCE OF I431V DHPS MUTATION IN PARASITES HARBORING QUINTUPLE AND QUADRUPLE DHPS MUTATIONS IN SENEGAL**Mouhamad Sy<sup>1</sup>, Yaye Die Ndiaye<sup>1</sup>, Wesley Wong<sup>2</sup>, Mamadou Alpha Diallo<sup>1</sup>, Amy Gaye<sup>1</sup>, Tolla Ndiaye<sup>1</sup>, Aida Sadikh Badiane<sup>1</sup>, Baba Dieye<sup>1</sup>, Ibrahima Mbaye Ndiaye<sup>1</sup>, Younousse Diedhiou<sup>1</sup>, Amadou Moctar Mbaye<sup>1</sup>, Aita Sene<sup>1</sup>, Djiby Sow<sup>1</sup>, Lamine Ndiaye<sup>1</sup>, Khadim Diongue<sup>1</sup>, Mamane Nassirou Garba<sup>1</sup>, Mouhamadou Ndiaye<sup>1</sup>, Bronwyn MacInnis<sup>3</sup>, Dyann F. Wirth<sup>1</sup>, Sarah K. Volkman<sup>2</sup>, Daouda Ndiaye<sup>1</sup><sup>1</sup>International Research and Training Center for Applied Genomics and Health Surveillance (CIGASS) at UCAD, Dakar, Senegal, <sup>2</sup>Harvard T.H. Chan School of Public Health, Boston, MA, United States, <sup>3</sup>Broad Institute of MIT and Harvard, Cambridge, MA, United States

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**EVOLUTION OF GENOMIC MARKERS OF *PLASMODIUM FALCIPARUM* RESISTANCE TO ANTIFOLATES AND AMINOQUINOLINES IN UGANDA**Victor Asua<sup>1</sup>, Melissa D. Conrad<sup>2</sup>, Shreeya Garg<sup>2</sup>, Sawyer Smith<sup>3</sup>, David Giesbrecht<sup>3</sup>, Jennifer Legac<sup>2</sup>, Samuel L. Nsoby<sup>1</sup>, Grant Dorsey<sup>2</sup>, Moses R. Kamya<sup>1</sup>, Jeffrey A. Bailey<sup>2</sup>, Steffen Borrmann<sup>4</sup>, Philip J. Rosenthal<sup>2</sup><sup>1</sup>Infectious Diseases Research Collaboration, Kampala, Uganda, <sup>2</sup>University of California, San Francisco, San Francisco, CA, United States, <sup>3</sup>Brown University, Providence, RI, United States, <sup>4</sup>Institute of Tropical Medicine, University and University Hospital of Tübingen, Tübingen, Germany

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### RISK FACTORS OF CHEMOPROPHYLAXIS FAILURE MALARIA AMONG BANGLADESHI UN PEACEKEEPERS IN AFRICA

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### SUSCEPTIBILITY OF *PLASMODIUM FALCIPARUM* ISOLATES FROM EASTERN UGANDA TO GANAPLACIDE AND PHOSPHATIDYLINOSITOL 4-KINASE INHIBITORS

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### QPCR ANALYSIS OF RING STAGE SURVIVAL ASSAYS FOR SURVEILLANCE OF ARTEMISININ PARTIAL RESISTANCE IN *PLASMODIUM FALCIPARUM*

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### DECIPHERING *P. FALCIPARUM* ARTEMISININ RESISTANCE IN BANGLADESH: A GENOTYPIC-PHENOTYPIC EVALUATION OF KELCH13-DEPENDENT AND INDEPENDENT DETERMINANTS

Maisha K. Nima<sup>1</sup>, Nirjhar Bhattacharya<sup>2</sup>, Lisa A. Checkley<sup>2</sup>, Saiful Arefeen Sazed<sup>3</sup>, Muhammad Riadul H. Hossainey<sup>3</sup>, Ching S. Phru<sup>3</sup>, Douglas A. Shoue<sup>2</sup>, Mohammad Shafiq Alam<sup>3</sup>, Michael T. Ferdig<sup>1</sup>, Angana Mukherjee<sup>4</sup>

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### TRENDS OF *PLASMODIUM FALCIPARUM* MOLECULAR MARKERS OF ASSOCIATED WITH RESISTANCE ARTEMISININS AND REDUCED SUSCEPTIBILITY TO LUMEFANTRINE IN MAINLAND TANZANIA FROM 2016 TO 2021

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### DEVELOPMENT OF SELECTIVE *P. FALCIPARUM* PROLYL-TRNA SYNTHETASE INHIBITORS THAT ARE INSENSITIVE TO HALOFUGINONE RESISTANCE

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### UNDERSTANDING THE DEVELOPMENT OF DRUG RESISTANCE IN LIVER STAGES OF *PLASMODIUM FALCIPARUM*

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### LEVERAGING ON ROUTINE REVIEW MEETINGS IN ANTIMICROBIAL STEWARDSHIP

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## Malaria - Diagnosis - Challenges and Innovations

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### INVESTIGATING THE ACCURACY OF MALARIA DIAGNOSTIC TESTS: A BAYESIAN META-ANALYSIS COMPARING CONVENTIONAL AND ULTRASENSITIVE RAPID DIAGNOSTIC TOOLS

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### PRECLINICAL PERFORMANCE AND USABILITY EVALUATION OF A NEW POINT-OF-CARE TEST FOR GLUCOSE-6-PHOSPHATE DEHYDROGENASE DEFICIENCY

Rebecca K. Green<sup>1</sup>, Gornpan Gornsawun<sup>2</sup>, Paw Khu Moo<sup>2</sup>, Chanikan Thipwong<sup>2</sup>, Stephanie Zobrist<sup>1</sup>, Laypaw Archasukan<sup>2</sup>, Huyen Nguyen<sup>3</sup>, Huong Nguyen<sup>3</sup>, Cindy S. Chu<sup>4</sup>, Emily Gerth-Guyette<sup>1</sup>, Podjane Jittamala<sup>5</sup>, Francois Nosten<sup>4</sup>, Sampa Pal<sup>1</sup>, Gonzalo J. Domingo<sup>1</sup>, Germana Bancone<sup>4</sup>

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**PRACTICAL FACILITY-LEVEL APPROACHES TO REDUCE MALARIA TEST POSITIVITY RATES IN OYO STATE, NIGERIA**

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**THE ROLE OF PSYCHOSOCIAL FACTORS IN PROMPT AND APPROPRIATE CARE SEEKING FOR FEVER IN CHILDREN UNDER 5: FINDINGS FROM THE KENYA MALARIA BEHAVIOR SURVEY**

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**THE EXPERIENCE OF TESTING AND TREATMENT FOR MALARIA IN THE RETAIL SECTOR: COMPARING THE PROVIDER AND ATTENDANT REPORTED OUTCOMES**

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**COMPARING MALARIA RAPID DIAGNOSTIC TEST AND PCR FOR DETECTION OF PLASMODIUM FALCIPARUM INFECTIONS IN SCHOOL MALARIA PARASITAEMIA SURVEY IN TANZANIA**

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**COMPARISON OF TWO METHODS FOR DETECTION OF GAMETOCYTES IN BURKINA FASO YOUNG CHILDREN WHO RECEIVED THE MALARIA VACCINE CANDIDATE BK-SE36**

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**PERFORMANCE EVALUATION OF CONVENTIONAL RDT, HIGHLY SENSITIVE RDT, AND POLYMERASE CHAIN REACTION TO IDENTIFY MALARIA INFECTION AMONG PREGNANT WOMEN ATTENDING FIRST ANTENATAL CARE VISITS IN CHADIZA DISTRICT, ZAMBIA**

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**REINFORCING ADHERENCE TO NATIONAL GUIDELINES ON MALARIA CASE MANAGEMENT IN PRIVATELY-OWNED HEALTH FACILITIES: A CASE STUDY FROM OYO, NIGERIA**

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**MULTIPLEXED DDPCR-AMPLICON SEQUENCING TO UNDERSTAND PLASMODIUM VIVAX TRANSMISSION IN THE ETHIOPIAN HIGHLANDS**

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**BRAIN ENDOTHELIAL SECRETORY BIOMARKERS FOR SEVERE AND CEREBRAL MALARIA**

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(ACMCIP Abstract)

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### COMPARATIVE ANALYSIS OF PRIMARY HEALTH CARE PROVIDERS' ADHERENCE TO PARASITOLOGICAL DIAGNOSIS OF UNCOMPLICATED MALARIA USING BEHAVIORAL ECONOMICS PROTOTYPES IN AKWA IBOM, NIGERIA

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### EVALUATION OF THE STANDARD G6PD RAPID TEST FOR THE DETERMINATION OF THE ENZYMIC ACTIVITY OF G6PD

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### APPLICATION OF MACHINE LEARNING IN A RODENT MODEL FOR RAPID AND ACCURATE PARASITE COUNTS

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### SPATIAL HETEROGENEITY OF THE DISTRIBUTION OF PFHRP2/3 GENE DELETION IN ETHIOPIA AND CURRENT ALTERNATIVES TO EXCLUSIVE HRP2-BASED RDTs

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### PLASMODIUM FALCIPARUM HISTIDINE-RICH PROTEIN 2 GENE DELETION SURVEILLANCE IN SENEGAL

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### DETECTION AND QUANTIFICATION OF *PLASMODIUM VIVAX* DNA: CONCORDANCE BETWEEN PCR RESULTS ON PLASMA AND BLOOD PELLET SAMPLES FROM PATIENTS IN SENEGAL

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### INTEGRATED FACILITY-BASED REFRESHER TRAINING AND SUPPORTIVE SUPERVISION FOR STRENGTHENING HEALTHCARE PROVIDERS' CAPACITY FOR EFFECTIVE MALARIA CASE MANAGEMENT, PRODUCT SUPPLY MANAGEMENT AND SURVEILLANCE IN NIGERIA

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### EXPANDING COMMUNITY CASE MANAGEMENT OF MALARIA TO ALL AGES CAN CONTRIBUTE TOWARDS UNIVERSAL ACCESS TO MALARIA DIAGNOSIS AND TREATMENT: RESULTS FROM A CLUSTER RANDOMIZED TRIAL

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### DIGITALLY-ENHANCED RAPID MALARIA TESTING USING ARTIFICIAL INTELLIGENCE (AI) TO SUPPORT QUALITY CONTROL WITH COMMUNITY HEALTH WORKERS IN RWANDA

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## Malaria - Drug Development and Clinical Trials

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### EFFICACY OF ARTEMETHER-LUMEFANTRINE, ARTESUNATE-AMODIAQUINE, AND DIHYDROARTEMISININ-PIPERAQUINE FOR THE TREATMENT OF UNCOMPLICATED PLASMODIUM FALCIPARUM MALARIA AMONG CHILDREN IN THE CENTER AND NORTH REGIONS OF CAMEROON, 2021-2022

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### THERAPEUTIC EFFICACY OF ARTESUNATE-AMODIAQUINE AND ARTEMETHER-LUMEFANTRINE FOR UNCOMPLICATED FALCIPARUM MALARIA TREATMENT IN FOUR SENTINEL SITES OF CÔTE D'IVOIRE, 2021

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### AN IN VIVO SCREEN REVEALS NOVEL VULNERABILITIES IN THE MOSQUITO STAGES OF PLASMODIUM FALCIPARUM

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### THERAPEUTIC EFFICACY OF ARTEMETHER-LUMEFANTRINE AND DIHYDROARTEMISININ-PIPERAQUINE FOR THE TREATMENT OF UNCOMPLICATED PLASMODIUM FALCIPARUM MALARIA IN MALI, 2020-2022

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### PHARMACOKINETICS OF PIPERAQUINE WHEN USED AS MALARIA CHEMOPREVENTION IN HIV-INFECTED CHILDREN ON ANTIRETROVIRAL THERAPY IN UGANDA

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### EVALUATION OF IVERMECTIN AND THEIR METABOLITES AS AN ANTIMALARIA THERAPY AGAINST PLASMODIUM FALCIPARUM LIVER STAGE

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### A PHASE 2A TRIAL OF SJ733 FOR P. VIVAX MALARIA

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### THE ANTIPLASMODIAL ACTIVITY OF PUTATIVE COMPOUNDS TARGETING *PLASMODIUM* SPP. AURORA KINASE-2

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### THERAPEUTIC EFFICACY OF PYRONARIDINE-ARTESUNATE (PYRAMAX®) AGAINST UNCOMPLICATED *PLASMODIUM FALCIPARUM* INFECTION AT HAMUSIT HEALTH CENTER, NORTHWEST ETHIOPIA

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### MUTATION OF THEP. *FALCIPARUM* FLAVOKINASE CONFERS RESISTANCE TO ANTIPLASMODIAL RIBOFLAVIN ANALOGUES

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### ANTIPLASMODIAL ACTIVITY OF NOVEL HETEROCYCLIC COMPOUNDS USING IN SILICO AND IN VITRO ASSAYS

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Universidad del Valle, Cali, Colombia

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Sooyoung Kim<sup>1</sup>, Praveen K. Sahu<sup>2</sup>, Timir K. Padhan<sup>2</sup>, Stuti Mohanty<sup>2</sup>, Mohammed A. Haque<sup>2</sup>, Sanjib Mohanty<sup>2</sup>, Anne Kessler<sup>2</sup>, Danielle C. Ompad<sup>1</sup>, Jane M. Carlton<sup>3</sup>, Yesim Tozan<sup>1</sup>

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Selemani C. Mmbaga<sup>1</sup>, Tajiri Laizer<sup>1</sup>, Brian Masanja<sup>1</sup>, Praise J. Michael<sup>1</sup>, Janice Maige<sup>1</sup>, Maneno Baravuga<sup>1</sup>, Victoria Githu<sup>1</sup>, Emmanuel Mwanga<sup>2</sup>, Yeromin P. Mlacha<sup>1</sup>, Samson Kiware<sup>3</sup>, Nicodemus Govella<sup>1</sup>

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### A SUSTAINABLE MALARIA CONTROL BLUEPRINT: 20 YEARS OF CHALLENGES, LESSONS AND ACHIEVEMENTS

Wonder P. Phiri<sup>1</sup>, Matilde Riloha Rivas<sup>2</sup>, Olivier Tresor Donfack<sup>1</sup>, Jeremias Nzamio Mba Eyono<sup>1</sup>, Julia Yumbe Baka<sup>1</sup>, Liberato Motobe Vaz<sup>1</sup>, Teresa Ayingono Ondo Mfumu<sup>1</sup>, David Galick<sup>1</sup>, Kylie R. DeBoer<sup>3</sup>, Immo Kleinschmidt<sup>4</sup>, David L. Smith<sup>5</sup>, Claudia Daubenberger<sup>6</sup>, Bonifacio Manguire Nlavo<sup>7</sup>, Carlos A. Guerra<sup>8</sup>, Mitotha Ondo'o Ayekaba<sup>9</sup>, Guillermo A. Garcia<sup>9</sup>

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May Me The<sup>1</sup>, Zaw Wai Yan Bo<sup>2</sup>, Zayar Kyaw<sup>1</sup>, Bram Piot<sup>3</sup>, Myat Noe Thiri Khaing<sup>1</sup>, Sandar Oo<sup>1</sup>, Mahesh Paudel<sup>4</sup>

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Hanitra Ranaivoarison<sup>1</sup>, Omega Raobela<sup>1</sup>, Ye Maurice<sup>2</sup>, Sandy Mbolatiana Ralisata<sup>3</sup>

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Benjamin P. Fuller<sup>1</sup>, Ashley Winfred Nakawuki<sup>2</sup>, Yasin Ramazan<sup>2</sup>, Maureen Adongo<sup>2</sup>, Margaret Ireeta<sup>2</sup>, Dinah Nandudu<sup>2</sup>, Esther Mwolobi<sup>2</sup>, Edward Nyongesa<sup>2</sup>, Annet Bogere<sup>2</sup>, Richard Ssekitoleko<sup>3</sup>, Christopher C. Moore<sup>4</sup>, Herbert Kiirya Isabirye<sup>2</sup>

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**THE TRAJECTORY OF MALARIA CARE OF CHILDREN UNDER FIVE YEARS WITH FEVER, FROM AN ANNUAL CROSS-SECTIONAL HOUSEHOLD SURVEY WITHIN PROGRAM AREAS OF THE ISDELL:FLOWERS CROSS BORDER MALARIA INITIATIVE IN ZAMBIA**Alysse Maglior<sup>1</sup>, Jesse Heitner<sup>2</sup>, Alexandra Gordon<sup>1</sup>, Rebecca Vander Meulen<sup>1</sup>, Constance Njovu<sup>3</sup>, Busiku Hamainza<sup>4</sup><sup>1</sup>J.C. Flowers Foundation, New York City, NY, United States, <sup>2</sup>Mass General Brigham, Boston, MA, United States, <sup>3</sup>Anglican Diocese of Lusaka, Lusaka, Zambia, <sup>4</sup>National Malaria Elimination Centre, Ministry of Health of Zambia, Lusaka, Zambia

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**COMPARATIVE EFFECTIVENESS TRIAL OF TWO INTEGRATED COMMUNITY CASE MANAGEMENT TECHNIQUES FOLLOWING WITHDRAWAL OF INDOOR RESIDUAL SPRAYING IN NE UGANDA**Dorothy Echodu<sup>1</sup>, Humphrey Wanzirah<sup>2</sup>, Lucinda Hadley<sup>3</sup>, Thomas Eganyu<sup>2</sup>, Richard Elliott<sup>4</sup>, Fred Bukonya<sup>2</sup>, Kathryn Colborn<sup>5</sup>, Wycliff Odude<sup>6</sup>, Adoke Yeka<sup>7</sup>, Jimmy Opigo<sup>8</sup>, Emanuele Georgi<sup>3</sup><sup>1</sup>Pilgrim Africa, Seattle, WA, United States, <sup>2</sup>Pilgrim Africa, Kampala, Uganda, <sup>3</sup>University of Lancaster, Lancaster, United Kingdom, <sup>4</sup>Boise State University, Boise, ID, United States, <sup>5</sup>University of Colorado Denver, Denver, CO, United States, <sup>6</sup>Pilgrim Africa, Soroti, Uganda, <sup>7</sup>University of Makerere School of Public Health, Kampala, Uganda, <sup>8</sup>National Malaria Control Division, Ministry of Health, Kampala, Uganda

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**COMMUNITY PERCEPTIONS OF PROACTIVE MALARIA COMMUNITY CASE MANAGEMENT IN CHADIZA DISTRICT, ZAMBIA**Bupe M. Kabamba<sup>1</sup>, Melody N. Simaata<sup>1</sup>, Chabu C. Kangale<sup>1</sup>, Marie-Reine I. Rutagwera<sup>1</sup>, Maximillian Musunse<sup>1</sup>, Patrick Nyendwa<sup>1</sup>, Viennah Kapenda<sup>1</sup>, Ignatius Banda<sup>2</sup>, Caroline Phiri-Chibawe<sup>1</sup>, Paul Psychas<sup>3</sup>, Julie R. Gutman<sup>4</sup>, John M. Miller<sup>5</sup>, Busiku Hamainza<sup>2</sup>, Julie I. Thwing<sup>6</sup><sup>1</sup>PATH PAMO Plus, Lusaka, Zambia, <sup>2</sup>Zambia Ministry of Health National Malaria Elimination Centre, Lusaka, Zambia, <sup>3</sup>US President's Malaria Initiative (PMI), Centers for Disease Control and Prevention (CDC), Lusaka, Zambia, <sup>4</sup>Malaria Branch, CDC, Atlanta, GA, United States, <sup>5</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Lusaka, Zambia, <sup>6</sup>Malaria Branch, CDC, Lusaka, Zambia

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**ASSESSING MALARIA INCIDENCE IN PROACTIVE COMMUNITY MALARIA CASE MANAGEMENT (PROCCM): A RANDOMIZED CONTROL TRIAL IN CHADIZA DISTRICT, EASTERN PROVINCE, ZAMBIA**Marie-Reine I. Rutagwera<sup>1</sup>, Sarah Gallalee<sup>2</sup>, Travis Porter<sup>3</sup>, Chabu C. Kangale<sup>1</sup>, Bupe M. Kabamba<sup>1</sup>, Melody Simataa<sup>1</sup>, John M. Miller<sup>4</sup>, Caroline Phiri-Chibawe<sup>1</sup>, Maximillian Musunse<sup>1</sup>, Patrick Nyendwa<sup>1</sup>, Viennah Kapenda<sup>1</sup>, Paul Psychas<sup>5</sup>, Julie R. Gutman<sup>6</sup>, Adam Bennett<sup>3</sup>, Ignatius Banda<sup>7</sup>, Busiku Hamainza<sup>7</sup>, Julie I. Thwing<sup>8</sup><sup>1</sup>PATH PAMO Plus, Lusaka, Zambia, <sup>2</sup>University of California, San Francisco, San Francisco, CA, United States, <sup>3</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Seattle, WA, United States, <sup>4</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Lusaka, Zambia, <sup>5</sup>US President's Malaria Initiative (PMI), Centers for Disease Control and Prevention (CDC), Lusaka, Zambia, <sup>6</sup>Malaria Branch, CDC, Atlanta, GA, United States, <sup>7</sup>Zambia Ministry of Health National Malaria Elimination Centre (NMEC), Lusaka, Zambia, <sup>8</sup>US President's Malaria Initiative (PMI), Centers for Disease Control and Prevention (CDC), Lusaka, Zambia

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**EXPLORING STAKEHOLDERS' PERCEPTIONS OF THE BIKO ISLAND MALARIA CONTROL AND ELIMINATION PUBLIC-PRIVATE PARTNERSHIP MODEL: A QUALITATIVE STUDY**Antonio Enrique Ngua Sama Roca<sup>1</sup>, Olivier Tresor Donfack<sup>1</sup>, Wonder P. Phiri<sup>1</sup>, Jeremias Nzamio Mba Eyono<sup>1</sup>, Teresa Ayingono Ondo Mfumum<sup>1</sup>, David Galick<sup>1</sup>, Kylie R. DeBoer<sup>2</sup>, Carlos A. Guerra<sup>3</sup>, Matilde Riloha Rivas<sup>3</sup>, Guillermo A. Garcia<sup>4</sup><sup>1</sup>MCD Global Health, Malabo, Equatorial Guinea, <sup>2</sup>MCD Global Health, Silver Spring, MD, United States, <sup>3</sup>Ministry of Health and Social Welfare, National Malaria Control Program, Malabo, Equatorial Guinea

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**A CRITICAL SYSTEM PERSPECTIVE OF MALAWI'S HEALTH SURVEILLANCE ASSISTANTS' NEEDS AND OPPORTUNITIES**Nyanyiwe Masingi Mbeye<sup>1</sup>, Travis Porter<sup>2</sup>, Lumbani Munthali<sup>3</sup>, Austin A. Gumbo<sup>3</sup>, Humphreys Nsona<sup>4</sup>, Adam Bennett<sup>2</sup>, John M. Miller<sup>5</sup>, Arantxa Roca-Feltrer<sup>6</sup><sup>1</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Lilongwe, Malawi, <sup>2</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Seattle, WA, United States, <sup>3</sup>National Malaria Control Program, Malawi Ministry of Health, Lilongwe, Malawi, <sup>4</sup>Integrated Management of Childhood Illnesses Department, Malawi Ministry of Health, Lilongwe, Malawi, <sup>5</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Lusaka, Zambia, <sup>6</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Maputo, Mozambique

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**STAKEHOLDER ANALYSIS, IN-DEPTH INTERVIEWS AND COMMUNITY SURVEYS ON EXPANDED ROLES OF MALARIA COMMUNITY HEALTH WORKERS IN CAMBODIA, THAILAND AND VIETNAM**Monnaphat Jongdeepaisal<sup>1</sup>, Hue Nguyen<sup>1</sup>, Orng Long Heng<sup>1</sup>, Panarasri Khonputsai<sup>1</sup>, Orathai Prasert<sup>1</sup>, Suphitsara Maneenet<sup>1</sup>, Massaya Sirimatayanant<sup>1</sup>, Marco Liverani<sup>2</sup>, Christopher Pell<sup>3</sup>, Richard Maude<sup>1</sup><sup>1</sup>Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Amsterdam Institute for Global Health and Development (AIGHD), Amsterdam, Netherlands

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**EXPANDED ROLES OF COMMUNITY HEALTH WORKERS BEYOND MALARIA SERVICES IN THE ASIA-PACIFIC: A SYSTEMATIC REVIEW AND LANDSCAPING SURVEY**Massaya Sirimatayanant<sup>1</sup>, Monnaphat Jongdeepaisal<sup>1</sup>, Panarasri Khonputsai<sup>1</sup>, Worarat Khuenpetch<sup>1</sup>, Elinor Harriss<sup>2</sup>, Phone Si Hein<sup>3</sup>, Laura Buback<sup>4</sup>, Naomi Beyeler<sup>4</sup>, Amita Chebbi<sup>5</sup>, Richard Maude<sup>1</sup><sup>1</sup>Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand, <sup>2</sup>Bodleian Health Care Libraries, University of Oxford, Oxford, United Kingdom, <sup>3</sup>Asia Pacific Malaria Elimination Network (APMEN), Singapore, Singapore, <sup>4</sup>UCSF Institute for Global Health Sciences, University of California San Francisco, San Francisco, CA, United States

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**SUSTAINING MALARIA COMMUNITY HEALTH WORKER PROGRAMS WITH EXPANDED ROLES IN THE GMS: FINDINGS FROM IMPLEMENTER CASE STUDIES**Laura Buback<sup>1</sup>, Kyle Daniels<sup>2</sup>, Tiese Etim-Inyang<sup>1</sup>, Monnaphat Jongdeepaisal<sup>3</sup>, Massaya Sirimatayanant<sup>3</sup>, Panarasri Khonputsai<sup>3</sup>, Richard Maude<sup>3</sup>, Naomi Beyeler<sup>1</sup><sup>1</sup>Institute for Global Health Sciences, University of California San Francisco, San Francisco, CA, United States, <sup>2</sup>University of Washington School of Public Health, Seattle, WA, United States, <sup>3</sup>Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand**Malaria - Epidemiology**

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**HIGH BURDEN OF ASYMPTOMATIC MALARIA AND ANAEMIA DESPITE HIGH ADHERENCE TO MALARIA CONTROL MEASURES: A CROSS-SECTIONAL STUDY AMONG PREGNANT WOMEN ACROSS TWO SEASONS IN A MALARIA-ENDEMIC SETTING IN GHANA**Nsoh Godwin Anabire<sup>1</sup>, Belinda Aculley<sup>2</sup>, Abigail Pobee<sup>2</sup>, Eric Kyei-Baafour<sup>2</sup>, Gordon Awandare<sup>3</sup>, Maria del Pilar Quintana<sup>4</sup>, Lars Hviid<sup>5</sup>, Michael Ofori<sup>2</sup><sup>1</sup>Department of Biochemistry and Molecular Medicine, School of Medicine, University for Development Studies, Tamale, Ghana, <sup>2</sup>Department of Immunology, Noguchi Memorial Institute for Medical Research, University of Ghana, Accra, Ghana, <sup>3</sup>West African Centre for Cell Biology of Infectious Pathogens, Department of Biochemistry, Cell and Molecular Biology, University of Ghana, Accra, Ghana, <sup>4</sup>Centre for Medical Parasitology, Department of Immunology and Microbiology, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark



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### HIGH COMMUNITY HEALTH WORKER USAGE WITH APPROPRIATE MALARIA MANAGEMENT IN A MODERATE *PLASMODIUM FALCIPARUM* BURDEN REGION OF CHADIZA DISTRICT, ZAMBIA, APRIL-MAY, 2021

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### EVALUATION OF THE MANAGEMENT OF CHILDREN UNDER 10 YEARS OF AGE HOSPITALIZED WITH SEVERE MALARIA AT THE HEALTH CENTER OF TAMBACOUNDA, SENEGAL FROM 2018 TO 2021

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### IMPACTS OF CYCLONE IDAI RELATED INFRASTRUCTURE DAMAGE ON MALARIA INCIDENCE IN SOFALA PROVINCE, MOZAMBIQUE

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### UPDATING MALARIA RISK MAP OF KENYA BY PRE-SERVICE DIAGNOSIS OF THE MALARIA ASYMPTOMATIC INDIVIDUALS RECRUITED IN THE KENYA DEFENCE FORCES

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### LLIN EVALUATION IN UGANDA PROJECT (LLINEUP2) - ASSOCIATION BETWEEN HOUSING CONSTRUCTION AND MALARIA BURDEN IN UGANDA: RESULTS FROM AN OBSERVATIONAL STUDY OF 32 DISTRICTS

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### DISTRIBUTION OF MALARIA INFECTIONS AND RISK FACTORS IN SELECTED REGIONS OF TANZANIA WITH VARYING TRANSMISSION INTENSITIES

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### EVALUATION OF THE ASSOCIATION BETWEEN OCCUPATION AND MALARIA PARASITE GENETIC RELATEDNESS IN CAMBODIA

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### COMPARING COMPARTMENTAL MODELS AND STATE SPACE MODELS WITH SPATIAL DYNAMICS. A CASE STUDY OF MALARIA

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### A MATHEMATICAL MODEL FOR MICROSTRATIFICATION OF MALARIA INTERVENTIONS IN URBAN NIGERIA.

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### HIGH PREVALENCE AND RISK OF SUBPATENT *PLASMODIUM FALCIPARUM* INFECTIONS IN REGIONS WITH LOW TRANSMISSION INTENSITIES AND THEIR IMPLICATION FOR MALARIA ELIMINATION IN TANZANIA

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(ACMCIP Abstract)

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### INCIDENCE RATES OF MALARIA, MENINGITIS AND MORTALITY IN CHILDREN UNDER 5 YEARS OF AGE IN GHANA AND KENYA PRIOR TO THE ROLL-OUT OF THE MALARIA VACCINE

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**USING MORTALITY AUDITS TO IDENTIFY FACTORS INCREASING MALARIA MORTALITY IN KARAMOJA, A HIGH-BURDEN REGION OF UGANDA**

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**PREVALENCE OF FALCIPARUM AND NON-FALCIPARUM MALARIA IN THE 2014-15 RWANDA DEMOGRAPHIC HEALTH SURVEY**

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**UNDERSTANDING MALARIA BEHAVIORAL RISK FACTORS IN SEASONAL MIGRANT WORKERS IN SELECTED MID-HIGHLAND AND LOWLAND DISTRICTS OF NORTHWEST AMHARA REGION, ETHIOPIA**

**Berhane Tesfay<sup>1</sup>**, Henry Ntuku<sup>1</sup>, Melkamu Tiruneh<sup>1</sup>, Adem Agmas<sup>1</sup>, Asefaw Getachew<sup>1</sup>, Laura Merriman<sup>1</sup>, Belay Bezabih<sup>2</sup>, Gudissa Assefa<sup>3</sup>, Hiwot Solomon<sup>3</sup>, Dereje Dillu<sup>1</sup>, Asnakew Yeshiwondim<sup>1</sup>, Gezahegn Tesfaye<sup>1</sup>, Belendia Serda<sup>1</sup>, Caterina Guinovart<sup>4</sup>, Amir Siraj<sup>1</sup>, Adam Bennett<sup>1</sup>

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**COINFECTION BURDEN AND RISK FACTORS OF MALARIA AND HELMINTH INFECTIONS AMONG PREGNANT WOMEN IN TANZANIA**

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**NOVEL METHODS TO ESTIMATE THE LIKELIHOOD OF MIXED-SPECIES INFECTIONS AND RELATIVE SPECIES ABUNDANCE IN MALARIA**

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**MALARIA TRANSMISSION IN GOLD MINING AREAS, A CHALLENGE TO OVERCOME IN THE BRAZILIAN AMAZON REGION**

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**PREVALENCE OF MALARIA AMONGST CHILDREN UNDER 5 AND ASSOCIATED FACTORS IN SUB-SAHARAN AFRICA: A POOLED ANALYSIS COVERING 33 COUNTRIES, 2000 - 2022**

**Magdalene Akos Odikro<sup>1</sup>**, Williams Kwarah<sup>1</sup>, Kwasi Torpey<sup>1</sup>, Margaret Lartey<sup>2</sup>, Frances Baaba da-Costa Vroom<sup>1</sup>, Duah Dwomoh<sup>1</sup>, Ernest Kenu<sup>1</sup>, Samuel Bosomprah<sup>1</sup>

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**SEVERE HAEMOLYSIS DURING PRIMAQUINE RADICAL CURE OF PLASMODIUM VIVAX MALARIA: TWO SYSTEMATIC REVIEWS AND INDIVIDUAL PATIENT DATA DESCRIPTIVE ANALYSES**

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**TRENDS OF MALARIA PREVALENCE AND ASSOCIATED RISK FACTORS AMONG SCHOOL AGE CHILDREN IN MAINLAND TANZANIA: CROSS-SECTIONAL SURVEYS FROM 2015 - 2021**

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**MOLECULAR SPECIATION OF PLASMODIUM FROM THE TWO LARGEST POPULATION CENTERS OF CAMEROON**

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### REDUCTION OF MALARIA CASE INCIDENCE FOLLOWING THE INTRODUCTION OF CLOTHIANIDIN-BASED INDOOR RESIDUAL SPRAYING IN PREVIOUSLY UNSPRAYED DISTRICTS: AN OBSERVATIONAL ANALYSIS USING HEALTH FACILITY REGISTER DATA FROM COTE D'IVOIRE, 2018-2022

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### URBAN AND PERI-URBAN MALARIA: NEW EPIDEMIOLOGICAL LANDSCAPE OF MALARIA TRANSMISSION IN VENEZUELA

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### REDUCING MALARIA CAUSED ABSENTEEISM AMONG ORPHANS AND VULNERABLE CHILDREN IN CAMEROON: A CROSS SECTIONAL STUDY AMONG TEACHERS AND CAREGIVERS

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### EPIDEMIOLOGICAL CHARACTERISTICS OF MALARIA PARASITES IN SOKOTO STATE, NORTHWEST NIGERIA

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## Malaria - Genetics, Genomics and Evolution

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### RECURRENT DE NOVO MUTATION CONTRIBUTES TO DRUG RESISTANCE EVOLUTION IN *PLASMODIUM FALCIPARUM*

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### MOST ABUNDANT *PLASMODIUM FALCIPARUM* GENE TRANSCRIPTS IN THE BLOOD OF KENYAN CHILDREN WITH ACUTE MALARIA

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### GENETIC DIVERSITY OF *PLASMODIUM VIVAX* IN HIGH-RISK MALARIA AREAS IN CORDOBA, COLOMBIA

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### GENOME-WIDE SINGLE NUCLEOTIDE POLYMORPHISM (SNP) ANALYSIS OF *PLASMODIUM FALCIPARUM* DRUG RESISTANCE-ASSOCIATED LOCI IN AREAS OF DIFFERENT MALARIA ENDEMICITY IN TANZANIA

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(ACMCIP Abstract)

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### IMPACT OF *PLASMODIUM FALCIPARUM* INFECTION ON DNA METHYLATION OF CIRCULATING IMMUNE CELLS

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### MICROSATELLITE CHARACTERIZATION AND ANTIGENIC SEQUENCING OF *PLASMODIUM FALCIPARUM* FIELD ISOLATES FROM KENYA, PERU, AND THAILAND FOR DOWN SELECTION OF A NEW STRAIN FOR USE IN CONTROLLED HUMAN MALARIA INFECTION STUDIES

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### GENETIC DIVERSITY OF *PLASMODIUM FALCIPARUM* RETICULOCYTE BINDING HOMOLOGUE-5 (PFRH5) IN REGIONS OF DIFFERENT MALARIA TRANSMISSION IN TANZANIA

Angelina Julius, Beatus Lyimo, Deus Ishengoma, Dativa Pereus, celine Mandara, Ruth Boniface, Misago Seth  
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**POPULATION GENOMICS OF *PLASMODIUM FALCIPARUM* AND MALARIA CONTROL: IMPLICATIONS IN ABIDJAN (COTE D'IVOIRE)**

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 (ACMCIP Abstract)

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**ASSESSING TRANSMISSION DYNAMICS AND RELATEDNESS OF *PLASMODIUM FALCIPARUM* ON BIKO ISLAND, EQUATORIAL GUINEA**

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 (ACMCIP Abstract)

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***PLASMODIUM FALCIPARUM* POPULATION STRUCTURE IN SOUTHWESTERN AFRICA, USING WHOLE GENOME SEQUENCE DATA: INITIAL GENOME-WIDE SEQUENCE DATA FROM ANGOLA**

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**SEQUENCE POLYMORPHISMS IN THE PFS47 6-CYSTEINE PROTEIN IN *PLASMODIUM FALCIPARUM* ISOLATES FROM ANGOLA, 2019**

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**DRUG RESISTANCE PROFILE OF *PLASMODIUM FALCIPARUM* IN THE COMMUNITIES OF CONDORCANQUI, AMAZONAS, PERU**

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6876

**MOLECULAR EPIDEMIOLOGY OF NON-FALCIPARUM *PLASMODIUM* INFESTATIONS IN DIFFERENT AREAS OF THE IVORY COAST**

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 (ACMCIP Abstract)

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**A MORE EFFECTIVE MULTIPLICITY OF INFECTION: INCORPORATING WITHIN-HOST RELATEDNESS AND GENOTYPING ERROR TO OBTAIN MORE ACCURATE ESTIMATES OF *PLASMODIUM* WITHIN-HOST DIVERSITY AND POPULATION ALLELE FREQUENCIES**

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**STRUCTURAL AND FUNCTIONAL ANNOTATION OF A UNIQUE HYPOTHETICAL PHOSPHATASE OF *PLASMODIUM VIVAX***

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**BUZZWORTHY: NOVEL HIVE SEQUENCING TECHNOLOGY MAKES SINGLE-CELL SEQUENCING POSSIBLE FOR MALARIA FIELD ISOLATES**

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(ACMCIP Abstract)

**Malaria - Immunology**

6880

**ASSESSING THE INTERACTION BETWEEN NATURALLY-ACQUIRED PFCSP-SPECIFIC HUMORAL IMMUNITY AND THE PROTECTIVE EFFICACY OF THE ANTI-MALARIAL MONOCLONAL ANTIBODY CIS43LS**

**Hamidou Cisse<sup>1</sup>**, Hyeseon Cho<sup>1</sup>, Jeff Skinner<sup>1</sup>, Youngsil Seo<sup>1</sup>, Shanping Li<sup>1</sup>, Mary Peterson<sup>1</sup>, Cherrelle Dacon<sup>2</sup>, Azza H. Idris<sup>3</sup>, Aissata Ongoiba<sup>4</sup>, Safiatou Doumbo<sup>4</sup>, Kassoum Kayentao<sup>4</sup>, Boubacar Traore<sup>4</sup>, Joshua Tan<sup>2</sup>, Robert A. Seder<sup>5</sup>, Peter D. Crompton<sup>1</sup>  
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### THE PROTECTIVE ROLE OF MATERNALLY DERIVED ANTIBODIES AGAINST SYMPTOMATIC MALARIA IN THE FIRST YEAR OF LIFE

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### DENGUE AND MALARIA IMMUNE CROSSTALK: UNDERSTANDING THE IMPORTANCE OF CO-INFECTIONS IN ENDEMIC REGIONS

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### T CELL RESPONSES AGAINST LIVER STAGE *P. FALCIPARUM* ANTIGENS IN UGANDAN CHILDREN EXPOSED TO MALARIA

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### OFF-TARGET ANTIBODY RESPONSES INDUCED BY RTS,S/AS02A/1B IN MALARIA-NAÏVE ADULTS ASSOCIATED WITH PROTECTION AGAINST CONTROLLED HUMAN MALARIA INFECTION

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### ROLE OF MALARIA AND EPSTEIN-BARR VIRUS IN PEDIATRIC CANCER DEVELOPMENT IN MALAWIAN CHILDREN

Gabriela Samayoa-Reyes<sup>1</sup>, Elshafa M. Ahmed<sup>2</sup>, Conner Jackson<sup>1</sup>, Robert Baiocchi<sup>2</sup>, Robert Newton<sup>3</sup>, Rosemary Rochford<sup>1</sup>  
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### OPSONIC PHAGOCYTOSIS OF *PLASMODIUM FALCIPARUM* MEROZOITES IS ASSOCIATED WITH PROTECTION FROM CLINICAL MALARIA IN AN AREA OF LOW AND UNSTABLE MALARIA TRANSMISSION

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### QUANTIFYING THE EFFECT OF NUMBER OF INFECTIONS ON MALARIA IMMUNITY

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### INTERACTIVE SUBTRACTIVE BIOPANNING OF A *PLASMODIUM FALCIPARUM* SEXUAL STAGE (I-III) PHAGE DISPLAY LIBRARY IDENTIFIES A POTENTIAL TARGET OF ANTI-GAMETOCYTE IMMUNE RESPONSES

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(ACMCIP Abstract)

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### CYTOMEGALOVIRUS VECTOR PROLONGS LIVE MALARIA VACCINE IMMUNITY THROUGH INNATE AND ADAPTIVE MECHANISMS

Komi Gbedande<sup>1</sup>, Samad A. Ibitokou<sup>2</sup>, Monique L. Ong<sup>3</sup>, Mariapia A. Degli-Esposti<sup>4</sup>, Michael G. Brown<sup>1</sup>, Robin Stephens<sup>1</sup>  
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(ACMCIP Abstract)

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### VD2+ $\Gamma$ T CELL CHROMATIN ACCESSIBILITY AND IMMUNE FUNCTION ASSOCIATES WITH PRIOR MALARIA INCIDENCE

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(ACMCIP Abstract)



## Malaria - Pathogenesis

**6891**

### ELEVATED LEVELS OF CEREBROSPINAL FLUID NEURON-SPECIFIC ENOLASE ARE ASSOCIATED WITH LONG-TERM NEUROLOGIC AND COGNITIVE IMPAIRMENT IN CHILDREN WITH CEREBRAL MALARIA

**Alejandro Soto**<sup>1</sup>, Adnan Gopinadhan<sup>2</sup>, Paul Bangirana<sup>3</sup>, Robert Opoka<sup>4</sup>, Keisuke Kawata<sup>5</sup>, Dibyadyuti Datta<sup>1</sup>, Chandy John<sup>1</sup>

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### ELEVATED RENIN PREDICTS MORTALITY IN CHILDREN WITH SEVERE MALARIA

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### ASSOCIATION OF XANTHINE OXIDASE LEVELS AND DEVELOPMENT OF SEVERE MALARIAL ANEMIA

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**6894**

### LONGITUDINAL CLONAL PARASITE DYNAMICS FOLLOWING ARTEMETHER-LUMEFANTRINE TREATMENT FOR MALARIA IN HIV-INFECTED AND HIV-UNINFECTED CHILDREN IN UGANDA

**Justin Goodwin**<sup>1</sup>, Richard Kajubi<sup>2</sup>, Martina Wade<sup>1</sup>, Francis Orukan<sup>2</sup>, Moses Were<sup>2</sup>, Meghan Whalen<sup>3</sup>, Francesca T. Aweeka<sup>3</sup>, Norah Mwebaza<sup>2</sup>, Sunil Parikh<sup>1</sup>

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**6895**

### INVESTIGATING MICROBIOME AND TIGHT JUNCTION INTEGRITY IN THE GUT DURING *PLASMODIUM KNOWLESII* INFECTION IN MACAQUES

**Tryphena Adams**<sup>1</sup>, Noelle G. Allen<sup>1</sup>, Ryan M. Kelly<sup>1</sup>, Mariko S. Peterson<sup>2</sup>, Chester J. Joyner<sup>3</sup>, MaHPIC Consortium<sup>2</sup>, Rabindra Tirouvanziam<sup>2</sup>, Alberto Moreno<sup>4</sup>, Sanjeev Gumber<sup>2</sup>, Mary R. Galinski<sup>2</sup>, Regina Joice Cordy<sup>1</sup>

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(ACMCIP Abstract)

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### THE SEVERE MALARIA TRIUMVIRATE: AN INVESTIGATION OF ABO BLOOD GROUP, ROSETTE FORMATION, AND PFEMP1 TYPE

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(ACMCIP Abstract)

**6897**

### DEDUCING THE EFFECT OF VARIABLE OXYGEN CONCENTRATIONS ON *PLASMODIUM FALCIPARUM* GROWTH

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**6898**

### PREDISPOSING FACTORS RELATED TO THE PVMSP3ALFA GENE AND THE CYTOKINE RESPONSE IN VIVAX MALARIA.

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**6899**

### HOST-DERIVED LIPIDS SHAPE *PLASMODIUM FALCIPARUM* DEVELOPMENT AND PATHOGENICITY: AN INTEGRATIVE MULTI-OMICS ANALYSIS IN MALARIA-INFECTED CHILDREN

**Wael Abdroubou**<sup>1</sup>, Maria Nikulkova<sup>2</sup>, Massar Dieng<sup>1</sup>, Saruul Zorigt<sup>1</sup>, Manar AlShaikh<sup>1</sup>, Aïssatou Diawara<sup>3</sup>, Samuel Sermé<sup>4</sup>, Salif Sombié<sup>4</sup>, Noëlie Henry<sup>4</sup>, Desire Kargougou<sup>4</sup>, Issiaka Soulama<sup>4</sup>, Youssef Idaghdour<sup>1</sup>

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**6900**

### PROFILE OF ENDOTHELIAL BIOMARKERS (ANGIOPOEITIN-1 AND ANGIOPOEITIN- 2) IN PATIENTS WITH UNCOMPLICATED MALARIA IN LAGOS

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## Malaria - Prevention

**6901**

### THE ROLE OF PSYCHOSOCIAL FACTORS IN NET USE IN KENYA: FINDINGS FROM THE KENYA MALARIA BEHAVIOR SURVEY

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### A FIVE-ARM TRIAL COMPARING ARTESUNATE-AMODIAQUINE AND ARTEMETHER-LUMEFANTRINE-AMODIAQUINE WITH OR WITHOUT SINGLE-DOSE PRIMAQUINE TO REDUCE P. FALCIPARUM TRANSMISSION IN MALI

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### A QUASI-EXPERIMENTAL STUDY TO ESTIMATE EFFECTIVENESS OF SEASONAL MALARIA CHEMOPREVENTION IN AWEIL SOUTH COUNTY IN NORTHERN BAHR EL GHAZAL, SOUTH SUDAN

Jamshed Khan<sup>1</sup>, Denis Mubiru<sup>1</sup>, Francis Okot Lokang<sup>1</sup>, Abubaker Rom Ayuiel<sup>1</sup>, Jonathan Magoola<sup>1</sup>, Maria Suau Sans<sup>2</sup>, Christian Rassi<sup>2</sup>, Craig Bonnington<sup>2</sup>, Kevin Baker<sup>2</sup>, Sol Richardson<sup>3</sup>, Chuks Nnaji<sup>2</sup>, Sikai Huang<sup>2</sup>, Ahmad Julla<sup>4</sup>

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### DIGITAL TRANSFORMATION IN HEALTH: GUINEAN EXPERIENCE OF USING A NATIVE ANDROID APPLICATION COUPLED WITH DHIS2 IN THE 2022 NATIONAL ITN DISTRIBUTION CAMPAIGN

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### PLASMODIUM FALCIPARUM MALARIA INFECTION AND ANEMIA PREVALENCE IN UNDER FIVE YEAR OLD CHILDREN RECEIVING SEASONAL CHEMOPREVENTION IN A VILLAGE OF TANGHIN WOOBDO BURKINA FASO

Noelie Henry-Bere<sup>1</sup>, Mariama K. Combassere-Cherif<sup>2</sup>, Jean W. Sawadogo<sup>1</sup>, Amidou Diarra<sup>1</sup>, Alphonse Ouedraogo<sup>1</sup>, Alfred B. Tiono<sup>1</sup>, Issa Nèbié<sup>1</sup>, Sodiomon B. Sirima<sup>1</sup>

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### INTERMITTENT PREVENTIVE TREATMENT (IPT) OF MALARIA IN PREGNANCY WITH MEFLUQUINE MAY REDUCE NEVIRAPINE LEVELS AMONG HIV-INFECTED WOMEN

Linda Stoeger<sup>1</sup>, Anifa Valá<sup>2</sup>, Esperança Sevene<sup>2</sup>, Mercè Brunet<sup>3</sup>, Arsénio Nhacolo<sup>2</sup>, Eusébio Macete<sup>2</sup>, Clara Menéndez<sup>1</sup>, Raquel González<sup>1</sup>

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### CONTRIBUTION OF ACCESS IN THE IMPROVEMENT OF IPT3 COVERAGE AMONG PREGNANT WOMEN IN MADAGASCAR, 2019 - 2022

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### COMBINING SMC ACTIVITIES WITH CATCH-UP IMMUNIZATION AND COMMUNITY MALARIA CASE MANAGEMENT IN GUINEA

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### THE IMPORTANCE OF QUANTIFICATION TO OPTIMIZE RESOURCE MOBILIZATION FOR A CONTINUOUS SUPPLY OF ANTIMALARIAL COMMODITIES IN MADAGASCAR

Tiana Ravelonarivo<sup>1</sup>, Serge Ramahazomanana<sup>1</sup>, Aline Mukeraboriori<sup>1</sup>, Joelson Soa-Naivo<sup>1</sup>, Jane Briggs<sup>2</sup>, Luz Razafimbelo<sup>1</sup>, Timon Anjaramijoro<sup>3</sup>, Yvette Razafimaharo<sup>4</sup>, Soza Andriamarovesatra<sup>5</sup>, Haingomalala Razafimandimby<sup>4</sup>, Hasina Rabarijaona<sup>4</sup>, Rija Razafindrabe<sup>6</sup>, Jeanine Raharilalao<sup>7</sup>, Ony Andriamanalina<sup>2</sup>, Tantely Rajaobelina<sup>8</sup>, Laurent Kapesa<sup>9</sup>, Lantonirina Ranarison<sup>7</sup>, Elisohasina Rafalimanana<sup>4</sup>

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### PSYCHOSOCIAL FACTORS ASSOCIATED WITH INTENTIONS FOR SEEKING EARLY ANC DURING A FUTURE PREGNANCY: FINDINGS FROM THE KENYA MALARIA BEHAVIOR SURVEY

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### IMPACT OF COMMUNITY-BASED PROMOTION OR FOCUSED MALARIA IN PREGNANCY TRAINING FOR HEALTH PROVIDER ON THE COVERAGE OF INTERMITTENT PREVENTIVE TREATMENT IN PREGNANCY IN SAN, MALI

Sory Diawara<sup>1</sup>, Julie R. Gutman<sup>2</sup>, Bourema Kone<sup>1</sup>, Samba Diarra<sup>1</sup>, Celia Woodfill<sup>3</sup>, Jules Mihigo<sup>4</sup>, Aliou Diallo<sup>4</sup>, Philippe Mutwa<sup>5</sup>, Renion Saye<sup>6</sup>, Beh Kamate<sup>6</sup>, Moussa Niangaly<sup>1</sup>, Moussa Djimde<sup>1</sup>, Mohamed Keita<sup>1</sup>, Balla Bagayoko<sup>1</sup>, Abraham Tembely<sup>1</sup>, Mamadou Samake<sup>1</sup>, Almany Traore<sup>1</sup>, Aissata Ongoiba<sup>1</sup>, Safiatou Niare<sup>1</sup>, Fady Toure<sup>6</sup>, Fatimata Sidibe<sup>5</sup>, M'Fa Adama Diallo<sup>7</sup>, Addoulaye Djimde<sup>1</sup>, Boubacar Traore<sup>1</sup>, Kassoum Kayentao<sup>1</sup>

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**NEW TREATMENT REGIMEN OF SEASONAL MALARIA CHEMOPREVENTION A PROMISING ALTERNATIVE TO DISRUPT PLASMODIUM OF TRANSMISSION IN THE FIELD**

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**MULTI-LEVEL AND EVIDENCE-BASED ADVOCACY SUPPORTED INCREASED UPTAKE OF INTERMITTENT PREVENTIVE TREATMENT OF MALARIA AMONG PREGNANT WOMEN OF CROSS RIVER STATE, NIGERIA**

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**COMPARISON OF DIARY-REPORTED BEDNET USE ACTIVITIES AND ACCELEROMETER-BASED BEDNET DATA FROM COTE D'IVOIRE**

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**ESTIMATING THE IMPACT OF LLIN USE PATTERNS ON ANOPHELES MOSQUITO EXPOSURE AMONG SCHOOL-AGED CHILDREN IN UGANDA**

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**IMPACT EVALUATION OF SEASONAL MALARIA CHEMOPREVENTION THROUGH ANALYSIS OF LARGE, AGGREGATED ROUTINE COVERAGE SURVEYS IN NIGERIA, BURKINA FASO, CHAD, TOGO AND MOZAMBIQUE (2020-2022)**

**Sol Richardson<sup>1</sup>**, Sikai Huang<sup>1</sup>, Taiwo Ibinaiye<sup>2</sup>, Benoît Sawadogo<sup>3</sup>, Esseboé Sewu<sup>4</sup>, Albertino Zunza<sup>5</sup>, Oluola Oresanya<sup>6</sup>, Narcisse Tounaikok<sup>6</sup>, Cheick Compaore<sup>3</sup>, Mercia Siteo<sup>6</sup>, Chuks Nnaji<sup>7</sup>, Kevin Baker<sup>7</sup>  
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**COVERAGE OF INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN INFANTS AFTER FOUR YEARS OF IMPLEMENTATION IN SIERRA LEONE.**

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Joe-Henry C. Sanders<sup>2</sup>, Maximo Ramirez<sup>1</sup>, Cesc Bertran-Cobo<sup>1</sup>, Francisco Saute<sup>3</sup>, Didier K. Ekouevi<sup>4</sup>, Valérie Briand<sup>5</sup>, Anitta R.Y. Kamara<sup>6</sup>, Tom Sesay<sup>7</sup>, Mohamed Samai<sup>2</sup>, Clara Menendez<sup>1</sup>

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**ARTEMETHER-LUMEFANTRINE AS A CHEMOPROPHYLACTIC TREATMENT OF MALARIA**

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**USING MODELING TO ASSESS THE OPERATIONAL AND EPIDEMIOLOGICAL FACTORS AFFECTING EFFECTIVENESS OF PRAGMATIC PERENNIAL CHEMOPREVENTION IN OSUN STATE, SOUTHERN NIGERIA**

**Manuela Runge<sup>1</sup>**, Semiu Rahman<sup>2</sup>, Oluola Oresanya<sup>2</sup>, Monique Ambrose<sup>3</sup>, Anne Stahlfeld<sup>1</sup>, Ben Kok Toh<sup>1</sup>, Yahya Hamzat<sup>1</sup>, Caitlin A. Bever<sup>3</sup>, Perpetua Uhomoibhi<sup>4</sup>, James K. Tibenderana<sup>5</sup>, Jaline Gerardin<sup>1</sup>  
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**MODELLING THE PUBLIC HEALTH IMPACT OF PERENNIAL MALARIA CHEMOPREVENTION: CURRENT GUIDELINES AND A PROPOSED AGE-EXPANSION**

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**HARNESSING COMMUNITY HEALTH WORKERS TO IMPROVE PMC UPTAKE IN CAMEROON: INSIGHTS FROM THE PLUS PROJECT**

**Lilly Claire Ekobika<sup>1</sup>**, Charles Ndjindjock<sup>1</sup>, Dominique Bomba<sup>2</sup>, Junior Voundi<sup>2</sup>, Joel Ateba<sup>2</sup>, Erica Mengue<sup>1</sup>, Annie Michèle Mabally<sup>1</sup>, Marguerite M. Clougherty<sup>3</sup>, Malia Skjefte<sup>3</sup>, Jacques Kouakou<sup>3</sup>, Meredith Center<sup>3</sup>  
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**ADOPTION OF A PERENNIAL MALARIA CHEMOPREVENTION (PMC) STRATEGY IN BENIN: A CO-DESIGN PROCESS**

**Bienvenu Wakpo<sup>1</sup>**, Firmin Houssou<sup>1</sup>, William Houndjo<sup>2</sup>, Cyriaque D. Affoukou<sup>2</sup>, Jacques Kouakou<sup>3</sup>, Marguerite M. Clougherty<sup>3</sup>, Malia Skjefte<sup>3</sup>, Meredith Center<sup>3</sup>  
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Saturday  
October 21

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**DESIGNING COMMUNITY ENGAGEMENT ACTIVITIES USING A HUMAN CENTERED APPROACH TO PROMOTE PMC ADOPTION: THE PLUS PROJECT EXPERIENCE IN BENIN, CAMEROON, COTE D'IVOIRE, AND MOZAMBIQUE**

Jacques Kouakou<sup>1</sup>, Marguerite M. Clougherty<sup>1</sup>, Albertina Chihale<sup>2</sup>, William Houndjo<sup>3</sup>, Junior Voundi<sup>4</sup>, Alain Dago<sup>5</sup>, Malia Skjeftje<sup>1</sup>, Lilly Claire Ekobika<sup>6</sup>, Bienvenu Wakpo<sup>7</sup>, Elsa Nhamumbo<sup>8</sup>, Hans Bahibo<sup>9</sup>, Meredith Center<sup>1</sup>

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**KNOWLEDGE, ATTITUDES, PRACTICES AND ACCEPTABILITY OF DIGITAL PAYMENT BY OPERATORS OF THE INDOOR SPRAYING CAMPAIGN AGAINST MALARIA IN THE HEALTH DISTRICT OF KOUMPEMTOUM (SENEGAL)**

El Hadji Cheikh Abdoulaye DIOP

District Sanitaire de Koumpentoum, Koumpentoum, Senegal

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**IMPLEMENTATION OF PHASE 1 OF PERENNIAL MALARIA CHEMOPREVENTION (PMC) IN CHILDREN UNDER TWO YEARS OF AGE IN ABENGOUROU, CÔTE D'IVOIRE**

Hans Bahibo<sup>1</sup>, Hermann Akissi<sup>1</sup>, Soro N'wolo<sup>1</sup>, Stella Abli<sup>1</sup>, Sarah Koffi<sup>1</sup>, Meredith Center<sup>2</sup>, Jacques Kouakou<sup>2</sup>, Sadate Soumahoro<sup>1</sup>, Marguerite M. Clougherty<sup>2</sup>, Malia Skjeftje<sup>2</sup>, Méa Tanoh<sup>3</sup>, Colette Kokrasset<sup>3</sup>, Marcelin Dougonne<sup>3</sup>, Thérèse Bleu<sup>3</sup>, Nicole Lomg<sup>3</sup>, Paule-valérie Odjohou<sup>3</sup>

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**ACCEPTABILITY AND IMPLEMENTATION COST OF THE INTERMITTENT PREVENTIVE TREATMENT FOR MALARIA IN SCHOOLCHILDREN (IPTSC) IN MODERATE AND HIGH ENDEMIC AREAS, NORTH-EASTERN TANZANIA**

Geoffrey Makenga<sup>1</sup>, Edwin Liheluka<sup>1</sup>, Vito Baraka<sup>1</sup>, Misago D. Seth<sup>1</sup>, Daniel Chale<sup>1</sup>, Bruno Mmbando<sup>1</sup>, Filbert Fransis<sup>1</sup>, Mercy Chiduo<sup>1</sup>, George Mtove<sup>1</sup>, Celine Mandara<sup>1</sup>, Daniel T.R. Minja<sup>1</sup>, Samwel Gesase<sup>1</sup>, Abdallah Lusasi<sup>2</sup>, Frank Chacky<sup>2</sup>, Anna David<sup>2</sup>, Samwel Lazaro<sup>2</sup>, Fabrizio Molteni<sup>3</sup>, Alex Nkayamba<sup>4</sup>, Jean-pierre Van geertruyden<sup>5</sup>, John P.A. Lusingu<sup>1</sup>, Hilde Bastiaens<sup>5</sup>

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**Malaria – Surveillance and Data Utilization**

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**IMPROVING CLIENT SATISFACTION AND COMPETENCE OF HEALTH PROVIDERS IN TANZANIA**

Stella Makwaruzi<sup>1</sup>, Goodluck Tessa<sup>2</sup>, Saidi Mgata<sup>1</sup>, Michael Gulaka<sup>1</sup>, Geoffrey Makenga<sup>1</sup>, Nicodemus Govella<sup>1</sup>, Abdallah Lusasi<sup>3</sup>, Charlotte Eddis<sup>4</sup>, Marguerite M. Clougherty<sup>5</sup>, Albert Ikonje<sup>6</sup>, Chonge Kitojo<sup>6</sup>, Erik Reaves<sup>7</sup>, Sigsibert Mkude<sup>1</sup>, Samwel Lazaro<sup>5</sup>, Lolade Oseni<sup>8</sup>, Katherine Wolf<sup>8</sup>

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**MECHANISMS FOR MANAGEMENT MISSINGNESS OF DATA IN THE HEALTH MANAGEMENT SYSTEM A CASE OF UGANDA MALARIA CONTROL PROGRAM**

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**SYNERGY BETWEEN FACILITY AND COMMUNITY-BASED SURVEILLANCE IN THE MALARIA VACCINE PILOT EVALUATION IN GHANA: BEST PRACTICES, CHALLENGES AND LESSONS LEARNT**

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**PREDICTION OF RESISTANCE PIPERAQUINE BASED ON ATYPIC PIPERAQUINE CHEMOSENSITIVITY ISOTOPIC DATA**

Lise Musset, Celia Florimond, Maxime Agranier, Beatrice Volney, Manon Discours, Yassamine Lazrek

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**UNITED STATES OF AMERICA DOMESTIC MALARIA DRUG RESISTANCE SURVEILLANCE USING TARGETED AMPLICON DEEP SEQUENCING (TADS), 2018-2021**

Edwin Pierre-Louis<sup>1</sup>, Brooke Clemons<sup>2</sup>, Julia Kelley<sup>1</sup>, Dhruviben Patel<sup>1</sup>, My T. Nguyen<sup>1</sup>, Swarnali Louha<sup>1</sup>, Je-Hoon M. Oh<sup>1</sup>, Kimberly E. Mace<sup>1</sup>, Dragan Ljolje<sup>1</sup>, Christina Carlson<sup>1</sup>, Eldin Talundzic<sup>1</sup>, Susan Madison-Antenucci<sup>2</sup>

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**DIGITALIZATION OF MALARIA CAMPAIGNS IN NIGERIA: IMPACT, CHALLENGES, KEY FACTORS FOR CONSIDERATION AND OPPORTUNITIES**

Oneybuchi Augustine Okoro<sup>1</sup>, Kunle Oreagba<sup>2</sup>, Chukwu Okoronkwo<sup>1</sup>, Oluwaleke Jegede<sup>2</sup>, Uchenna Igbokwe<sup>2</sup>, Shina Aladeshawe<sup>3</sup>, Perpetua Uhomoihi<sup>1</sup>

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**A ROBUST MALARIA DATA INTEGRATED, STORAGE AND ANALYTICAL SYSTEM CRITICAL FOR ENHANCING SURVEILLANCE**

Japhet Chiwaula, Kaluba Mataka, Mercy Mwanza, Ignatius Banda, Stephen Bwalya, John Banda, Busiku Hamainza

Ministry of Health, Lusaka, Zambia

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**MALARIAGEN AMPLICON TOOLKIT: A GENOMIC SURVEILLANCE TOOL TO SUPPORT MALARIA CONTROL AND ELIMINATION**

Cristina V. Ariani, on behalf of MalariaGEN, on behalf of Genomics Surveillance Unit Wellcome Sanger Institute, Hinxton, United Kingdom



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**STANDARDISATION OF LABORATORY PROTOCOLS AND MULTINATIONAL IMPLEMENTATION TO ESTABLISH GENOMIC SURVEILLANCE CAPACITY IN MALARIA ENDEMIC COUNTRIES**

Mozam Ali<sup>1</sup>, Andrew Mains<sup>1</sup>, Thomas Pemberton<sup>1</sup>, Andrews Asante<sup>1</sup>, Joyce Ngoi<sup>2</sup>, Kukuu Thompson<sup>2</sup>, Eniyou Oriero<sup>3</sup>, Nhien Nguyen Thanh Thuy<sup>4</sup>, Angela Rumaseb<sup>5</sup>, Nadia Fadila<sup>6</sup>, Pinkan Pertiwi Kariodimedjo<sup>6</sup>, Agatha Mia Puspitasari<sup>6</sup>, Rintis Noviyanti<sup>6</sup>, Sarah Auburn<sup>5</sup>, Olivo Miotto<sup>7</sup>, Gordon Awandare<sup>2</sup>, Lucas Amenga-Etego<sup>2</sup>, Alfred Amambua-Ngwa<sup>3</sup>, Cristina Ariani<sup>1</sup>, Sónia Gonçalves<sup>1</sup>, **Shavanthi Rajatileka**<sup>1</sup>  
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**EMPOWERING HEALTH DISTRICTS IN SUSTAINING HIGH-QUALITY MALARIA CASE MANAGEMENT AND DIAGNOSTIC SERVICES PER NATIONAL GUIDELINES IN EQUATORIAL GUINEA**

**Matilde Riloha Rivas**<sup>1</sup>, Olivier Tresor Donfack<sup>2</sup>, Ramona Mba Andeme<sup>1</sup>, Martin Eka Ondo<sup>2</sup>, Consuelo Oki Eburi<sup>1</sup>, Delicia Esono Mba<sup>1</sup>, Kylie R. DeBoer<sup>3</sup>, Sandra Incardona<sup>3</sup>, Carlos A. Guerra<sup>3</sup>, Wonder P. Phiri<sup>2</sup>, Guillermo A. Garcia<sup>3</sup>  
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**MONITORING, MENTORING AND MOTIVATION VISITS TO COMMUNITY HEALTH WORKERS AS A MECHANISM TO SUSTAIN HIGH QUALITY OF CARE IN MALARIA COMMUNITY CASE MANAGEMENT: A CASE OF FOUR HIGH MALARIA BURDEN PROVINCES IN ZAMBIA**

**Sarah Shankwaya**<sup>1</sup>, Mathews Monde<sup>1</sup>, Chabu C. Kangale<sup>1</sup>, Marie-Reine I. Rutagwera<sup>1</sup>, Caroline Phiri-Chibawe<sup>1</sup>, Webby E. Phiri<sup>1</sup>, Paul Tembo<sup>1</sup>, Jennifer Somtore<sup>2</sup>, Busiku Hamainza<sup>3</sup>  
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**THE POTENTIAL OF SATELLITE-DERIVED BUILDING POLYGONS DATA AS A PROXY TO ON-THE-GROUND HOUSEHOLD MAPPING TO PROVIDE DENOMINATOR FOR PUBLIC HEALTH INTERVENTIONS: A PILOT STUDY IN BATA DISTRICT, EQUATORIAL GUINEA**

**Jeremias Nzamio Mba Eyono**<sup>1</sup>, Restituto Mba Nguema Avue<sup>1</sup>, David Galick<sup>1</sup>, Victor Mba Micha<sup>1</sup>, Julia Yumbe Baka<sup>1</sup>, Jose Osa Osa Nfumu<sup>2</sup>, Matilde Riloha Rivas<sup>3</sup>, Carlos A. Guerra<sup>1</sup>, Guillermo A. Garcia<sup>4</sup>  
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**GENETIC ANALYSIS OF MALARIA IN PALAWAN, PHILIPPINES REVEALS HIGHLY MONOCLONAL INFECTIONS IN HIGH TRANSMISSION AREA**

**Aaron Nicholas Elliott**<sup>1</sup>, Malou Macalinao<sup>2</sup>, Bryan Greenhouse<sup>1</sup>, Chris Drakeley<sup>3</sup>  
<sup>1</sup>University of California San Francisco, San Francisco, CA, United States, <sup>2</sup>LSHTM-Nagasaki University, Nagasaki, Japan, <sup>3</sup>LSHTM, London, United Kingdom

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**BENCHMARKING COMMUNITY CASE MANAGEMENT WORKFORCE NEEDS AND MALARIA COMMODITY DEMAND ACROSS SUB-SAHARAN AFRICA USING GEOSPATIAL OPTIMIZATION**

**Justin Millar**<sup>1</sup>, Emily Hilton<sup>1</sup>, Samantha Herrera<sup>2</sup>, Danya Rogers<sup>1</sup>, John M. Miller<sup>3</sup>, Travis Porter<sup>1</sup>, Hannah Slater<sup>1</sup>, Adam Bennett<sup>1</sup>  
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**SUBNATIONAL TAILORING AND TARGETING OF ANTI-MALARIA INTERVENTIONS IN ETHIOPIA**

**Amir Siraj**<sup>1</sup>, Gudissa Assefa<sup>2</sup>, Hiwot Solomon<sup>2</sup>, Asefaw Getachew<sup>3</sup>, Gezahegn Tesfaye<sup>3</sup>, Achameyesh Sisay<sup>2</sup>, Kebede Etana<sup>2</sup>, Ayele Tiyou<sup>2</sup>, Mebrahtom Haile<sup>2</sup>, Belendia Serda<sup>3</sup>, Asnakew Yeshiwondim<sup>2</sup>, Dereje Dillu<sup>3</sup>, Berhane Tesfay<sup>3</sup>, Getachew Abebe<sup>3</sup>, Arantxa Roca-Feltrer<sup>4</sup>, Adam Bennett<sup>1</sup>, Hannah Slater<sup>1</sup>  
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**COMBAT LAO PDR: FEASIBILITY AND EFFECTIVENESS OF COMMUNITY-BASED ACTIVE CASE DETECTION AND TREATMENT**

**Tim Finn**<sup>1</sup>, Sarah Cassidy-Seyoum<sup>1</sup>, Keobouphaphone Chindavongsa<sup>2</sup>, Viengxay Vanisaveth<sup>2</sup>, Sengkeo Vongviengxay<sup>1</sup>, Watthana Lasichanh<sup>1</sup>, Michelle Hsiang<sup>1</sup>, Chris Cotter<sup>1</sup>, Adam Bennett<sup>1</sup>  
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**A PROGRAM EVALUATION OF COMMUNITY HEALTH WORKER-LED REACTIVE CASE DETECTION AND ITS IMPACT ON MALARIA MORBIDITY AND MORTALITY IN ZAMBIA**

**Ellen Ferriss**<sup>1</sup>, William Sheahan<sup>1</sup>, Chris Lungu<sup>2</sup>, Kafula Silumbe<sup>2</sup>, John M. Miller<sup>2</sup>, Hannah Slater<sup>1</sup>, Adam Bennett<sup>1</sup>  
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**DOCUMENTING THE EVIDENCE OF ROUTINE DATA QUALITY AUDITS ON MALARIA DATA REPORTING ACCURACY IN ZAMBIA, 2015-2021**

**Smita Das**<sup>1</sup>, Arantxa Roca-Feltrer<sup>2</sup>, Marie-Reine I. Rutagwera<sup>3</sup>, Christopher Lungu<sup>3</sup>, Prudence Malama<sup>3</sup>, Mathews Monde<sup>3</sup>, Ignatius Banda<sup>4</sup>, Mercy M. Ingwe<sup>1</sup>, Busiku Hamainza<sup>4</sup>, Adam Bennett<sup>1</sup>, Michael Hainsworth<sup>1</sup>  
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**LOST TIME, LOST LIVES: INVESTIGATING DETERMINANTS OF DELAYED MALARIA TREATMENT IN SUB-SAHARAN AFRICA'S CHILDREN**

**Jailos Lubinda**, Paul Castle, Susan Rumisha, Paulina Dzianach, Daniel Weiss, Peter Gething  
 Telethon Kids Institute, Malaria Atlas Project, Cockburn City, Australia

Saturday  
October 21

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### ENGAGING HUMAN-CENTRED DESIGN TO UNDERSTAND HUMAN BEHAVIOURS AND MALARIA CONTROL IN HIGHLY ENDEMIC AREAS IN MALAWI.

**Blessings N. Kaunda-Khangamwa**<sup>1</sup>, John Gimnig<sup>2</sup>, Themba Mzilahowa<sup>1</sup>, Don P. Mathanga<sup>1</sup>, Michael Kayange<sup>3</sup>, Shadreck Mulenga<sup>3</sup>, Akuzike Banda<sup>3</sup>, Julie-Anne A. Tangena<sup>4</sup>

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### IMPLEMENTING GENOMIC SURVEILLANCE FOR MALARIA IN GHANA: OPPORTUNITIES AND CHALLENGES

**Joyce M. Ngoi**, Collins M. Moranga, Kukua A. Thompson, Gordon A. Awandare, Lucas Amenga-Etego

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## Malaria - Vaccines and Immunotherapeutics

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### PRIORITIZATION OF *PLASMODIUM FALCIPARUM* ANTIGENS ASSOCIATED WITH REDUCED RISK OF MALARIA DURING PREGNANCY

**Lucy Mwai**<sup>1</sup>, Jesse Gitaka<sup>1</sup>, Hikaru Nagaoka<sup>2</sup>, Sebastian Musundi<sup>1</sup>, Takafumi Tsuboi<sup>3</sup>, Eizo Takashima<sup>2</sup>, Bernard N. Kanoi<sup>1</sup>

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### EFFICACY OF R21/MATRIX-M™ IS MAINTAINED IN A PHASE IIB TRIAL IN CHILDREN IN BURKINA FASO OVER FOUR MALARIA SEASONS

**Hamtandi Magloire Natama**<sup>1</sup>, Mehreen S. Dattoo<sup>2</sup>, Ousmane Traoré<sup>1</sup>, Athanase M. Somé<sup>1</sup>, Toussaint Rouamba<sup>1</sup>, Duncan Bellamy<sup>2</sup>, Félix Ido<sup>1</sup>, Prisca Yaméogo<sup>1</sup>, Christian M. Tahita<sup>1</sup>, Youssouf Bagayan<sup>1</sup>, Debora Sangara<sup>1</sup>, Florence Ouédraogo<sup>1</sup>, Rachidatou Soma<sup>1</sup>, Faizatou Sorgho<sup>1</sup>, Fernando Ramos-Lopez<sup>2</sup>, Alison Lawrie<sup>2</sup>, Rachel Roberts<sup>2</sup>, Matthew Cairns<sup>3</sup>, John Bradley<sup>3</sup>, Nicola Williams<sup>4</sup>, Jenny Reimer<sup>5</sup>, Filip Dubovsky<sup>6</sup>, Gregory Glenn<sup>6</sup>, Innocent Valea<sup>1</sup>, Hermann Sorgho<sup>1</sup>, Katie J. Ewer<sup>2</sup>, Umesh Shaligram<sup>7</sup>, Adrian V.S. Hill<sup>2</sup>, Halidou Tinto<sup>1</sup>

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### STRUCTURE-BASED DESIGN OF A STRAIN-TRANSCENDING SINGLE-COMPONENT AMA1-RON2L MALARIA VACCINE

**Palak N. Patel**, Thayne H. Dickey, Ababacar Diouf, Nichole D. Salinas, Holly McAleese, Tarik Ouahes, Carole A. Long, Kazutoyo Miura, Lynn E. Lambert, Niraj H. Tolia

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### EVALUATION OF THE SAFETY AND IMMUNOGENICITY OF A SINGLE- VERSUS TWO-VIAL PRESENTATION OF R21/MATRIX-M™ IN CHILDREN IN MALI

**Yahia Dicko**<sup>1</sup>, Fernando Ramos Lopez<sup>2</sup>, Almahamoudou Mahamar<sup>1</sup>, Seydina O Maguiraga<sup>1</sup>, Abasse Diaby<sup>1</sup>, Kalifa Diarra<sup>1</sup>, Duncan Bellamy<sup>2</sup>, Lisa Stockdale<sup>2</sup>, Mehreen S. Dattoo<sup>2</sup>, Sophie Weston<sup>2</sup>, Alison Lawrie<sup>2</sup>, Nicola Williams<sup>2</sup>, Samuel Provstgaard-Morys<sup>2</sup>, Yaya Sankare<sup>1</sup>, Makonon Diallo<sup>1</sup>, Koualy Sanogo<sup>1</sup>, Oumar M. Dicko<sup>1</sup>, Soumeyla Diarra<sup>1</sup>, Oumar Attaher<sup>1</sup>, Djibrilla Issiaka<sup>1</sup>, Amagana Dolo<sup>1</sup>, Umesh Shaligram<sup>4</sup>, Prasad Kulkarni<sup>4</sup>, Adrian V. S. Hill<sup>2</sup>, Katie Ewer<sup>2</sup>, Alassane Dicko<sup>1</sup>

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### A SYSTEMATIC REVIEW OF *PLASMODIUM FALCIPARUM* CIRCUMSPOROZOITE PROTEIN BASED VACCINE CANDIDATES: IMPACT OF ANTIGEN, DOSE AND ADJUVANT ON PROTECTIVE EFFICACY AGAINST CONTROLLED HUMAN MALARIA INFECTION CHALLENGE

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### GENETIC DIVERSITY & NATURAL SELECTION OF A MALARIA VACCINE CANDIDATE GENE IN THE ETHIOPIAN *PLASMODIUM VIVAX* POPULATION

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(ACMCIP Abstract)

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### SAFETY OF THE MALARIA VACCINE CANDIDATE R21/MATRIX-M™ WHEN CO-ADMINISTERED WITH EPI VACCINES FOR MEASLES-RUBELLA AND YELLOW FEVER AT 9 MONTHS OF AGE IN MALIAN CHILDREN

**Fernando Ramos Lopez**<sup>1</sup>, Yahia Dicko<sup>2</sup>, Mehreen S. Dattoo<sup>1</sup>, Sophie Weston<sup>1</sup>, Almahamoudou Mahamar<sup>2</sup>, Abasse Diaby<sup>2</sup>, Kalifa Diarra<sup>2</sup>, Mamoudou Samassekou<sup>2</sup>, Cheick B. Sagara<sup>2</sup>, Mahamadou A. Sidibe<sup>2</sup>, Yaya Sankare<sup>2</sup>, Ahamadou Youssouf<sup>2</sup>, Amadou Tapily<sup>2</sup>, Oumar Attaher<sup>2</sup>, Djibrilla Issiaka<sup>2</sup>, Amagana Dolo<sup>2</sup>, Alison Lawrie<sup>1</sup>, Nicola Williams<sup>1</sup>, Cheryl Turner<sup>1</sup>, Oliver Conway<sup>1</sup>, Umesh Shaligram<sup>4</sup>, Prasad Kulkarni<sup>4</sup>, Adrian V.S. Hill<sup>1</sup>, Katie J. Ewer<sup>1</sup>, Alassane Dicko<sup>2</sup>

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### MACHINE LEARNING FOR *PLASMODIUM FALCIPARUM* REVERSE VACCINOLOGY

**Renee Ti Chou**<sup>1</sup>, Amed Ouattara<sup>2</sup>, Matthew Adams<sup>2</sup>, Andrea A. Berry<sup>2</sup>, Shannon Takala-Harrison<sup>2</sup>, Michael P. Cummings<sup>1</sup>

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### BIOPHYSICAL CHARACTERIZATION OF NOVEL HUMAN MONOCLONAL ANTIBODIES TARGETING *PLASMODIUM VIVAX* APICAL MEMBRANE ANTIGEN 1

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**COMPARISON OF JUNCTIONAL, MINOR REPEAT, AND MAJOR REPEAT-FOCUSED CIRCUMSPOROZOITE VACCINES USING THE TOBACCO MOSAIC VIRUS EPI TOPE DISPLAY PLATFORM**

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(ACMCIP Abstract)

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**IMMUNOGENICITY OF A PLASMODIUM VIVAX CIRCUMSPOROZOITE PROTEIN NANOPARTICLE VACCINE**

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**COMPARABILITY OF THE STANDARD MEMBRANE FEEDING ASSAY (SMFA) ACROSS DIFFERENT VACCINE STUDIES, STUDY SITES, AND TIME**

Jen C. C. Hume<sup>1</sup>, Jennifer Kwan<sup>2</sup>, Olga Muratova<sup>1</sup>, Heather Goodman<sup>1</sup>, Edward Owen<sup>1</sup>, Holly Torano<sup>1</sup>, Sara A. Healy<sup>1</sup>, Issaka Sagara<sup>3</sup>, Patrick E. Duffy<sup>1</sup>

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**BUILDING A NEXT-GENERATION PRIME-AND-TRAP PRE-ERYTHROCYTIC MALARIA VACCINE**

Rebekah Reynolds<sup>1</sup>, Yining Zhu<sup>2</sup>, Anya Kalata<sup>1</sup>, Felicia Watson<sup>1</sup>, Naveen Yadav<sup>1</sup>, Melanie Shears<sup>1</sup>, Hai-Quan Mao<sup>2</sup>, Sean C. Murphy<sup>1</sup>

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**EXPLORING IMMUNITY INDUCED BY PLASMODIUM FALCIPARUM CIRCUMSPOROZOITE, PRE-ERYTHROCYTIC VACCINE CANDIDATE, FMP014/ALFQ**

Paul M. Robben<sup>1</sup>, Jessica Bolton<sup>1</sup>, Jack N. Hutter<sup>1</sup>, Jason A. Regules<sup>1</sup>, Gary Matyas<sup>2</sup>, Sheetij Dutta<sup>1</sup>, Elke S. Bergmann-Leitner<sup>1</sup>, Evelina Angov<sup>1</sup>

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**Bacteriology - Enteric Infections**

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**MATERNAL ENVIRONMENTAL ENTERIC DYSFUNCTION AND MATERNAL MALNUTRITION: EFFECT ON MATERNAL AND INFANT MICROBIOTA AND MOTHER-INFANT TRANSFER OF DYSBIOSIS IN CENTRAL-AFRICA**

Violeta Moya-Alvarez<sup>1</sup>, Pascale Vonaesch<sup>2</sup>, Amine Ghazlane<sup>3</sup>, Daniel Mad-Bondo<sup>4</sup>, Bertrand Kongoma<sup>4</sup>, Serge Djorie<sup>5</sup>, Philippe Sansonetti<sup>3</sup>

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**ANTIMICROBIAL RESISTANCE IN E. COLI ISOLATED FROM DIARRHEAL STOOLS IN CHILDREN AGED 0-3 YEARS AT THE YIRIMADIO COMMUNITY HEALTH CENTER, MALI**

Bintou Diarra  
MRTC, Bamako, Mali

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**COMPARATIVE EVALUATION OF ANTIMICROBIAL SUSCEPTIBILITY OF SHIGELLA ISOLATES AMONG CHILDREN <5 YEARS IN RURAL KENYA PRE AND POST ROTAVIRUS VACCINE INTRODUCTION**

Alex O. Awuor<sup>1</sup>, Billy Ogwel<sup>1</sup>, George Ayodo<sup>2</sup>, Sharon Tennant<sup>3</sup>, Karen L. Kotloff<sup>3</sup>, Richard Omoro<sup>1</sup>

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**PARASITIC AND ANTIBIOTIC-RESISTANT BACTERIAL CONTAMINATION OF RAW SALAD VEGETABLES SOLD IN LOCAL MARKETS OF DHAKA, BANGLADESH**

Ayan Goshwami<sup>1</sup>, Priyanka Barua<sup>1</sup>, Meher Nigad Nipa<sup>2</sup>, Sharmin Musa<sup>1</sup>

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**HOSPITALISATION AND MORTALITY RATES AMONG CHILDREN WITH MODERATE TO SEVERE DIARRHOEA TREATED WITH AZITHROMYCIN OR PLACEBO: A RANDOMISED CONTROLLED TRIAL**

Salman Haq, ibtisam qazi, farah naz  
aga khan university, Karachi, Pakistan

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**THE ROLE OF VILLAGE DOCTORS IN THE TREATMENT OF PEDIATRIC DIARRHEA AND POTENTIAL FOR ANTIMICROBIAL STEWARDSHIP IN RURAL BANGLADESH: A DESCRIPTIVE ANALYSIS**

Olivia R. Hanson<sup>1</sup>, Ishtiakul I. Khan<sup>2</sup>, Zahid H. Khan<sup>2</sup>, Mohammad A. Amin<sup>2</sup>, Mohammad T. Islam<sup>2</sup>, Melissa H. Watt<sup>1</sup>, Eric J. Nelson<sup>3</sup>, Sharia M. Ahmed<sup>1</sup>, Firdausi Qadri<sup>2</sup>, Daniel Leung<sup>1</sup>, Ashrafur I. Khan<sup>2</sup>

<sup>1</sup>University of Utah, Salt Lake City, UT, United States, <sup>2</sup>International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh, <sup>3</sup>University of Florida, Gainesville, FL, United States

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## SAFETY, IMMUNOGENICITY, AND EFFICACY OF ETVAXÂ VACCINE AGAINST ENTEROTOXIGENIC E. COLI-ASSOCIATED DIARRHEA IN GAMBIAN CHILDREN AGED 6 TO 18 MONTHS

M. Jahangir Hossain<sup>1</sup>, Fatou Secka<sup>1</sup>, Lady C. Sanyang<sup>1</sup>, Taiwo Raifu<sup>1</sup>, Emmanuel C. Okoh<sup>1</sup>, Olubunmi A. Olubiyi<sup>1</sup>, Mbemba Drammeh<sup>1</sup>, Emmanuel U. Richard<sup>1</sup>, Mama Drammeh<sup>1</sup>, Samba Juma Jallow<sup>1</sup>, Ousman Secka<sup>1</sup>, Anna Roca<sup>1</sup>, Nils Nils<sup>2</sup>, Ann-Mari Svennerholm<sup>3</sup>, Anna Hill<sup>2</sup>, Umberto D' Alessandro<sup>1</sup>, Thomas F. Wierzbak<sup>4</sup>

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## A LONGITUDINAL COMMUNITY ASSESSMENT OF PLASMA CITRULLINE IN TWO COHORTS OF BANGLADESHI INFANTS

Zhanmo Ni<sup>1</sup>, Abdullah Siddique<sup>2</sup>, Mamun Kabir<sup>2</sup>, Masud Alam<sup>2</sup>, Rifat Ara<sup>2</sup>, Tahsin Ferdous<sup>2</sup>, Rebecca M. Munday<sup>3</sup>, Rashidul Haque<sup>2</sup>, Priya Duggal<sup>4</sup>, Poonum Korpe<sup>4</sup>

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## ANTIMICROBIAL RESISTANCE TO ANTIBIOTICS AT A COMMUNITY-LEVEL HEALTH FACILITY IN MALI: A NANOPORE SEQUENCING AS A TOOL FOR AMR SURVEILLANCE

Antoine Dara<sup>1</sup>, Boi Kone<sup>1</sup>, Bintou Diarra<sup>1</sup>, Mamadou Tekete<sup>1</sup>, Lassina Timbine<sup>2</sup>, Hinda Doucoure<sup>1</sup>, Abdoulaye A. Djimde<sup>1</sup>

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## CHOLERA DEATHS DURING OUTBREAKS IN UVIRA, EASTERN DEMOCRATIC REPUBLIC OF CONGO, SEPTEMBER 2021-JANUARY 2023

Patrick Musole Bugeme<sup>1</sup>, Hanmeng Xu<sup>1</sup>, Chloe Hutchins<sup>2</sup>, Juan Dent Husle<sup>1</sup>, Jaime Saidi<sup>3</sup>, Baron Bashige Rumedeka<sup>1</sup>, Moïse Itongwa<sup>1</sup>, Justin Bengheya<sup>1</sup>, Amanda Debes<sup>1</sup>, Iza Ciglenecki<sup>5</sup>, Esperance Tshiwedi<sup>6</sup>, Faïda Kitoga<sup>6</sup>, Daniel Mukadi-Bamuleka<sup>6</sup>, Jackie Kneer<sup>7</sup>, Placide Okitayemba Welo<sup>8</sup>, Andrew Azman<sup>1</sup>, **Espoir Bwenge Malembaka<sup>1</sup>**

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## A PATHWAY TO A MORE DURABLE CHOLERA RAPID DIAGNOSTIC TEST (RDT)

Eric Nelson

University of Florida, Gainesville, FL, United States

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## GENOMIC EPIDEMIOLOGY OF CAMPYLOBACTER SPP. ISOLATED FROM CHILDREN WITH MEDICALLY ATTENDED DIARRHEA IN IQUITOS, PERU

Katia Manzanares Villanueva<sup>1</sup>, Francesca Schiaffino<sup>2</sup>, Lucero Romaina Cachique<sup>1</sup>, Tackeshy Pinedo Vasquez<sup>1</sup>, Maribel Paredes Olortegui<sup>1</sup>, Paul F. Garcia Bardales<sup>1</sup>, Steven Huynh<sup>3</sup>, Pablo Peñataro Yori<sup>4</sup>, Evangelos Mourkas<sup>5</sup>, Ben Pascoe<sup>6</sup>, Kerry K. Cooper<sup>7</sup>, Craig T. Parker<sup>8</sup>, Margaret N. Kosek<sup>1</sup>

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## SEROINCIDENCE OF ENTERIC FEVER IN RURAL AND URBAN POPULATIONS OF SIERRA LEONE

Polina Kamenskaya<sup>1</sup>, Ibrahim Swaray<sup>2</sup>, Ahmed Osman<sup>3</sup>, Karla Fischer<sup>4</sup>, Rashid Ansumana<sup>5</sup>, Hellen Gelband<sup>6</sup>, Kristen Aiemijoy<sup>7</sup>, Prabhat Jha<sup>8</sup>, Jason R. Andrews<sup>9</sup>, Isaac I. Bogoch<sup>4</sup>, Richelle C. Charles<sup>1</sup>

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## A SPOTTED RASH HELPS SPOT A RARE PATHOGEN: CAPNOCYTOPHAGA CANIMORSUSENDOCARDITIS WITH GLOMERULONEPHRITIS

Divya Chandramohan, Moyosore Awobajo, Ermais Sori, Sean O'Neil, Gregory M. Anstead

UT Health- San Antonio, San Antonio, TX, United States

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## EVALUATION OF VIRULENCE GENE REPERTOIRE AS A MEANS TO ESTABLISH THE ROLE OF ESCHERICHIA COLI ISOLATED POSTMORTEM IN THE CAUSAL PATHWAY TO DEATH

Deng B. Madut<sup>1</sup>, Matthew P. Rubach<sup>1</sup>, Nadia Boisen<sup>2</sup>, Cristina Costales<sup>1</sup>, Manuela Carugati<sup>1</sup>, Patrick T. Amsi<sup>3</sup>, Alex R. Mremi<sup>3</sup>, Nathan Kalengo<sup>3</sup>, Calvin Moshia<sup>4</sup>, Annette Marandu<sup>4</sup>, Michael J. Maze<sup>5</sup>, Blandina T. Mmbaga<sup>6</sup>, Kajiru G. Kilonzo<sup>6</sup>, Venance P. Maro<sup>6</sup>, Flemming Scheutz<sup>2</sup>, John A. Crump<sup>7</sup>

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## FACTORS ASSOCIATED WITH IN-HOSPITAL MORTALITY IN ADULT PATIENTS WITH SEPSIS AT TWO RURAL BORDER PROVINCES OF THAILAND

Woradee Lurchachaiwong<sup>1</sup>, Peeriya Watakulsin<sup>2</sup>, Emily Bloss<sup>1</sup>, Philip Mock<sup>1</sup>, Pitiphon Promduangsi<sup>2</sup>, Anupong Sujariyakul<sup>2</sup>, Supphachoke Khemla<sup>2</sup>, Tanaphat Lertwitayakumjorn<sup>3</sup>, Nuttagarn Chuenchom<sup>4</sup>, Thanit Rattanathumsakul<sup>2</sup>, Patranuch Sapchookul<sup>1</sup>, Beth Skaggs<sup>1</sup>, Saithip Bhengsri<sup>1</sup>, Ornuma Sangwichian<sup>1</sup>, James D. Heffelfinger<sup>1</sup>, John R. MacArthur<sup>1</sup>, Somsak Thamthitwat<sup>1</sup>

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## DETECTING AND TREATING SEPTIC SHOCK IN DIARRHEAL PATIENT WITH POINT OF CARE (POC) LACTATE TESTING: A LIFE-SAVING STRATEGY BEYOND ICU

Lubaba Shahrin, Monira Sarmin, Irin Parvin, Mohammod Jobayer Chisti  
International Centre for Diarrheal Disease Research, Bangladesh, Dhaka, Bangladesh



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**GRAM (-) BACTEREMIA IS ASSOCIATED WITH AN INCREASED BURDEN OF CHILDHOOD SEVERE MALARIAL ANEMIA IN A HOLOENDEMIC *PLASMODIUM FALCIPARUM* TRANSMISSION REGION OF WESTERN KENYA**Sabella J. Kiprono<sup>1</sup>, Evans Raballah<sup>1</sup>, Qiuying Cheng<sup>2</sup>, Ivy Hurwitz<sup>2</sup>, Collins Ouma<sup>3</sup>, Benjamin H. McMahon<sup>4</sup>, Philip D. Seidenberg<sup>5</sup>, Kristan A. Schneider<sup>6</sup>, Samuel B. Anyona<sup>2</sup>, Douglas J. Perkins<sup>2</sup><sup>1</sup>Masinde Muliro University of Science and Technology, Kakamega, Kenya, <sup>2</sup>University of New Mexico, Center for Global Health, Department of Internal Medicine, Albuquerque, NM, United States, <sup>3</sup>Maseno University, Kisumu, Kenya, <sup>4</sup>Theoretical Biology and Biophysics Group, Theoretical Division, Los Alamos National Laboratory, Los Alamos, NM, USA, Los Alamos, NM, United States, <sup>5</sup>University of New Mexico, Department of Emergency Medicine, Albuquerque, NM, United States, <sup>6</sup>Department of Applied Computer and Biosciences, University of Applied Sciences Mittweida, Technikumplatz, Mittweida, Germany

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**CHARACTERIZATION OF ACINETOBACTER SPP. ISOLATED FROM BLOOD AND URINE OF PATIENTS IN RURAL GHANA**Charity Wiafe Akenten<sup>1</sup>, John Amuasi<sup>1</sup>, Jürgen May<sup>2</sup>, Wibke Loag<sup>2</sup>, Eva Lorenz<sup>2</sup>, Denise Dekker<sup>2</sup><sup>1</sup>Kumasi Center for Collaborative Research in Tropical Medicine, KUMASI, Ghana, <sup>2</sup>Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany

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**LEPTOSPIROSIS AMONG HOSPITALIZED PATIENTS WITH ACUTE FEBRILE ILLNESS IN BANGLADESH**Tanzir Ahmed Shuvo<sup>1</sup>, Anik Palit<sup>1</sup>, Mohammed Ziaur Rahman<sup>1</sup>, Zubair Akhtar<sup>1</sup>, Probir Kumar Ghosh<sup>1</sup>, Muntasir Alam<sup>1</sup>, Md. Mahfuzur Rahman<sup>1</sup>, Mahmudur Rahman<sup>2</sup>, Pawan Angra<sup>3</sup>, Matthew Mikoleit<sup>3</sup>, Daniel Martin<sup>3</sup>, Fahmida Chowdhury<sup>1</sup><sup>1</sup>icddr, Dhaka, Bangladesh, <sup>2</sup>Global Health Development, EMPHNET, Dhaka, Bangladesh, <sup>3</sup>Center for Disease Control and Prevention (CDC), Atlanta, GA, United States

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**NANOPORE SEQUENCING USING THE FULL LENGTH 16S RRNA GENE IS A PROMISING VETERINARY DIAGNOSTIC TOOL FOR THE DETECTION OF BLOOD-BORNE BACTERIAL PATHOGENS**Lucas Huggins, Vito Colella, Rebecca Traub  
University of Melbourne, Melbourne, Australia

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**ÉCOLOGIE BACTÉRIENNE ET PROFIL DE RÉSISTANCE BACTÉRIENNE AUX ANTIBIOTIQUES DANS LE SERVICE DE MÉDECINE ET D'UROLOGIE DU CHU BSS DE KATI**Hamsatou Cisse<sup>1</sup>, Youba Sangaré<sup>1</sup>, Abdramane Traoré<sup>1</sup>, Nagou Tolo<sup>1</sup>, Amadou Kassogué<sup>1</sup>, Djeneba Diagne<sup>1</sup>, Cheick Oumar Sanogo<sup>1</sup>, Boureima Kodio<sup>2</sup>, Abdoulaye Traoré<sup>3</sup>, Garan Dabo<sup>4</sup>, Yacouba Cissoko<sup>3</sup>, Ghislain Poda<sup>5</sup>, Daouda k Minta<sup>3</sup><sup>1</sup>Centre hospitalier universitaire de Kati, Kati, Mali, <sup>2</sup>Centre de rhumatologie Primum, Bamako, Mali, <sup>3</sup>Centre hospitalier universitaire du Point G, Bamako, Mali, <sup>4</sup>Hopital du Mali, Bamako, Mali, <sup>5</sup>University Pedagogical Institute, Bamako, Mali

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**ANTIMICROBIAL SUSCEPTIBILITY PATTERNS OF GRAM NEGATIVE BACTERIA GRAM POSITIVE BACTERIA AND FUNGI SPECIES ISOLATED FROM BLOOD CULTURE BOTTLES IN YAOUNDE CAMEROON**Laure Ngando<sup>1</sup>, Leopold Mbous Nguimbus<sup>2</sup>, Blaise Akenji<sup>1</sup>, Albert Legrand Same Ekobo<sup>1</sup>  
<sup>1</sup>University of Yaounde 1, Faculty of Medicine, Yaounde, Cameroon, <sup>2</sup>University of Yaounde 1, Faculte des sciences, Yaounde, Cameroon

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**NEONATAL PAENIBACILLIOSIS: A NOVEL INFECTION LEADING TO INFECTIOUS HYDROCEPHALUS IN INFANTS**Sarah U. Morton<sup>1</sup>, Jessica E. Ericson<sup>2</sup>, Steven J. Schiff<sup>3</sup><sup>1</sup>Boston Children's Hospital, Boston, MA, United States, <sup>2</sup>Penn State College of Medicine, Hershey, PA, United States, <sup>3</sup>Yale University, New Haven, CT, United States**Cestodes (including taeniasis and cysticercosis, echinococcosis/hydatid disease, and others)**

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**ASSESSMENT OF THE ANTIGEN DYNAMICS DURING THE CALCIFICATION PROCESS IN NATURALLY INFECTED PIGS**Luz M. Toribio<sup>1</sup>, Javier Bustos<sup>1</sup>, Laura Baquedano<sup>1</sup>, Gianfranco Arroyo<sup>1</sup>, Yesenia Castillo<sup>1</sup>, Hector H. Garcia<sup>2</sup><sup>1</sup>Center for Global Health, Universidad Cayetano Heredia, Lima, Peru, <sup>2</sup>Instituto Nacional de Ciencias Neurologicas, Lima, Peru

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**CONCORDANCE BETWEEN TWO ANTIGEN-DETECTION ENZYME-LINKED IMMUNOSORBENT ASSAYS IN DETECTING URINARY ANTIGENS AND MONITORING ANTIGEN DECAY IN PATIENTS WITH NEUROCYSTICERCOSIS**Luz M. Toribio<sup>1</sup>, Carolina Guzman<sup>1</sup>, Yesenia Castillo<sup>1</sup>, Cindy Espinoza<sup>1</sup>, Gianfranco Arroyo<sup>1</sup>, Herbert Saavedra<sup>2</sup>, Javier Bustos<sup>1</sup>, Pierre Dorny<sup>3</sup>, Seth O'Neal<sup>4</sup>, Hector H. Garcia<sup>5</sup><sup>1</sup>Center for Global Health, Universidad Cayetano Heredia, Lima, Peru, <sup>2</sup>Instituto Nacional de Ciencias Neurologicas, Lima, Peru, <sup>3</sup>Department of Biomedical Sciences, Institute of Tropical Medicine, Antwerp, Belgium, <sup>4</sup>School of Public Health, Oregon Health & Sciences, Portland State University, Portland, OR, United States, <sup>5</sup>Universidad Cayetano Heredia, Lima, Peru

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**PHENOTYPIC DETERMINATION OF REGULATORY T AND B REGULATORY CELLS IN NEUROCYSTICERCOSIS PATIENTS**Iskra Tuero<sup>1</sup>, Luz Toribio<sup>2</sup>, Yazmin Marin<sup>3</sup>, Isidro Gonzales<sup>3</sup>, Javier Bustos<sup>2</sup>, Hector H. Garcia<sup>2</sup><sup>1</sup>Department of Molecular and Celular Science, Universidad Cayetano Heredia, Lima, Peru, <sup>2</sup>Center for Global Health, Universidad Cayetano Heredia, Lima, Peru, <sup>3</sup>Instituto Nacional de Ciencias Neurologicas, Lima, Peru

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**CALCIFIED PORCINE NEUROCYSTICERCOSIS: IMMUNOHISTOCHEMISTRY BASED ON MONOCLONAL ANTIBODIES (MABS) FOR RESIDUAL ANTIGENS DETECTION**Lizzie Tello<sup>1</sup>, Luz M. Toribio<sup>1</sup>, Gianfranco Arroyo<sup>1</sup>, Manuela Verastegui<sup>2</sup>, Kayla Togneri<sup>1</sup>, Javier Bustos<sup>1</sup>, Robert Gilman<sup>3</sup>, Hector H. Garcia<sup>1</sup><sup>1</sup>Center for Global Health, Universidad Cayetano Heredia, Lima, Peru, <sup>2</sup>Infectious Diseases Laboratory Research LID, Universidad Cayetano Heredia, Lima, Peru, <sup>3</sup>Department of International Health, Bloomberg School for Public Health, Johns Hopkins University, Baltimore, MD, United States

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**RESIDUAL CALCIFICATION IN NEUROCYSTICERCOSIS: NOT ONLY IN PARENCHYMAL CYSTS**Daniel Bustamante<sup>1</sup>, Christina Coyle<sup>2</sup>, Daniel Muñoz<sup>3</sup>, Carolina Guzman<sup>1</sup>, Erick Castillo<sup>4</sup>, Javier Bustos<sup>1</sup>, Hector Garcia<sup>1</sup><sup>1</sup>Center for Global Health, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>Department of Medicine, Division of Infectious Disease, Albert Einstein College of Medicine, New York, NY, United States, <sup>3</sup>Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>4</sup>Centro de diagnóstico por imágenes de la Clínica internacional, Lima, Peru

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### MRI SPECTROSCOPY OF PATIENTS WITH SUBARACHNOID AND PARENCHYMAL NEUROCYSTICERCOSIS RACEMOSA AND PARENCHYMAL NEUROCYSTICERCOSIS OF THE NATIONAL INSTITUTE OF NEUROLOGICAL SCIENCES, LIMA, 2021-2022

Carolina Guzman<sup>1</sup>, Erick Castillo<sup>2</sup>, Norvind Gamboa<sup>3</sup>, Daniel Bustamante<sup>4</sup>, Herbert Saavedra<sup>5</sup>, Isidro Gonzales<sup>6</sup>, Javier Bustos<sup>7</sup>, Hector Garcia<sup>8</sup>

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### TRANSCRANIAL DOPPLER ULTRASONOGRAPHY TO DETECT VASCULITIS IN NEUROCYSTICERCOSIS

Sofia Sanchez<sup>1</sup>, Danny Barrientos<sup>1</sup>, Jorge Ramirez<sup>1</sup>, Javier Bustos<sup>2</sup>, Rosa Ecos<sup>1</sup>, Isidro Gonzales<sup>1</sup>, Herbert Saavedra<sup>1</sup>, Hector Garcia<sup>2</sup>

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### CONCORDANCE BETWEEN TWO MONOCLONAL ANTIBODY-BASED (MAB) ENZYME-LINKED IMMUNOSORBENT ASSAYS (ELISAS) FOR MEASURING CYSTICERCUS ANTIGEN LEVELS INSERA FROM PIGS EXPERIMENTALLY INFECTED WITH TAENIA SOLIUM AND TAENIA HYDATIGENA

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### THE EARLY STAGE OF TAENIA SOLIUM CYSTICERCUS SECRETE TRANSFORMING GROWTH FACTOR-BETA MIMIC PROTEINS

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(ACMCIP Abstract)

6995

### EVALUATION OF AXONAL TRANSPORT DAMAGE IN AN ANIMAL MODEL OF NEUROCYSTICERCOSIS

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(ACMCIP Abstract)

6996

### EVALUATION OF OLIGODENDROCYTE DENSITY AND APOPTOSIS DAMAGE AT DIFFERENT POST-INFECTION TIMES IN A RAT MODEL WITH NEUROCYSTICERCOSIS

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(ACMCIP Abstract)

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### GASDERMIN D IMMUNOREACTIVITY IN RAT BRAIN TISSUES WITH NEUROCYSTICERCOSIS

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(ACMCIP Abstract)

6998

### NITRO-OXIDATIVE STRESS AND NEURONAL DAMAGE IN A RAT MODEL FOR NEUROCYSTICERCOSIS PRESENTING EPILEPSY

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## Clinical Tropical Medicine

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### AN UPDATE ON THE CLINICAL-EPIDEMIOLOGY OF NEGLECTED SEXUALLY TRANSMITTED INFECTIONS IN IMPOVERISHED SOUTHERN USA ADOLESCENT POPULATIONS

Lauren Turner, Melissa Nolan

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7000

### CLINICAL, EPIDEMIOLOGICAL, HISTOPATHOLOGICAL, AND SOCIO-ECONOMIC PANORAMA OF LEPROSY PATIENTS IN A TERTIARY CENTER ACROSS THE NEPAL-INDIA BORDER IN THE POST-ELIMINATION ERA: A CROSS-SECTIONAL STUDY

Vikash Paudel

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## 7001

**SPOT SEPSIS: PREDICTION OF DISEASE SEVERITY IN YOUNG CHILDREN WITH ACUTE FEBRILE ILLNESSES IN RESOURCE LIMITED SETTINGS**

**Arjun Chandna**<sup>1</sup>, Raman Mahajan<sup>2</sup>, Riris Ahmad<sup>3</sup>, Eggi Arguni<sup>3</sup>, Elizabeth A. Ashley<sup>4</sup>, Quoc Dat<sup>5</sup>, Nicholas P.J. Day<sup>6</sup>, Arjen Dondorp<sup>6</sup>, Carolina Jimenez<sup>2</sup>, Kevin Kain<sup>7</sup>, Rungnapa Khamboocha<sup>8</sup>, Constantinos Koshiris<sup>8</sup>, Estrella Lasry<sup>2</sup>, Mayfong Mayxay<sup>4</sup>, Chonticha Menggred<sup>6</sup>, Dinesh Monal<sup>9</sup>, Lazaro Mwandigha<sup>8</sup>, Rafael Perera-Salazar<sup>8</sup>, Phan Huu Phuc<sup>10</sup>, Tiengkham Pongvongsa<sup>11</sup>, Sayaphet Rattanavong<sup>4</sup>, Michael Rekart<sup>2</sup>, Melissa Richard-Greenblatt<sup>12</sup>, Mohammad Shomik<sup>7</sup>, Pouthalavanh Souvannasing<sup>13</sup>, Keang Suy<sup>1</sup>, Claudia Turner<sup>1</sup>, Paul Turner<sup>1</sup>, Dinh Van Anh<sup>10</sup>, Naomi Waitthira<sup>6</sup>, James A. Watson<sup>9</sup>, Mikhael Yosia<sup>2</sup>, Yoel Lubell<sup>6</sup>, Sakib Burza<sup>2</sup>

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## 7002

**NANOPORE SEQUENCING OR MICROARRAY DETECTION OF PATHOGENS IN BLOOD: SIDE-BY-SIDE COMPARISON**

**Robert Duncan**<sup>1</sup>, Carolyn Fisher<sup>1</sup>, Scott Espich<sup>1</sup>, Moussa Kourout<sup>1</sup>, Sean Smith<sup>1</sup>, Luis Santana-Quintero<sup>1</sup>, Anjan Purkayastha<sup>2</sup>, Morgan Chandler<sup>1</sup>, Maria Rios<sup>1</sup>, Hong Zheng<sup>1</sup>, Sanjai Kumar<sup>1</sup>

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## 7003

**EVALUATION OF THE IMPACT ON CHILDHOOD MORTALITY OF AZITHROMYCIN PLUS INTERMITTENT PREVENTIVE TREATMENT ADMINISTERED THROUGH THE EXPANDED PROGRAM OF IMMUNIZATION IN SIERRA LEONE**

**Haily Chen**<sup>1</sup>, Kwabena Owusu-kyei<sup>1</sup>, Mireia Llach<sup>1</sup>, Mohamed Samai<sup>2</sup>, Clara Menéndez<sup>1</sup>

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## 7004

**A RANDOMIZED CLINICAL TRIAL INVESTIGATING THE EFFECT OF BCG REVACCINATION ON THE RESPONSE TO UNRELATED VACCINES IN UGANDAN ADOLESCENTS: THE POPVAC C TRIAL**

**Jacent Nassuuna**<sup>1</sup>, Agnes Natukunda<sup>1</sup>, Gyaviira Nkurunungi<sup>1</sup>, Ludoviko Zirimenya<sup>1</sup>, Emily L. Webb<sup>2</sup>, Alison M. Elliott<sup>1</sup>

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## 7005

**DIFFERENTIATION OF ACUTE EXACERBATIONS OF CHRONIC HEPATITIS B AND ACUTE HEPATITIS B IN ANTIHBC IGM POSITIVE PATIENTS AT HOSPITAL FOR TROPICAL DISEASES IN VIETNAM**

**Thao Tu**<sup>1</sup>, Hung Le<sup>1</sup>, Hien Tran<sup>2</sup>

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## 7006

**ALPHA-GAL ALLERGY SEROPREVALENCE IN RURAL AND MINORITY POPULATIONS, EVIDENCE ALPHA-GAL SYNDROME IS A NEGLECTED DISEASE IN THE SOUTHERN USA**

**Emily Owens Pickle**<sup>1</sup>, Scott P. Commins<sup>2</sup>, Melissa S. Nolan<sup>1</sup>

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## 7007

**STOOL CALPROTECTIN AND ASSOCIATED GUT-PATHOGENS IN A COHORT OF PATIENTS WITH GIT DISORDERS WITH AND WITHOUT IMMUNE-MEDIATED INFLAMMATORY INTESTINAL DISEASES IN SAUDI ARABIA**

**Ayman A. Elbadry**, Nehal M.M. Hosin

Imam Abdulrahman Bin Faisal University, College of Medicine, Microbiology department, Damma, Saudi Arabia

## 7008

**CLINICAL CHARACTERIZATION AND ANALYSIS OF INFLAMMATION AND COAGULATION OF LASSA FEVER PATIENTS TREATED AT THE IRRUA SPECIALIST TEACHING HOSPITAL IN EDO STATE, NIGERIA IN 2022 AND 2023**

Cyril Erameh<sup>1</sup>, Osahogie Edeawe<sup>1</sup>, Joseph Okegual<sup>1</sup>, Jerome Christian<sup>1</sup>, Iboi Matthew<sup>1</sup>, Hannah Müller<sup>2</sup>, Matin Kohsar<sup>2</sup>, Christian Erohubie<sup>1</sup>, Benevolence Ohomoime<sup>2</sup>, Rita Esumeh<sup>1</sup>, Charity Oseghale<sup>1</sup>, Aiterebhe Ujiagbe<sup>1</sup>, Charlotte Kriebel<sup>2</sup>, Ludmila Unrau<sup>2</sup>, Anke Thielebein<sup>2</sup>, Colette Sih<sup>2</sup>, Stephan Günther<sup>2</sup>, Michael Ramharter<sup>2</sup>, Sylvanus Okogbenin<sup>1</sup>, Lisa Oestereich<sup>2</sup>, **Till Omansen**<sup>2</sup>

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## 7009

**CHAGAS DISEASE CLINICS IN ENDEMIC LOCALITIES FROM ARGENTINA: RESULTS FROM 2015 TO 2022**

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## 7010

**ISOLATED HYPERPARASITEMIA IN IMPORTED SEVERE PLASMODIUM FALCIPARUM MALARIA: NO PREDICTOR FOR COMPLICATIONS**

**Tilman Lingscheid**, Pinkus Tober-Lau, Juliane Dörfler, Leif-Erik Sander, Florian Kurth Charité - Universitätsmedizin Berlin, Berlin, Germany

## 7011

**THE BURDEN AND IMPACT OF TORCH INFECTIONS AMONG PERINATAL WOMEN AND THEIR NEONATES IN EL SALVADOR**

**Mary K. Lynn**<sup>1</sup>, Marvin Stanley Rodriguez Aquino<sup>2</sup>, Stella C. W. Self<sup>1</sup>, Mufaro Kanyangarara<sup>1</sup>, Berry A. Campbell<sup>3</sup>, Melissa S. Nolan<sup>1</sup>

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## 7012

**HEALTH-RELATED QUALITY OF LIFE (HRQL) AND FATIGUE IN THE DENGUE CONVALESCENCE PHASE DURING AN OUTBREAK (2019-2020) IN BUCARAMANGA, COLOMBIA.**

Mónica Patricia Consuegra<sup>1</sup>, Víctor Herrera<sup>2</sup>, **Elsa Marina Rojas**<sup>1</sup>, Maria Isabel Estupiñan<sup>1</sup>, Rosa Margarita Gelvez<sup>1</sup>, Natalia Bueno<sup>1</sup>, Luis Angel Villar<sup>1</sup>

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### FAS-2 ELISA FOR FOLLOW-UP OF SCHOOL-AGE CHILDREN WITH CHRONIC FASCIOLA HEPATICA INFECTION TREATED IN RURAL CUSCO, PERU

**Maria A. Caravedo**<sup>1</sup>, Melinda Tanabe<sup>1</sup>, Martha V. Fernandez-Baca<sup>2</sup>, Maria L. Morales<sup>2</sup>, Miguel M. Cabada<sup>1</sup>  
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### PHYSICIAN KNOWLEDGE OF CHAGAS DISEASE IN NEW ORLEANS

**Kerly J. Bernabé**, Claudia Herrera, Eric Dumonteil  
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7015

### UNVEILING CONGENITAL SYPHILIS THROUGH MINIMALLY INVASIVE TISSUE SAMPLING: A CASE REPORT FROM CHILD HEALTH AND MORTALITY PREVENTION SURVEILLANCE, BANGLADESH SITE

**Mohammad Sabbir Ahmed**<sup>1</sup>, Mohammad Mosiur Rahman<sup>2</sup>, Tais M. Wilson<sup>3</sup>, Muntasir Alam<sup>1</sup>, Kazi Munisul Islam<sup>1</sup>, Afruna Rahman<sup>1</sup>, Rajib Biswas<sup>1</sup>, Md. Fakhruddin<sup>1</sup>, Afsana Afrin<sup>1</sup>, Afsana Rashed<sup>1</sup>, Sanwarul Bari<sup>1</sup>, Shams El Arifeen<sup>1</sup>, Mustafizur Rahman<sup>1</sup>, Mohammad Zahid Hossain<sup>1</sup>  
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### RAISING STANDARDS IN DIAGNOSTIC PARASITOLOGY - PERSPECTIVES FROM AN INTERNATIONAL EQA SCHEME

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## Helminths – Nematodes – Filariasis (Cellular and Molecular Biology)

7017

### PURIFICATION OF EXTRACELLULAR VESICLES PRODUCED BY FILARIAL PARASITES FOR PROTEOMIC DETECTION OF BIOMARKER CANDIDATES IN HUMAN PLASMA

**Devyn Yates**<sup>1</sup>, Lucia S. Di Maggio<sup>1</sup>, Reid Townsend<sup>1</sup>, Robert Sprung<sup>1</sup>, Petra Erdmann-Gilmore<sup>1</sup>, Bruce Rosa<sup>1</sup>, Philip J. Budge<sup>1</sup>, Joseph Kamgno<sup>2</sup>, Makedonka Mitreva<sup>1</sup>, Gary Weil<sup>1</sup>, Peter Fischer<sup>1</sup>  
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7018

### TOWARDS IMPROVED ONCHOCERCIASIS DIAGNOSTICS: CHARACTERIZATION OF A MAJOR ANTIGEN OF ONCHOCERCA VOLVULUS IDENTIFIED FROM THE PLASMA OF INFECTED INDIVIDUALS

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Washington University School of Medicine, St Louis, MO, United States

(ACMCIP Abstract)

7019

### THE POLY-LYSINE PEPTIDE AS A BROAD-SPECTRUM ANTIPARASITIC, AND EFFECTIVE AGAINST FILARIAL AND MALARIA PARASITES

Arun Ashutosh<sup>1</sup>, Sergej Djuranovic<sup>2</sup>, Makedonka Mitreva<sup>1</sup>, **Slavica Pavlovic Djuranovic**<sup>1</sup>  
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## Helminths – Nematodes – Filariasis (Clinical)

7020

### ASSOCIATION BETWEEN BLOOD LOA LOA MICROFILARIAL DENSITY AND PROTEINURIA LEVELS: A POPULATION-BASED CROSS-SECTIONAL STUDY IN A RURAL AREA OF THE REPUBLIC OF CONGO

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### ASSOCIATION BETWEEN ARTERIAL STIFFNESS AND LOA LOA MICROFILAREMIA A POPULATION BASED CROSS-SECTIONAL STUDY IN A RURAL AREA OF THE REPUBLIC OF CONGO

**Jérémy T. Campillo**<sup>1</sup>, Valentin Dupasquier<sup>2</sup>, Elodie Lebredonchel<sup>3</sup>, Ludovic G. Rancé<sup>2</sup>, Marlhand C. Hemilembolo<sup>4</sup>, Sébastien D. S. Pion<sup>1</sup>, Michel Boussinesq<sup>1</sup>, Francois Missamou<sup>4</sup>, Antonia Perez Martin<sup>2</sup>, Cédric B. Chesnais<sup>1</sup>  
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7022

### EFFICACY AND FEASIBILITY OF SHORT-STRETCH COMPRESSION GARMENTS ENABLED BY THREE-DIMENSIONAL INFRARED IMAGING FOR STAGE 3 FILARIAL LYMPHEDEMA IN SRI LANKA

**Jaimee M. Hall**<sup>1</sup>, Sandani S. Thilakarathne<sup>2</sup>, Nirmintha L. De Silva<sup>2</sup>, Janaka Ruben<sup>2</sup>, Thishan C. Yahathugoda<sup>2</sup>, Philip J. Budge<sup>1</sup>  
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### IDENTIFICATION OF NOVEL POTENTIAL BIOMARKERS FOR BANCROFTIAN FILARIASIS

**Nikhilesh Joardar**, Kurt C. Kurtis, Kerstin Fischer, Amy Rush, Bruce A. Rosa, Petra Erdmann Gilmore, Robert Sprung, R. Reid Townsend, Gary J. Weil, Peter U. Fischer, Philip J. Budge  
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7024

### PLASMA PENTRAXIN 3 AND ANGIOPOIETINS ARE ELEVATED IN LYMPHATIC FILARIASIS LYMPHEDEMA PATIENTS WITH ESSENTIAL HYPERTENSION

**Charles Gyasi**<sup>1</sup>, Linda Batsa Debrah<sup>1</sup>, Jubin Osei-Mensah<sup>1</sup>, Derrick Adu Mensah<sup>1</sup>, Ute Klarmann-Schulz<sup>2</sup>, Patricia Korir<sup>2</sup>, Achim Hoerauf<sup>2</sup>, Alexander Yaw Debrah<sup>1</sup>  
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## 7025

**FIELD EVALUATION OF STANDARD Q FILARIASIS ANTIGEN TEST FOR LYMPHATIC FILARIASIS (LF) DURING A PRE-TRANSMISSION ASSESSMENT SURVEY IN SIERRA LEONE, 2022**

**Benoit Dembele**<sup>1</sup>, Mohamed Salieu Bah<sup>2</sup>, Abdulai Conteh<sup>3</sup>, Habib Kamara<sup>2</sup>, Ibrahim Kargbo-Labour<sup>3</sup>, Ashley Souza<sup>4</sup>, Patricia Houck<sup>5</sup>, Ernest Mensah<sup>6</sup>, Victoria Turay<sup>2</sup>, E. Scott Elder<sup>7</sup>, Katherine Gass<sup>4</sup>, Steven D. Reid<sup>5</sup>, Joseph P. Shott<sup>8</sup>, Yaobi Zhang<sup>5</sup>, Kimberly Y. Won<sup>7</sup>, Jonathan King<sup>9</sup>, Angela Weaver<sup>5</sup>  
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## 7026

**EFFECT OF SEASONALITY AND HYGIENE ON THE INCIDENCE OF ACUTE FILARIAL ATTACKS IN PATIENTS WITH LYMPHEDEMA IN MALI**

**Moussa Sangare**<sup>1</sup>, Yaya Ibrahim Coulibaly<sup>1</sup>, Aboul Fatao Diabate<sup>1</sup>, Housseini Dolo<sup>1</sup>, Sekou Oumarou Thera<sup>1</sup>, Lamine Diarra<sup>1</sup>, Michel E. Coulibaly<sup>1</sup>, Lamine Soumaoro<sup>1</sup>, Siaka Y. Coulibaly<sup>1</sup>, Salif Doumbia<sup>1</sup>, Abdallah A. Diallo<sup>1</sup>, Ayoubou Diarra<sup>1</sup>, Amy D. Klion<sup>2</sup>, Charles Mackenzie<sup>3</sup>, Mariana Stephens<sup>3</sup>, John Horton<sup>4</sup>, Eric Ottessen<sup>3</sup>, Sarah Sullivan<sup>3</sup>, Thomas B. Nutman<sup>2</sup>  
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## 7027

**THE CLINICAL SPECTRUM OF LYMPHATIC FILARIASIS. A CASE OF PROTEIN-LOSING ENTEROPATHY**

**Roque Díaz Díaz**<sup>1</sup>, Vanesa Jarne Beltrán<sup>2</sup>, Paul Nguewa<sup>3</sup>  
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**Helminths – Nematodes – Filariasis (Other)**

## 7028

**SHIFT IN THE SKIN MICROBIOME AMONG INDIVIDUALS PRESENTING WITH FILARIAL LYMPHEDEMA COMPARED TO NON-FILARIAL HEALTHY INDIVIDUALS IN GHANA**

**Alexander Kwarteng**<sup>1</sup>, Solomon Wireko<sup>2</sup>, Samuel Opoku Asiedu<sup>1</sup>  
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## 7029

**DETECTION AND DISCRIMINATION OF O. VOLVULUS AND O. OCHENGI FROM BLACKFLY POOL DNA USING A NOVEL POLYMERASE CHAIN REACTION - RESTRICTION FRAGMENT LENGTH POLYMORPHISM (PCR-RFLP) TECHNIQUE**

**Isaac Owusu-Frimpong**, Edward Jenner Tettevi, Queenstar Dedei Quarshie, Naa Adjeley Kuma, Nfayem Imoro, Yusuf Al-Mahroof, Reuben Enchill, Mawutor K. Ahiabu, Mike Yaw Osei-Atweneboana  
 CSIR - Water Research Institute, Accra, Ghana

## 7030

**ANTIBIOTIC RESISTANCE AND MECA CHARACTERIZATION OF STAPHYLOCOCCUS HOMINIS FROM FILARIAL LYMPHEDEMA PATIENTS IN THE AHANTA WEST DISTRICT, GHANA: A CROSS-SECTIONAL STUDY**

**Priscilla Osei-Poku**<sup>1</sup>, Priscilla Kini<sup>1</sup>, Solomon Wireko<sup>1</sup>, Emmanuel Amewu<sup>1</sup>, Caleb Mensah<sup>2</sup>, Samuel Opoku Asiedu<sup>1</sup>, Ebenezer Asiedu<sup>3</sup>, Ernest Amanor<sup>2</sup>, Mary Wilson<sup>1</sup>, Amma Larbi<sup>1</sup>, Kennedy Gyau Boahen<sup>1</sup>, Augustina Angelina Sylverken<sup>1</sup>, Katherine Ryan Amato<sup>4</sup>, Alexander Kwarteng<sup>1</sup>  
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## 7031

**GUIDELINES FOR SELECTION OF FIRST- AND THIRD-LINE COMMUNITIES FOR MONITORING AND EVALUATION DURING ONCHOCERCIASIS ELIMINATION MAPPING**

**Joseph Harold Nyarko Osei**, Sellase Pi-Bansa, Kwadwo Kyereme Frempong, Millicent Opoku, Franklin Ayisi, Millicent Daniels Selassie Afatodzi, Sarah Mawunyo Dogbe, Abena Akyeamaa Nyarko, Sampson Otoo, Wilma Stolk, Sake J. de Vlas, Aissatou Diawara, Daniel Adjei Boakyie  
 Noguchi Memorial Institute for Medical Research, Accra, Ghana

## 7032

**DEVELOPING A TRAP FOR AFRICAN CHRYSOPS SPECIES TO ACCELERATE ONCHOCERCIASIS ELIMINATION: PROOF OF CONCEPT IN CAMEROON**

**Kareem Atekem**<sup>1</sup>, Philippe Nwane<sup>2</sup>, Rogers Nditanchou<sup>3</sup>, Clarisse Ebene<sup>4</sup>, Anita Jeyam<sup>5</sup>, Joseph Kamgno<sup>2</sup>, Louise Hamill<sup>5</sup>, Richard Selby<sup>5</sup>  
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## 7033

**COMPARISON OF SPONTANEOUS VS IVERMECTIN-INDUCED CROSS-REACTIVE ANTIGENEMIA IN LOIASIS**

**Linda Djune-Yemeli**<sup>1</sup>, Hugues Nana-Djeunga<sup>2</sup>, Marla I. Hertz<sup>3</sup>, Jean Bopda<sup>2</sup>, Amy Rush<sup>4</sup>, Joseph Kamgno<sup>2</sup>, Philip J. Budge<sup>4</sup>  
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(ACMCIP Abstract)

## 7034

**EFFORT TOWARDS ELIMINATION OF LYMPHATIC FILARIASIS IN CAMEROON: RESULTS OF THE LAST TRANSMISSION ASSESSMENT SURVEY IN 20 HEALTH DISTRICTS OF ADAMAOUA, CENTER AND FAR-NORTH REGION**

Biholong Benjamin<sup>1</sup>, Ebene Clarisse<sup>1</sup>, Georges Nko'Ayissi<sup>2</sup>, Carine Fokam<sup>3</sup>, Benoit Dembele<sup>4</sup>, Patricia Houck<sup>5</sup>, Ernest Mensah<sup>6</sup>, Yaobi Zhang<sup>5</sup>, Steven D. Reid<sup>5</sup>, Angela Weaver<sup>5</sup>, Ismael Teta<sup>3</sup>  
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7035

### IMPLEMENTING THE LYMPHATIC FILARIASIS REPEAT PRE-TRANSMISSION SURVEY IN A CONTEXT OF INSECURITY IN TWO HEALTH DISTRICTS IN BURKINA FASO

Mamadou Serme<sup>1</sup>, Ouedraogo Mathias<sup>1</sup>, Christophe Nassa<sup>1</sup>, Clarrise Bougouma<sup>1</sup>, Zoromé Harouna<sup>1</sup>, Ilboudo Adama<sup>1</sup>, Ogaobiga Fernand<sup>1</sup>, Issa Guiré<sup>2</sup>, Soubeiga Joseph<sup>3</sup>, Dieudonné Naré<sup>4</sup>, Georges Diminthe<sup>4</sup>, Regina Khassanova<sup>4</sup>, Micheline Ouedraogo<sup>4</sup>, Lucien Mano<sup>4</sup>, Elisabeth Chop<sup>5</sup>, Angel Weng<sup>5</sup>, Patricia Houck<sup>5</sup>, Ernest Mensah<sup>6</sup>, Yaobi Zhang<sup>6</sup>, Benoit Dembele<sup>7</sup>, Steven D. Reid<sup>8</sup>, Angela Weaver<sup>8</sup>

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### EFFORTS TOWARD ELIMINATION OF LYMPHATIC FILARIASIS IN GUINEA: RESULTS OF TRANSMISSION ASSESSMENT SURVEYS (TAS1) IN 11 HEALTH DISTRICTS

Nouhou Konkouré Diallo<sup>1</sup>, Lamine Lamah<sup>2</sup>, Mamadou Siradiou Baldé<sup>1</sup>, Aïssatou Diaby<sup>1</sup>, Christophe Zoungana<sup>2</sup>, Mamadou Miadiaou Bah<sup>2</sup>, Abdoul A. Diallo<sup>2</sup>, Abdoul Karim Camara<sup>2</sup>, Ernest Mensah<sup>3</sup>, Steven D. Reid<sup>4</sup>, Benoit Dembele<sup>5</sup>, Angela Weaver<sup>4</sup>

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7037

### EXAMINATION OF METABOLITE BIOMARKERS OF LOIASIS REVEALS PROMISING CANDIDATES PREDICTIVE OF MICROFILAREMIA

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(ACMCIP Abstract)

7038

### EXAMINING THE OVERLAP IN LYMPHATIC FILARIASIS PREVALENCE AND MALARIA INSECTICIDE-TREATED NET ACCESS AND USE IN AFRICA

Joanna Whisnant<sup>1</sup>, Mustafa Sikder<sup>2</sup>, Ewerton Cousin<sup>1</sup>, Cathleen Keller<sup>1</sup>, Olivia Nesbit<sup>1</sup>, Stephanie Zimsen<sup>1</sup>, Jonathan Mosser<sup>1</sup>

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### LYMPHATIC FILARIASIS TREATMENT STUDIES: THE CASE FOR AN INDIVIDUAL PARTICIPANT-LEVEL DATA PLATFORM

Azhar Uddin<sup>1</sup>, Luzia Tomas Freitas<sup>2</sup>, Mashroor Ahmad Khan<sup>1</sup>, Julia B. Halder<sup>3</sup>, Sauman Singh-Phulgenda<sup>4</sup>, Dinesh Raja<sup>1</sup>, Vijayakumar Balakrishnan<sup>1</sup>, Eli Harriss<sup>5</sup>, Philippe J. Guérin<sup>4</sup>, Maria-Gloria Basañez<sup>2</sup>, Ashwani Kumar<sup>1</sup>, Martin Walker<sup>6</sup>, Adinarayanan Srividya<sup>1</sup>  
<sup>1</sup>ICMR-Vector Control Research Centre, Puducherry, India, <sup>2</sup>Imperial College London, London, United Kingdom, <sup>3</sup>Royal Veterinary College, Hatfield, United Kingdom, <sup>4</sup>Infectious Diseases Data Observatory, Oxford, United Kingdom, <sup>5</sup>University of Oxford, Oxford, United Kingdom

## Integrated Control Measures for Neglected Tropical Diseases (NTDs)

7040

### MOVING TOWARD PERSON CENTERED CARE FOR NTDs INTEGRATION OF MENTAL HEALTH WITHIN CASE MANAGEMENT NTDs IN LIBERIA

Hannah Berrian<sup>1</sup>, Laura Dean<sup>2</sup>, Karsor Kollie<sup>3</sup>, Rosalind McCollum<sup>2</sup>, Shahren Chowdhury<sup>2</sup>, Wede Tate<sup>1</sup>, Georgina Zawolo<sup>1</sup>, Jerry Kollie<sup>1</sup>, John Smith<sup>1</sup>, Zeela Zaizay<sup>1</sup>, Colleen Parker<sup>3</sup>, Sally Theobald<sup>2</sup>, Rachael Thomson<sup>2</sup>, Joanna Raven<sup>2</sup>, Yan Ding<sup>2</sup>, Maaik Seekles<sup>2</sup>, Lucas Sempe<sup>5</sup>, Tia Akpan<sup>6</sup>, Stefanie Weiland<sup>7</sup>, Maneesh Phillip<sup>8</sup>, Anna Wickenden<sup>9</sup>, Emerson Rogers<sup>3</sup>, Benedict Dossen<sup>9</sup>

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7041

### THE IMPACT OF INDEPENDENT MONITORING (COVERAGE SURVEY) AGAINST THE 2019 MASS DRUG ADMINISTRATION DATA: THE USE OF IVERMECTIN AND ALBENDAZOLE IN LIBERIA

Alexlyn Secunda Monluo<sup>1</sup>, Vivian Ekie Monluo<sup>2</sup>

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## Kinetoplastida and Other Protozoa - Epidemiology (Including Leishmania and Trypanosomes)

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### INTEGRATED SEROLOGICAL SURVEILLANCE FOR MULTIPLE INFECTIOUS DISEASES IN VANUATU

Md Saiful Islam<sup>1</sup>, Elizabeth Nguyen<sup>1</sup>, Fasihah Taleo<sup>2</sup>, Fernando Santiago<sup>1</sup>, Clare Dyer<sup>1</sup>, Arunasingam Abayasingam<sup>1</sup>, David Kennedy<sup>3</sup>, Macklyne Katenga<sup>4</sup>, Stephanie Tabe<sup>4</sup>, Prudence Rymill<sup>4</sup>, Anastasia Pantelias<sup>5</sup>, Julie Jacobson<sup>5</sup>, Nicodemus Tedla<sup>1</sup>, John Kaldor<sup>1</sup>, Susana Vaz Nery<sup>1</sup>

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### LESSONS LEARNED FROM DEPLOYING ELECTRONIC DATA COLLECTION AS PART OF MASS DRUG ADMINISTRATION CAMPAIGNS IN SOUTH SUDAN

Stephen Ohidor<sup>1</sup>, Angelia M. Sanders<sup>2</sup>, Yak Yak Bol<sup>3</sup>, Lochebe Boniface<sup>1</sup>, James Niquette<sup>1</sup>, E. Kelly Callahan<sup>2</sup>, Scott D. Nash<sup>2</sup>

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### COMMUNITY ENGAGEMENT TO ACCELERATE ONCHOCERCIASIS ELIMINATION IN CAMEROUN

Emilienne Epee<sup>1</sup>, Aïssatou Diawara<sup>2</sup>, Julienne Louise Ngo Likeng<sup>3</sup>, Shona Wynd<sup>4</sup>, Clarisse Ebene<sup>5</sup>, Hugues C. Nana Djeunga<sup>6</sup>, Georges Nko Ayissi<sup>5</sup>, Bertrand Ndzana<sup>7</sup>

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## 7045

### NTD AMBASSADORIAL ENGAGEMENTS: STRATEGY FOR HIGH-LEVEL DECISION MAKING AND ADVOCACY TOWARDS RESOURCE MOBILIZATION FOR THE CONTROL AND ELIMINATION OF NTDS IN GHANA

**Wunpini Sayibu<sup>1</sup>**, Awurabena Quayeba Dadzie<sup>1</sup>, Hafez Adam Taher<sup>2</sup>, Joyce Aryee<sup>3</sup>, Kofi Asemanyi-Mensah<sup>2</sup>, Kyle Marie Jacobsen<sup>4</sup>

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## 7046

### KNOWLEDGE, ATTITUDE, AND PRACTICE OF MOTHERS TOWARD CHAGAS DISEASE IN LA GUARDIA, SANTA CRUZ DEPARTAMENT, BOLIVIA: A CROSS-SECTIONAL STUDY

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## 7047

### PORTABLE SMARTPHONE-BASED MOLECULAR TEST TO SUPPORT THE ELIMINATION PROGRAM OF LEISHMANIA DONOVANI

**Rea Maja Kobialka<sup>1</sup>**, Arianna Ceruti<sup>1</sup>, Madhurima Roy<sup>2</sup>, Sutopa Roy<sup>2</sup>, Rajashree Chowdhury<sup>3</sup>, Prakash Ghosh<sup>3</sup>, Faria Hossain<sup>3</sup>, Manfred Weidmann<sup>4</sup>, Elena Graf<sup>4</sup>, Jesus Bueno Alvarez<sup>4</sup>, Uwe Truyen<sup>1</sup>, Dinesh Mondal<sup>3</sup>, Mitali Chatterjee<sup>2</sup>, Ahmed Abd El Wahed<sup>1</sup>  
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## 7048

### REACHING THE LAST MILE IN ONCHOCERCIASIS ELIMINATION IN MALI: RESPONDING TO PRE-STOP FAILURE

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## 7049

### DIGITAL INNOVATION FOR EFFECTIVE MANAGEMENT OF NEGLECTED TROPICAL DISEASE PROGRAMME DATA; LESSONS AND CHALLENGES

**Ayowumi Ogunjobi<sup>1</sup>**, Enan William Adamani<sup>1</sup>, Elizabeth Ezeobele<sup>1</sup>, Maryanne Mannok<sup>1</sup>, Juliana Ajuma Amanyi-Enegeta<sup>2</sup>, Girija Sankar<sup>2</sup>

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## 7050

### LESSONS LEARNED ON FINGER-INKING AS A MEANS OF COVERAGE VERIFICATION FOR MASS DRUG ADMINISTRATION FOR NEGLECTED TROPICAL DISEASES

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## 7051

### THE JOURNEY OF NTD DATA FROM LOCAL FRAGMENTED DATABASE SYSTEMS INTO STABLE AND SECURE HEALTH MANAGEMENT INFORMATION SYSTEMS

**Diana M. Stukel<sup>1</sup>**, Charles Brown-Davies<sup>2</sup>, Nissou Ines Dossa<sup>3</sup>, Ange Elvis Aba<sup>4</sup>, Babacar Banda Diallo<sup>5</sup>

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## 7052

### CHAGAS DISEASE SCREENING OF MATERNAL DONORS IN PUBLICLY BANKED UMBILICAL CORD BLOOD IN NORTH CAROLINA, UNITED STATES 2007-2022

**Naseem Alavian**, Robert Rolfe, Susan Izatt, Jose Hernandez, Joanne Kurtzberg, Elizabeth Livingston

Duke University, Durham, NC, United States

## 7053

### TSETSE FLIES INFECTED WITH TRYPANOSOMES IN THREE ACTIVE HUMAN AFRICAN TRYPANOSOMIASIS FOCI OF THE REPUBLIC OF CONGO

**Irina Anne Emmanuelle Bemba<sup>1</sup>**, Arsene Lenga<sup>1</sup>, Herman Parfait Awono-Ambene<sup>2</sup>, Christophe Antonio-Nkondjio<sup>2</sup>

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## 7054

### RESULTS FROM PATIENT INSIGHTS RESEARCH EXPLORING DISEASE AWARENESS, PATIENT JOURNEY, AND CURRENT MANAGEMENT OF VISCERAL LEISHMANIASIS IN BIHAR, INDIA

**Kirsten Carter<sup>1</sup>**, Shyam Sundar<sup>2</sup>, Koert Ritmeijer<sup>3</sup>, Margriet den Boer<sup>3</sup>, Clare Zamble<sup>4</sup>, Colin Forsyth<sup>5</sup>, Fabiana Alves<sup>6</sup>, Gerhild Angyalosi<sup>1</sup>

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## 7055

### SEROPREVALENCE AND RISK FACTORS OF TOXOPLASMA GONDII IN WOMEN OF REPRODUCTIVE AGE (15-44 YEARS) – NIGERIA, 2018

**Dawn Blackburn<sup>1</sup>**, Nwando Mba<sup>2</sup>, William Nwachukwu<sup>2</sup>, Hong Zhou<sup>1</sup>, Andrew Abbott<sup>1</sup>, Nishanth Parameswaran<sup>1</sup>, Samuel Awala<sup>3</sup>, Stacie Greby<sup>4</sup>, Matthias Alagi<sup>2</sup>, Nnaemeka Iriemenam<sup>4</sup>, McPaul Okoye<sup>4</sup>, Mahesh Swaminathan<sup>4</sup>, Jeffrey Priest<sup>1</sup>, Diana Martin<sup>1</sup>, Anne Straily<sup>1</sup>, Chikwe Ihekweazu<sup>2</sup>

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## 7056

### CLINICAL IMPLICATION OF REGIONAL LEISHMANIA SPECIES DISTRIBUTION IN ECUADOR: A CROSS-SECTIONAL STUDY

**Henk Schallig<sup>1</sup>**, Jaap Bezemer<sup>1</sup>, Byron Freire<sup>2</sup>, Manuel Calvopiña<sup>3</sup>, Henry de Vries<sup>1</sup>

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**7057****THE ASYMPTOMATIC DOG WITH VISCERAL LEISHMANIASIS: IS THIS THE "REAL BAD DOG"? A SYSTEMATIC REVIEW**

Ana Izabel Passarella Teixeira<sup>1</sup>, Debora Marcolino Silva<sup>2</sup>, Leila Ullmann<sup>3</sup>, Juliana Arena Galhardo<sup>3</sup>, Adriana Caroprezo Morini<sup>1</sup>, Gustavo Adolfo Sierra Romero<sup>4</sup>  
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**7058****ADDRESSING AFRICAN SLEEPING SICKNESS TRANSMISSION THROUGH STREET THEATRE**

Hannah C. Bialic<sup>1</sup>, Walt Adamson<sup>1</sup>, Annette MacLeod<sup>1</sup>, Nicola Veitch<sup>1</sup>, Janelisa Musaya<sup>2</sup>, Lumbani Pete<sup>2</sup>, Alan Richardson<sup>3</sup>, Karen Veitch<sup>3</sup>, John Alufandika<sup>4</sup>, Bwanalori Bwamlima<sup>5</sup>, Garry Chilinga<sup>6</sup>  
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**7059****EPIDEMIOLOGY OF SPOTTED FEVER GROUP RICKETTSIA AND CHAGAS DISEASE INFECTION IN A RURAL COMMUNITY IN BOYACÁ, COLOMBIA**

Lidia Gual-Gonzalez<sup>1</sup>, Omar Cantillo-Barraza<sup>2</sup>, Manuel Medina<sup>3</sup>, Sara Patiño<sup>3</sup>, Stella CW Self<sup>1</sup>, Melissa S. Nolan<sup>1</sup>  
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**7060****MODELLING SLEEPING SICKNESS AT DIFFERENT SPATIAL SCALES: A HEALTH AREA ANALYSIS**

Christopher N. Davis<sup>1</sup>, Ronald E. Crump<sup>1</sup>, Samuel A. Sutherland<sup>1</sup>, Simon E. F. Spencer<sup>1</sup>, Alice Corbella<sup>1</sup>, Erick Mwamba Miaka<sup>2</sup>, Kat S. Rock<sup>1</sup>  
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**7061****FROM THE PLAINS TO THE MOUNTAINS: A NEW FRONTIER FOR LEISHMANIASIS IN NORTH INDIA**

Harnoor Singh, Preetinder Singh Manshahia, Pathik Dhangar, Prasan Kumar Panda  
 All India Institute of Medical Sciences, Rishikesh, India

**7062****EPIDEMIOLOGICAL, SEROLOGICAL, AND ENTOMOLOGICAL ASPECTS OF VISCERAL LEISHMANIASIS (VL) IN SUSPECTED NEW VL FOCI IN BANGLADESH**

Debashis Ghosh<sup>1</sup>, Md Utba Bin Rashid<sup>1</sup>, Soumik Kha Sagar<sup>1</sup>, Md Rasel Uddin<sup>1</sup>, Shomik Maruf<sup>1</sup>, Prakash Ghosh<sup>1</sup>, Rajashree Chowdhury<sup>1</sup>, M M Aktaruzzaman<sup>2</sup>, Abu Nayeem Mohammad Sohel<sup>2</sup>, Megha Raj Banjara<sup>2</sup>, Axel Kroeger<sup>3</sup>, Abraham Aseffa<sup>3</sup>, Dinesh Mondal<sup>1</sup>  
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**7063****MODELING THE RELATIONSHIP BETWEEN PRECIPITATION AND TEMPERATURE ON THE INCIDENCE OF CUTANEOUS LEISHMANIASIS IN NORTHERN MOROCCO**

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**7064****HAEMOGLOBIN DYNAMICS FOLLOWING TREATMENT OF VISCERAL LEISHMANIASIS: AN INDIVIDUAL PATIENT DATA META-ANALYSIS USING THE INFECTIOUS DISEASES DATA OBSERVATORY DATA PLATFORM**

Prabin Dahal<sup>1</sup>, Abdalla Munir<sup>1</sup>, Rishikesh Kumar<sup>2</sup>, Sauman Singh-Phulgenda<sup>1</sup>, Niyamat Ali Siddiqui<sup>2</sup>, Gemma Buck<sup>1</sup>, Caitlin Naylor<sup>1</sup>, Matt Brack<sup>1</sup>, Manju Rahi<sup>3</sup>, Paritosh Malaviya<sup>4</sup>, Monique Wassuna<sup>5</sup>, Francois Chappuis<sup>6</sup>, Koert Ritmeijer<sup>7</sup>, Carlos Costa<sup>8</sup>, Gustavo Romero<sup>9</sup>, Vassiliki Syriopoulou<sup>10</sup>, Fabiana Alves<sup>11</sup>, Kasia Stepniewska<sup>1</sup>, Shyam Sundar<sup>4</sup>, Krishna Pandey<sup>2</sup>, Ahmed Musa<sup>12</sup>, Philippe J. Guerin<sup>1</sup>  
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**7065****SYSTEMATIC REVIEW OF CHAGAS DISEASE IN ENDEMIC COUNTRIES, 1980 - 2019.**

Ewerton Cousin, Stephanie R. M. Zimsen, Cathleen Keller, Joanna Whisnant, Olivia Nesbit, Taren Gorman, Lydia Plante, Quince Hara  
 Institute for Health Metrics and Evaluation, Seattle, WA, United States

**7066****FIRST MOLECULAR DOCUMENTATION OF LEISHMANIA MAJOR IN THE PHLEBOTOMINE SAND FLY, AL AHSÁ, EASTERN REGION, SAUDI ARABIA**

Abdullatif S. Al Rashed<sup>1</sup>, Reem Al Jindan<sup>1</sup>, Salma Al Jaroodi<sup>1</sup>, Ahmed Al Mohanna<sup>2</sup>, Ayman A. El-Badry<sup>1</sup>  
<sup>1</sup>Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia, <sup>2</sup>Vector Control Center, Al Ahsa, Saudi Arabia

**One Health: The Interconnection between People, Animals, Plants and Their Shared Environment****7067****THE FIRST EPIDEMIOLOGICAL INVESTIGATION ON CONTACTS WITH MYCOBACTERIUM BOVIS FROM A ZOO IN THE REPUBLIC OF KOREA, JULY 2021-SEPTEMBER 2022**

Hye Young Lee, Yunhyung Kwon, Sang-Eun Lee, Jieun Kim  
 Korea Disease Control and Prevention Agency, Cheongju-si, Chungcheongbuk-do, Republic of Korea

**7068****ASSESSMENT OF THE ZONOTIC TRANSMISSION POTENTIAL OF ASCARIS IN HUMAN AND PIGS AND ITS IMPLICATIONS FOR ASCARIASIS CONTROL IN MAKENENE IN THE CENTER REGION OF CAMEROON**

Merveille Gaëlle Lekeufack Djitia, Estelle Mezajou Mewamba, Pythagore Soubgwi Fogue, Cyrille Nguemngang Kamdem, Arnol Auvaker Zebaze Tiofack, Gustave Simo  
 University of Dschang, Dschang, Cameroon



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**DRIVING FORCE OF INDISCRIMINATE USAGE OF ANTIBIOTICS IN SMALL SCALE COMMERCIAL POULTRY FARMS IN BANGLADESH**

Abdul Khaleque Md. Dawlat Khan<sup>1</sup>, Nabila Nujhat Chowdhury<sup>1</sup>, Md. Mehedi Hasan<sup>1</sup>, Md. Zulqarnine Ibne Noman<sup>1</sup>, Shariful Islam<sup>1</sup>, Md. Abu Sayeed<sup>1</sup>, Md. Arif Khan<sup>1</sup>, Abdullah Al Mamun<sup>1</sup>, Shusmita Dutta Choudhury<sup>1</sup>, Tahmina Shirin<sup>1</sup>, Ariful Islam<sup>2</sup>  
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**ASSESSING TRANSBOUNDARY ZOOONOTIC DISEASE THREATS AT POINTS OF ENTRY BETWEEN IRAQ AND JORDAN: A ONE HEALTH APPROACH**

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**SNAKEBITE PREVALENCE AND RISK FACTORS IN A NOMADIC POPULATION IN KENYA: A COMMUNITY-BASED SURVEY**

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**USING A ONE HEALTH SYSTEMS ASSESSMENT TOOL TO STRENGTHEN TRANSBOUNDARY ZOOONOTIC DISEASE DETECTION, SURVEILLANCE AND RESPONSE BETWEEN LIBYA AND TUNISIA**

Lauren N. Miller<sup>1</sup>, Walid K. Saadawi<sup>2</sup>, Ahmed S. Elgrari<sup>2</sup>, Ashur M. Lmrabet<sup>2</sup>, Emaduldin A. Abdulkarim<sup>2</sup>, Abir E. Elbukhari<sup>2</sup>, Wafa Ben Hamouda<sup>4</sup>, Kaouther Harabech<sup>5</sup>, Ammar A. Jemai<sup>4</sup>, Abdulaziz Zorgani<sup>2</sup>, Omar Elamher<sup>2</sup>, Claire J. Standley<sup>1</sup>, Erin M. Sorrell<sup>6</sup>  
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**TAILORING A ONE HEALTH COURSE FOR AN ESTABLISHED NON-ONE HEALTH GRADUATE PROGRAM IN BRAZIL**

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**RIFT VALLEY FEVER VIRUS AND GENOME STABILITY IN RAW MILK**

Brian E. Dawes<sup>1</sup>, Alina M. De La Mota-Peynado<sup>2</sup>, Izabela Rezende<sup>1</sup>, Esra Buyukcangaz<sup>1</sup>, Keli Gerken<sup>3</sup>, Christabel Winter<sup>4</sup>, Bethel Bayrau<sup>1</sup>, Dana N. Mitzel<sup>2</sup>, William C. Wilson<sup>2</sup>, A. Desiree LaBeaud<sup>1</sup>  
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**GENOMIC EPIDEMIOLOGY OF CAMPYLOBACTER JEJUNI AND CAMPYLOBACTER COLI ISOLATED FROM INDUSTRIAL AND HOUSEHOLD POULTRY IN IQUITOS, PERU**

Francesca Schiaffino<sup>1</sup>, Katia Manzanares Villanueva<sup>2</sup>, Lucero Romaina Cachique<sup>2</sup>, Tackeshy Pinedo Vasquez<sup>2</sup>, Maribel Paredes Olortegui<sup>2</sup>, Paul F. Garcia Bardales<sup>2</sup>, Steven Huynh<sup>3</sup>, Pablo Peñataro Yori<sup>4</sup>, Evangelos Mourkas<sup>5</sup>, Ben Pascoe<sup>6</sup>, Kerry K. Cooper<sup>7</sup>, Craig T. Parker<sup>8</sup>, Margaret N. Kosek<sup>4</sup>  
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**FACTORS ASSOCIATED & PREVALENCE OF ABNORMALITIES OF VENTILATORY FUNCTION IN ATTÉCOUBÉ, ABIDJAN, CÔTE D'IVOIRE, JANUARY-FEBRUARY 2022**

Affou Seraphin Wognin<sup>1</sup>, Loukou Leandre Konan<sup>2</sup>, Wilnique Pierre<sup>3</sup>, Joseph Blaise Otshudiandjeka<sup>3</sup>, Issaka Tiembre<sup>4</sup>, Vroh Joseph Beni Bi<sup>5</sup>  
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**LAND USE CHANGE DRIVES BAT ROOSTING ECOLOGY AND HUMAN-BAT FOOD COMPETITION ON CULTIVATED FOOD RESOURCES PROMOTES NIPAH VIRUS SPILLOVER TO HUMANS IN BANGLADESH**

Ariful Islam<sup>1</sup>, AKM Dawlat Khan<sup>2</sup>, Shusmita Dutta Choudhury<sup>2</sup>, Md Mehedi Hasan<sup>2</sup>, Shariful Islam<sup>2</sup>, Sarah Munro<sup>1</sup>, Md Zulqarnine Ibne Noman<sup>2</sup>, Md Abu Sayeed<sup>2</sup>, Nabila Nujhat Chowdhury<sup>2</sup>, Pronesh Dutta<sup>2</sup>, Emama Amin<sup>2</sup>, Arif Khan<sup>2</sup>, Monjurul Islam<sup>2</sup>, Sharmin Sultana<sup>2</sup>, Ahmad Raihan Sharif<sup>2</sup>, Tahmina Shirin<sup>2</sup>, Jonathan H Epstein<sup>1</sup>  
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**Pneumonia, Respiratory Infections and Tuberculosis**

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**TUBERCULOSIS MORTALITY: A SCOPING REVIEW**

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**DISPROPORTIONATE COVID-19 DISEASE SEVERITY AND MORTALITY IN A DIVERSE POPULATION OF HOSPITALIZED PATIENTS**

Alexandra Do<sup>1</sup>, Jordan West<sup>1</sup>, Molly Biggs<sup>1</sup>, Marshall Reviere<sup>1</sup>, Gaelan Montoya<sup>1</sup>, Dominic Lundquist<sup>1</sup>, Samuel B. Anyona<sup>2</sup>, Douglas J. Perkins<sup>3</sup>, Ivy Hurwitz<sup>3</sup>, Jens O. Langsjoen<sup>4</sup>  
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Saturday  
October 21

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### PREDICTORS OF DISPOSITION STATUS IN HOSPITALIZED COVID-19 PATIENTS IN DIVERSE POPULATIONS: A CURRENT AND FUTURE MODEL

Dominic Lundquist<sup>1</sup>, Alexandra Do<sup>1</sup>, Jordan West<sup>1</sup>, Molly Biggs<sup>1</sup>, Marshall Reviere<sup>1</sup>, Gaelan Montoya<sup>1</sup>, Clinton Onyango<sup>2</sup>, Samuel B. Anyona<sup>3</sup>, Ivy Hurwitz<sup>4</sup>, Douglas J. Perkins<sup>5</sup>, Jens O. Langsjoen<sup>1</sup>

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### CROSS SECTIONAL OBSERVATIONAL STUDY ON PERINATAL OUTCOMES AFTER SARS-COVID-2 VACCINATION DURING PREGNANCY IN TERTIARY CARE SETTING IN URBAN PUNE , INDIA

Mohammadhanif Yakub Shaikh<sup>1</sup>, Priyanka Gaikwad<sup>2</sup>, Mahesh Asalkar<sup>3</sup>

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### WEIGHTED FIDELITY OF DELIVERY OF AN INTERVENTION IN THE HEALTH FACILITY: A CASE OF TUBERCULOSIS SCREENING AMONG HIV CLIENTS IN SELECTED HOSPITALS IN GHANA

Solomon A. Narh-Bana<sup>1</sup>, Mary Kawonga<sup>2</sup>, Esnat D. Chirwa<sup>3</sup>, Selase A. Ofori<sup>1</sup>, Frank Bonsu<sup>4</sup>, Latifat Ibisomi<sup>5</sup>, Tobias F. Chirwa<sup>2</sup>

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### SURVEILLANCE OF INFLUENZA LIKE ILLNESS (ILI) AT THE US. MILITARY CAMP LEMONNIER, DJIBOUTI

Mayar Maged Said

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### SENSITIVITY PROFILE OF FUNGAL PATHOGENS RESPONSIBLE FOR LOWER RESPIRATORY TRACT INFECTIONS IN YAOUNDE

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### TUBERCULOSIS IS A GOOD POINT OF ENTRY FOR THE SCREENING OF CARDIOVASCULAR EVENT RISK FACTORS IN A LOW-MIDDLE-INCOME COUNTRY: LESSON LEARNED FROM INTEGRATED HEALTHCARE IN GABON

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### EFFECT OF POST PCV13 ON VACCINE TYPE INVASIVE PNEUMOCOCCAL DISEASE AMONG CHILDREN IN RURAL GAMBIA

rasheed A. salaudeen<sup>1</sup>, Ousman Barjo<sup>2</sup>, Momodou Drammeh<sup>2</sup>, wutor Baleng Mahama<sup>2</sup>, Yekini A. Olatunji<sup>2</sup>, isaac osei<sup>2</sup>, Mohammad Ilias Hossain<sup>2</sup>, Grant A. Mackenzie<sup>2</sup>

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### THE ADDED VALUE OF USING PULSE OXIMETER ROUTINELY INTO THE INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS GUIDELINES TO BETTER IDENTIFY & MANAGE SEVERE CASES AMONG CHILDREN UNDER-5 YEARS OLD IN WEST AFRICA, JUNE 2021 TO JUNE 2022

Gildas Boris HEDIBLE<sup>1</sup>, Desire Neboua<sup>2</sup>, Lucie Peters Bokol<sup>1</sup>, Gildas Anago<sup>2</sup>, Zineb ZAIR<sup>1</sup>, Severin Lenaud<sup>3</sup>, Honorat Agbeci<sup>1</sup>, Abdoul Guaniyi Sawadogo<sup>4</sup>, Désiré Kargougou<sup>5</sup>, Bertrand Meda<sup>6</sup>, Jacques Séraphin Kolié<sup>7</sup>, Sandrine Busiere<sup>8</sup>, Franck Lamontagne<sup>9</sup>, Sarah Louart<sup>10</sup>, Valery Ridde<sup>11</sup>, Valériane Leroy<sup>1</sup>

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### FINE-SCALE SPATIOTEMPORAL DYNAMICS OF SARS-COV-2 INTRODUCTION AND SPREAD IN NAIROBI COUNTY, KENYA

Edith Chepkorir<sup>1</sup>, John Mwita<sup>2</sup>, Solomon Langat<sup>1</sup>, Silvanos Mukunzi<sup>1</sup>, Limbaso Konongoi<sup>1</sup>, Samwel Lifumo<sup>1</sup>, Samoel Khamadi<sup>1</sup>, George Githinji<sup>2</sup>

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### SCALING RISK FOR A GLOBAL TUBERCULOSIS PROGRAM IN AN OIL AND GAS COMPANY

Susan Ngunjiri, Malick Diara, Candace McAlester, Tammy Pipes  
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### INVESTIGATION OF SUSPECTED PULMONARY TUBERCULOSIS CASES IN KATIALI IN THE DIANRA HEALTH DISTRICT, CÔTE D'IVOIRE, JUNE 2021

Pegontaye Moussa Soro<sup>1</sup>, Kouadio Felix Koffi<sup>2</sup>, Wilnique Pierre<sup>3</sup>, Joseph Blaise Otshudiandjeka<sup>1</sup>, Issaka Tiembre<sup>4</sup>, Vroh Joseph Beni Bi<sup>4</sup>

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### PRE-CLINICAL VALIDATION STUDIES OF NOVEL POINT-OF-CARE RNA TEST FOR COVID-19 DIAGNOSIS AND UTILITY FOR SARS-COV-2 GENOMIC SURVEILLANCE IN GHANA

Charles Narh<sup>1</sup>, Maame E. Acquah<sup>1</sup>, Gloria Amegatcher<sup>1</sup>, Deborah Tetteh<sup>1</sup>, Ethel Debrah<sup>1</sup>, Bridget Quist<sup>1</sup>, Gideon Twieku<sup>2</sup>, Sarmuel Armoo<sup>2</sup>, Bill Hopper<sup>2</sup>, Lydia Mosi<sup>1</sup>, Jack Richards<sup>4</sup>

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### A CASE OF TUBERCULOSIS PERICARDITIS

Bethlehem Atoma<sup>1</sup>, Kinfu Debele<sup>2</sup>, Dawi Girma<sup>2</sup>, Obse Deressa<sup>2</sup>, Anteneh Zewde<sup>1</sup>

<sup>1</sup>University of Minnesota, Minneapolis, MN, United States, <sup>2</sup>Adama Hospital Medical Center, Adama, Ethiopia, <sup>3</sup>St Paul Hospital, Addis Ababa, Ethiopia

## Schistosomiasis and Other Trematodes – Epidemiology and Control

7093

### SCHISTOTRACK: A COMMUNITY-BASED, PROSPECTIVE COHORT IN RURAL UGANDA TO EXAMINE CAUSES OF PERIORTAL FIBROSIS ASSOCIATED WITH INTESTINAL SCHISTOSOMIASIS

Goylette F. Chami

Big Data Institute, Nuffield Department of Population Health, University of Oxford, Oxford, United Kingdom

7094

### NAVIGATING BARRIERS TO CREATING AWARENESS OF FEMALE GENITAL SCHISTOSOMIASIS IN GHANA-CASE STUDY IN THE CENTRAL REGION OF GHANA

Ruth Esi Fosuah Allotey

Korle Bu Teaching Hospital, Accra, Ghana

7095

### THE MEASURING OF TREATMENT COVERAGE AS COMPARED TO ADMINISTRATIVE COVERAGE FOR SCHISTOSOMIASIS WITH PREVENTIVE CHEMOTHERAPY IN BONG, LOFA, AND NIMBA COUNTIES IN 2018 IN LIBERIA

Anthony Kerkula Bettee

Ministry of Health, Monrovia, Liberia

7096

### MAPPING THE TRANSMISSION DYNAMICS OF SCHISTOSOMIASIS: INSIGHTS FOR CONTROL AND ELIMINATION STRATEGIES

Obiageli Josephine Nebe<sup>1</sup>, Juliana A. Amanyi Enegele<sup>2</sup>, Jacob Solomon<sup>1</sup>, Rita Omohode Urude<sup>1</sup>, Rinpan Ishaya<sup>3</sup>, Girija Sankar<sup>2</sup>, Bosede Eunice Ogundipe<sup>4</sup>, Abdurrahman Sadiq Tsimiri<sup>4</sup>, Abubakar Abba<sup>4</sup>, Joseph Kumbur<sup>5</sup>, Bright Ekweremadu<sup>5</sup>, Chistopher Ogoshi<sup>2</sup>, Moses Aderogba<sup>6</sup>, Louise Makau-Barasa<sup>7</sup><sup>1</sup>Federal Ministry of Health, Abuja, Nigeria, <sup>2</sup>CBM Christoffel Blindenmission CBM e.V, Cambridge, United Kingdom, <sup>3</sup>Health and Development Support Programme (HANDS), Jos, Nigeria, Jos, Nigeria, <sup>4</sup>Department of Public Health, Federal Capital Territory Administration, Abuja, Abuja, Nigeria, <sup>5</sup>CBM Christoffel Blindenmission CBM e.V, Abuja, Nigeria, <sup>6</sup>The END Fund, Abuja, Nigeria, <sup>7</sup>The END Fund, New York, NY, United States

7097

### COMPARATIVE GENOMIC EVOLUTIONARY ANALYSIS OF BIOMPHALARIA SUDANICA, A NEGLECTED INTERMEDIATE HOST VECTOR OF SCHISTOSOMIASIS

Tom Pennance<sup>1</sup>, Javier Calvelo<sup>2</sup>, Jacob A. Tennessen<sup>3</sup>, Stephanie R. Bollmann<sup>4</sup>, Michael S. Blouin<sup>4</sup>, Johannie M. Spaan<sup>1</sup>, George Ogara<sup>5</sup>, Fredrick Rawago<sup>5</sup>, Kennedy Andiego<sup>5</sup>, Boaz Mulonga<sup>6</sup>, Meredith Odhiambo<sup>5</sup>, Eric S. Loker<sup>6</sup>, Andrés Iriarte<sup>7</sup>, Maurice Odiere<sup>5</sup>, Michelle L. Steinauer<sup>1</sup><sup>1</sup>Western University of Health Sciences, Lebanon, OR, United States, <sup>2</sup>Universidad de la República, Montevideo, Uruguay, <sup>3</sup>Harvard T.H. Chan School of Public Health, Boston, MA, United States, <sup>4</sup>Oregon State University, Corvallis, OR, United States, <sup>5</sup>Kenya Medical Research Institute (KEMRI), Kisumu, Kenya, <sup>6</sup>University of New Mexico, Albuquerque, NM, United States

(ACMCIP Abstract)

7098

### RE-ASSESSING THERMAL SENSITIVITY OF SCHISTOSOMIASIS TRANSMISSION RATES IN THE ERA OF CLIMATE CHANGE: EVIDENCE OF A HIGHER THERMAL OPTIMUM THAN PREVIOUSLY PREDICTED

Giulio A. De Leo<sup>1</sup>, Ibrahim H. Aslan<sup>1</sup>, Andrew J. Chamberlin<sup>1</sup>, Kaitlyn Mitchell<sup>1</sup>, Alyson L. Singleton<sup>2</sup>, Caroline K. Glidden<sup>3</sup>, Erin A. Mordecai<sup>4</sup>, Roberta Lima Caldeira<sup>5</sup>, Miguel AMV Monteiro<sup>6</sup>, Vivian Silva<sup>6</sup>, Adriano Pinter<sup>7</sup>, Roseli Tuan<sup>8</sup>, Raquel GS Palasio<sup>9</sup>, Eliezer K. N'Goran<sup>10</sup>, Nana Rose Diakite<sup>10</sup>, Mamadou Ouattara<sup>10</sup>, Fiona Allan<sup>11</sup>, Andrew S. Brierley<sup>11</sup>, Dave Little<sup>12</sup>, Rachel Norman<sup>12</sup>, Reed Ozretich<sup>12</sup>, Ping Liu<sup>13</sup>, Kamazima Lwiza<sup>13</sup>, Thiago A. Pereira<sup>14</sup>, Susanne H. Sokolow<sup>1</sup>, Chelsea C. Wood<sup>15</sup><sup>1</sup>Stanford University, Program for Disease Ecology, Health and the Environment, Pacific Grove, CA, United States, <sup>2</sup>Stanford University, Emmett Interdisciplinary Program in Environment and Resources, Stanford, CA, United States, <sup>3</sup>Stanford University, Department of Biology, Stanford, CA, United States, <sup>4</sup>Stanford University, Dept of Biology, Stanford, CA, United States, <sup>5</sup>Fiocruz Minas, Belo Horizonte-MG, Brazil, <sup>6</sup>Instituto Nacional de Pesquisas Espaciais, São José dos Campos, São Paulo, Brazil, <sup>7</sup>Stanford University, Program for Disease Ecology, Health and the Environment, Pasteur Institute, Brazil, <sup>8</sup>Pasteur Institute, São Paulo, Brazil, <sup>9</sup>USP School of Public Health, São Paulo, Brazil, <sup>10</sup>Université Felix Houphouet Boigny, Abidjan, Côte D'Ivoire, <sup>11</sup>University of St Andrews, St Andrews, United Kingdom, <sup>12</sup>University of Stirling, Stirling, United Kingdom, <sup>13</sup>Stony Brook University, Stony Brook, NY, United States, <sup>14</sup>Stanford University, Stanford, CA, United States, <sup>15</sup>University of Washington, Seattle, WA, United States

7099

### USING WHO SCHISTOSOMIASIS COMMUNITY DATA COLLECTION FORM TO IDENTIFY FACTORS CONTRIBUTING TO HIGH PREVALENCE IN MALI

Mahamadou Traore<sup>1</sup>, Modibo Keita<sup>2</sup>, Fatoumata Koundou Maiga<sup>1</sup>, Boubacar Guindo<sup>2</sup>, Mama Niélé Doumbia<sup>2</sup>, Lamine Diarra<sup>2</sup>, Salif Seriba Doumbia<sup>3</sup>, Cheick Amadou Tidiane Traore<sup>1</sup>, Yacouba Sangaré<sup>1</sup>, Alex Karl Brown<sup>2</sup>, Benoit Dembele<sup>4</sup>, Yaya Ibrahim Coulibaly<sup>2</sup>, Anna Phillips<sup>5</sup>, Cleo Stern<sup>6</sup>, Steven D. Reid<sup>6</sup>, Yaobi Zhang<sup>6</sup>, Angela Weaver<sup>6</sup><sup>1</sup>Direction Générale de la Santé et de l'Hygiène Publique, Ministère de la Santé et de Développement Social, Bamako, Mali, <sup>2</sup>Helen Keller International, Bamako, Mali, <sup>3</sup>International Center of Excellence in Research, USTTB, Bamako, Mali, <sup>4</sup>Helen Keller International, Dakar, Senegal, <sup>5</sup>FHI 360, Washington, DC, United States, <sup>6</sup>Helen Keller International, New York, NY, United States

7100

### SCHISTOSOMA OCCUPATIONAL EXPOSURE RISK IN RICE FIELDS IN THE SENEGAL RIVER BASIN

Emily Selland<sup>1</sup>, Alexandra Sack<sup>1</sup>, Sidy Bakhoun<sup>1</sup>, Meghan Forstchen<sup>1</sup>, Nicolas Jouanard<sup>2</sup>, Momy Seck<sup>2</sup>, Jason Rohr<sup>1</sup><sup>1</sup>University of Notre Dame, Notre Dame, IN, United States, <sup>2</sup>Station d'Innovation Aquacole, Saint-Louis, Senegal

7101

### BARRIERS TO FEMALE GENITAL SCHISTOSOMIASIS CARE MANAGEMENT IN NIGERIA; COMMUNITY MEMBERS AND HEALTH WORKERS PERSPECTIVES

Omosefe Osinoiki<sup>1</sup>, Martins Imhansoloeva<sup>1</sup>, Oluwole Akinola<sup>1</sup>, Solomon Jacob<sup>2</sup>, Richard Selby<sup>3</sup>, Obiageli Nebe<sup>2</sup><sup>1</sup>Sightsavers, Abuja, Nigeria, <sup>2</sup>Federal Ministry of Health, Abuja, Nigeria, <sup>3</sup>Sightsavers, West Sussex, United Kingdom

7102

### A SURFING PARASITE: HOW SCHISTOSOME CERCARIAE COUPLE TO INTERFACIAL BOUNDARIES TO EXTEND DISPERSION AND DISEASE SPREAD

Melanie Hannebelle<sup>1</sup>, Ian Ho<sup>1</sup>, Alassane Ndiaye<sup>2</sup>, Manu Prakash<sup>1</sup><sup>1</sup>Stanford university, Stanford, CA, United States, <sup>2</sup>Station d'Innovation Aquacole, Saint Louis, Senegal

# Water, Sanitation, Hygiene and Environmental Health

7103

## INVESTIGATING THE PRESENCE OF SALMONELLA SPP. IN LOCALLY MADE CHEESE IN MONTERÍA, CORDOBA, COLOMBIA IN 2021

Linda M. Chams<sup>1</sup>, Jorge D. Arrieta<sup>2</sup>, Carlos J. Castro<sup>1</sup>  
<sup>1</sup>Universidad de Córdoba, Montería, Colombia, <sup>2</sup>Universidad de Córdoba, Barranquilla, Colombia

7104

## IMPACT OF THE WASH IN SCHOOLS FOR EVERYONE (WISE) PROGRAMME ON THE HEALTH AND SCHOOL ATTENDANCE OF KINDERGARTENERS IN ADDIS ABABA, ETHIOPIA: A CLUSTER-RANDOMISED CONTROLLED TRIAL

Sarah Bick<sup>1</sup>, Charles Opondo<sup>1</sup>, Baptiste Laurent<sup>2</sup>, Oliver Cumming<sup>1</sup>, Alem Ezezew<sup>2</sup>, Elizabeth Allen<sup>1</sup>, Robert Dreifelbis<sup>1</sup>  
<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>University College London, London, United Kingdom, <sup>3</sup>Holster International Research and Development Consultancy, Addis Ababa, Ethiopia

7105

## ASSESSMENT OF KNOWLEDGE ATTITUDES AND PRACTICE KAP OF HAND WASHING HYGIENE AND THE ROLE OF PREVENTION PROJECT OF INFECTION CONTROL, GEZIRA STATE, SUDAN 2022

Dania Akasha<sup>1</sup>, Mazin Osman<sup>2</sup>  
<sup>1</sup>University of Gezira, Faculty of medicine, Wad medani, Sudan, <sup>2</sup>King Fahad Hospital albaha, Al baha, Saudi Arabia

7106

## USE OF ENRICHMENT MNGS METHOD TO IDENTIFY RESPIRATORY PATHOGENS IN WASTEWATER FROM TREATMENT PLANT LOCATION IN SALVADOR, BAHIA, BRAZIL

Luciane Amorim Santos<sup>1</sup>, Laise Eduarda Paixão de Moraes<sup>1</sup>, Pablo Alessandro Barbosa Viana<sup>2</sup>, Pedro Milet Meirelles<sup>3</sup>, Tiago Gräf<sup>4</sup>, Pablo Ivan Pereira Ramos<sup>1</sup>, Manoel Barral Netto<sup>1</sup>, Ricardo Khouri<sup>1</sup>  
<sup>1</sup>Instituto Gonçalves Moniz, Fiocruz, Salvador, Brazil, <sup>2</sup>Instituto de Biologia da Universidade Federal da Bahia, Salvador, Brazil, <sup>3</sup>Instituto de Biologia da Universidade Federal da Bahia, Salvador, Brazil, <sup>4</sup>Instituto Carlos Chagas, Fiocruz, Curitiba, Brazil

7107

## CHOLERA OUTBREAK IN THE MIFI HEALTH DISTRICT OF CAMEROON, A CASE-CONTROL STUDY, JULY 2022

Ncham Evaristus Ngong<sup>1</sup>, Flore Estelle Balana Esiene<sup>1</sup>, Patricia Mendjime<sup>1</sup>, Etoundi Evouna Antoine De Padoue<sup>2</sup>, Evouna Armel Mbarga<sup>1</sup>  
<sup>1</sup>Cameroon Field Epidemiology Training Program, Yaounde, Cameroon, <sup>2</sup>National Tuberculosis Control Program, Yaounde, Cameroon

7108

## CONTROLLED BEFORE-AND-AFTER STUDY OF A MULTI-MODAL HAND HYGIENE INTERVENTION IN HEALTHCARE FACILITIES IN CAMBODIA

Elisabeth Tadi<sup>1</sup>, Leang Supheap<sup>2</sup>, Naisim Sum<sup>3</sup>, Senghort Ret<sup>3</sup>, Channara Thea<sup>3</sup>, Bernice Sarpong<sup>4</sup>, Robert Dreifelbis<sup>1</sup>  
<sup>1</sup>LSHTM, London, United Kingdom, <sup>2</sup>NIPH, Phnom Penh, Cambodia, <sup>3</sup>WaterAid Cambodia, Phnom Penh, Cambodia, <sup>4</sup>WaterAid Australia, Melbourne, Australia

7109

## FACTORS INFLUENCING HOUSEHOLD WASH PRACTICES

Andrea L. Smith, Alessandra Bazzano, Emily W. Johansson, Udochisom Anaba, Paul L. Hutchinson  
Tulane University, New Orleans, LA, United States

7110

## BEHAVIORAL DETERMINANTS OF ARSENIC-SAFE WATER USE AMONG GREAT PLAINS INDIAN NATION PRIVATE WELL USERS: RESULTS FROM THE COMMUNITY-LED STRONG HEART WATER STUDY PROGRAM

Kelly Endres<sup>1</sup>, Tracy Zacher<sup>2</sup>, Francine Richards<sup>3</sup>, Lisa Bear Robe<sup>3</sup>, David Harvey<sup>3</sup>, Lyle G. Best<sup>2</sup>, Reno Red Cloud<sup>4</sup>, Annabelle Black Bear<sup>5</sup>, Steve Ristau<sup>6</sup>, Dean Aurand<sup>6</sup>, Leslie Skinner<sup>7</sup>, Christa Cuny<sup>7</sup>, Marie Gross<sup>7</sup>, Elizabeth D. Thomas<sup>1</sup>, Ana Rule<sup>1</sup>, Kellogg Schwab<sup>1</sup>, Lawrence H. Moulton<sup>1</sup>, Marcia O'Leary<sup>8</sup>, Ana Navas-Acien<sup>8</sup>, Christine Marie George<sup>1</sup>  
<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, Maryland, MD, United States, <sup>2</sup>Missouri Breaks Industries Research Inc., Eagle Butte, SD, United States, <sup>3</sup>Indian Health Service, Rockville, MD, United States, <sup>4</sup>Environmental Resource Department, Oglala Sioux Tribe, Rapid City, SD, United States, <sup>5</sup>Missouri Breaks Industries Research, Inc, Eagle Butte, SD, United States, <sup>6</sup>Mid Continent Testing Labs, Inc, Rapid City, SD, United States, <sup>7</sup>Missouri Breaks Industries Research, Inc, Eagle Butte, SD, United States, <sup>8</sup>Columbia University Mailman School of Public Health, New York, NY, United States

7111

## MICROPLASTICS EXPOSURE AND THEIR ASSOCIATION WITH DIARRHOEA, GROWTH, AND DEVELOPMENT OF CHILDREN IN MALI

Cheick Sidya Sidibé<sup>1</sup>, Youssouf Diarra<sup>1</sup>, Modibo Telly<sup>1</sup>, Alice Phillips<sup>2</sup>, Lee Haverson<sup>2</sup>, Uwe Schneidewind<sup>2</sup>, Liam Kelleher<sup>2</sup>, Evans a. Asamane<sup>3</sup>, Stefan Krause<sup>2</sup>, Neil Thomas<sup>2</sup>, Iseult Lynch<sup>2</sup>, Ousmane Koita<sup>1</sup>, Ousmane Toure<sup>1</sup>, Semira Manaseki Holland<sup>3</sup>  
<sup>1</sup>University of sciences, Techniques and Technologies of Bamako, Bamako, Mali, <sup>2</sup>School of Geography, Earth and Environmental Sciences, University of Birmingham, Birmingham, United Kingdom, <sup>3</sup>Institute of Applied Health Research, University of Birmingham, Birmingham, United Kingdom

7112

## BEHAVIORAL AND ENVIRONMENTAL FACTORS ASSOCIATED WITH SELF-REPORTED DIARRHEA AND ENTERIC PATHOGEN DETECTION IN INFANTS DISCOVERED BY COMPARING HOUSEHOLD CLUSTERS WITH DISTINCT LIVING CONDITIONS

Kelly K. Baker<sup>1</sup>, Daniel Sewell<sup>1</sup>, Jane Mumma<sup>2</sup>, Oliver Cumming<sup>3</sup>, Robert Dreifelbis<sup>3</sup>, Sheillah Simiyu<sup>4</sup>  
<sup>1</sup>University of Iowa, Iowa City, IA, United States, <sup>2</sup>Great Lakes University of Kisumu, Kisumu, Kenya, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>4</sup>African Population and Health Research Center, Nairobi, Kenya

## Clinical Group (ACCTMTH) Past Presidents Meeting

Michigan 1A - Concourse Level (East Tower)

Saturday, October 21, 11:15 a.m. - 12:30 p.m. U.S. Central Time Zone



## Symposium 117

### Demystifying NIH Grants for Trainees

*Grand Ballroom CDEF - Ballroom Level (East Tower)*  
Saturday, October 21, 11:15 a.m. - 12:30 p.m. U.S. Central Time Zone

Brief presentation then Q and A with Dr. LeShawndra Price, PhD, Director of the Office of Research Training and Special Programs, NIAID, about trainee opportunities from pre-doc to transition to faculty, including efforts to diversify the pool of NIH-funded scientists through programs like MOSAIC and PACE.

#### CHAIR

Christine Petersen  
University of Iowa, Iowa City, IA, United States

#### 11:15 a.m. INTRODUCTION

#### 11:20 a.m. NIAID OPPORTUNITIES

LeShawndra N. Price  
National Institute of Allergy and Infectious Diseases, Rockville, MD, United States

## Meet the Professors Session 118

### Meet the Professors Session C – Persistent Fevers

*Grand Hall K - Ballroom Level (East Tower)*  
Saturday, October 21, 11:15 a.m. - 12:30 p.m. U.S. Central Time Zone

Meet the Professors sessions are valuable learning experiences for trainees and practicing clinicians to hear about clinical reasoning from leaders in the field. Persistent fever represents an important clinical syn-drome encountered in tropical medicine. This Meet the Professors session will feature cases from a clinician practicing in India (Dr. Tapadar), and a clinician practicing travel/tropical medicine in the USA (Dr. Gunaratne).

#### CHAIR

Daniel Leung  
University of Utah, Salt Lake City, UT, United States

#### 11:15 a.m. PRESENTATION #1

Jaya Chakravarty Tapadar  
Institute of Medical Sciences, Banaras Hindu University, Varanasi, India

#### 11:35 a.m. PRESENTATION #2

Shauna Gunaratne  
Columbia University Irving Medical Center, Bronx, NY, United States

## Late-Breaker Abstract Session 119

### Late-Breakers in Virology

*Grand Hall L - Ballroom Level (East Tower)*  
Saturday, October 21, 11:15 a.m. - 12:30 p.m. U.S. Central Time Zone

This session is specifically designed for brief presentations of new data obtained after the closing date for abstract submission. See the Meeting App or Late-Breaker Abstract Presentation Schedule booklet (available online) for the presentation schedule.

#### CHAIR

Noreen A. Hynes  
Johns Hopkins School of Medicine, Baltimore, MD, United States  
Wei-Kung Wang  
John A. Burns School of Medicine, University of Hawaii at Manoa, Honolulu, HI, United States

### Poster Session C Viewing

*Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI - Ballroom Level (East Tower)*  
Saturday, October 21, 12:45 p.m. - 3 p.m.

## Scientific Session 120

### Global Health: Maternal, Newborn and Child Health and Nutrition

*Grand Ballroom A - Ballroom Level (East Tower)*  
Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone

#### CHAIR

Miguel Reina Ortiz  
Boise State University, ID, United States  
Mary Iwaret Otiti  
Kenya Medical Research Institute- Centre for Global Health Research (KEMRI-CGHR), Kisumu, Kenya

12:45 p.m.

7113

#### EARLY LIFE DIETARY SUPPLEMENTATION OF PROBIOTICS AND SYNBIOTICS IMPROVES GUT HEALTH AND REDUCES SYSTEMIC INFLAMMATION AMONG INFANTS IN WESTERN KENYA: AN OPEN-LABEL RANDOMIZED CONTROLLED TRIAL

Mary Iwaret Otiti<sup>1</sup>, Simon Kariuki<sup>1</sup>, Micah J. June<sup>1</sup>, Alloys O. K'Oloo<sup>1</sup>, David O. Otieno<sup>1</sup>, Kephias O. Otieno<sup>1</sup>, James Dodd<sup>2</sup>, Duolao Wang<sup>2</sup>, Lindsay J. Hall<sup>3</sup>, Feiko ter Kuile<sup>2</sup>, Stephen J. Allen<sup>2</sup>  
<sup>1</sup>Kenya Medical Research Institute- Centre for Global Health Research (KEMRI-CGHR), Kisumu, Kenya, <sup>2</sup>Liverpool School of Tropical Medicine, Liverpool, United Kingdom, <sup>3</sup>Quadrum Institute of Bioscience, Norwich, United Kingdom

Saturday  
October 21

1 p.m.

7114

### TARGETING INFLAMMATION IN CHILDHOOD MALNUTRITION: A RANDOMIZED CONTROLLED CLINICAL TRIAL OF ADDITION OF FISH OIL TO THE STANDARD OF CARE NUTRITIONAL INTERVENTION

Mark Muchina<sup>1</sup>, Mary Inziani<sup>1</sup>, Beatrice Olack<sup>1</sup>, Mary Muriu<sup>1</sup>, Finnley Osuna<sup>1</sup>, Chris L. Melby<sup>2</sup>, Margaret Mbuchi<sup>1</sup>, Thaddeus Egondi<sup>1</sup>, Linet Ouma<sup>1</sup>, Rukia Kibaya<sup>1</sup>, Adam Chicco<sup>3</sup>, Asma Omar<sup>3</sup>, Peter C. Melby<sup>4</sup>, Phelgona Otieno<sup>1</sup>

<sup>1</sup>Kenya Medical Research Institute, Nairobi, Kenya, <sup>2</sup>Colorado State University, Ft. Collins, CO, United States, <sup>3</sup>Colorado State University, Ft. Collins, CO, United States, <sup>4</sup>University of Texas Medical Branch, Galveston, TX, United States

1:15 p.m.

7115

### CHILD STUNTING FROM BIRTH TO AGE TWO: A LONGITUDINAL COHORT STUDY IN AMHARA, ETHIOPIA

Frederick G. B. Goddard<sup>1</sup>, Bezawit M. Hunegnaw<sup>2</sup>, Jonathan Luu<sup>3</sup>, Sebastien Haneuse<sup>3</sup>, Mesfin Zeleke<sup>4</sup>, Yahya Mohammed<sup>4</sup>, Chalachew Bekele<sup>4</sup>, Delayehu Bekele<sup>5</sup>, Grace J. Chan<sup>6</sup>

<sup>1</sup>Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA, United States, <sup>2</sup>Department of Pediatrics and Child Health, St Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia, <sup>3</sup>Department of Biostatistics, Harvard T.H. Chan School of Public Health, Boston, MA, United States, <sup>4</sup>BIRHAN HDSS, St Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia, <sup>5</sup>Department of Obstetrics and Gynecology, St Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia, <sup>6</sup>Division of Medicine Critical Care, Boston Children's Hospital, Harvard Medical School; Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA, United States

1:30 p.m.

7116

### MICRONUTRIENT STATUS DURING PREGNANCY IS ASSOCIATED WITH YOUNG CHILD TELOMERE LENGTH

Farheen Jamshed<sup>1</sup>, Shahjahan Ali<sup>2</sup>, Sophia T. Tan<sup>3</sup>, Andrew N. Mertens<sup>4</sup>, Jue Lin<sup>5</sup>, Zachary Butzin-Dozier<sup>4</sup>, Md. Ziaur Rahman<sup>2</sup>, Rubhana Raqib<sup>2</sup>, Douglas A. Granger<sup>6</sup>, Anjan K. Roy<sup>2</sup>, Abul K. Shoab<sup>2</sup>, Firdaus S. Dhabhar<sup>7</sup>, Syeda L. Famida<sup>2</sup>, Md. Saheen Hossen<sup>2</sup>, Palash Mutsuddi<sup>2</sup>, Salma Akther<sup>2</sup>, Mahbubur Rahman<sup>2</sup>, Juergen Erhardt<sup>8</sup>, Idan Shalev<sup>9</sup>, John M. Colford Jr.<sup>4</sup>, Stephen P. Luby<sup>10</sup>, Lia C. H. Fernald<sup>11</sup>, Christine P. Stewart<sup>12</sup>, Audrie Lin<sup>9</sup>

<sup>1</sup>Department of Epidemiology, Mailman School of Public Health, Columbia University, New York, NY, United States, <sup>2</sup>Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh, <sup>3</sup>Division of HIV, Infectious Diseases, and Global Medicine, University of California, San Francisco, San Francisco, CA, United States, <sup>4</sup>Division of Epidemiology and Biostatistics, School of Public Health, University of California Berkeley, Berkeley, CA, United States, <sup>5</sup>Department of Biochemistry and Biophysics, University of California San Francisco, San Francisco, CA, United States, <sup>6</sup>Institute for Interdisciplinary Salivary Bioscience Research, University of California Irvine, Irvine, CA, United States, <sup>7</sup>Department of Psychiatry & Behavioral Sciences, Sylvester Comprehensive Cancer Center, University of Miami, Miami, FL, United States, <sup>8</sup>VitMin Lab, Willstaett, Germany, <sup>9</sup>Department of Biobehavioral Health, Pennsylvania State University, University Park, PA, United States, <sup>10</sup>Division of Infectious Diseases and Geographic Medicine, Stanford University, Stanford, CA, United States, <sup>11</sup>Division of Community Health Sciences, School of Public Health, University of California Berkeley, Berkeley, CA, United States, <sup>12</sup>Institute for Global Nutrition, University of California Davis, Davis, CA, United States

1:45 p.m.

7117

### MICRONUTRIENT STATUS DURING PREGNANCY IS ASSOCIATED WITH CHILD IMMUNE STATUS IN RURAL BANGLADESH

Da Kyung Jung<sup>1</sup>, Sophia T. Tan<sup>2</sup>, Caitlin Hemlock<sup>1</sup>, Andrew N. Mertens<sup>1</sup>, Christine P. Stewart<sup>3</sup>, Md. Ziaur Rahman<sup>4</sup>, Shahjahan Ali<sup>2</sup>, Rubhana Raqib<sup>4</sup>, Jessica A. Grembi<sup>5</sup>, Mohammed Rabiul Karim<sup>4</sup>, Sunny Shahriar<sup>4</sup>, Anjan Kumar Roy<sup>4</sup>, Sarah Bakir<sup>1</sup>, Abul K. Shoab<sup>4</sup>, Syeda L. Famida<sup>4</sup>, Md. Saheen Hossen<sup>4</sup>, Palash Mutsuddi<sup>4</sup>, Salma Akther<sup>4</sup>, Mahbubur Rahman<sup>4</sup>, Leanne Unicomb<sup>4</sup>, Lisa Hester<sup>7</sup>, Douglas A. Granger<sup>8</sup>, Juergen Erhardt<sup>9</sup>, Ruchira Tabassum Naved<sup>4</sup>, Md. Mahfuz Al Mamun<sup>4</sup>, Kausar Parvin<sup>4</sup>, John M. Colford Jr.<sup>1</sup>, Lia C. H. Fernald<sup>1</sup>, Stephen P. Luby<sup>10</sup>, Firdaus S. Dhabhar<sup>10</sup>, Audrie Lin<sup>11</sup>

<sup>1</sup>University of California, Berkeley, Berkeley, CA, United States, <sup>2</sup>University of California, San Francisco, San Francisco, CA, United States, <sup>3</sup>University of California, Davis, Davis, CA, United States, <sup>4</sup>International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh, <sup>5</sup>Stanford University, Palo Alto, CA, United States, <sup>6</sup>International Centre for

Diarrhoeal Disease Research, Bangladesh, Dhaka, CA, United States, <sup>7</sup>University of Maryland, Baltimore, MD, United States, <sup>8</sup>University of California, Irvine, Irvine, CA, United States, <sup>9</sup>VitMin Lab, Willstaett, Germany, <sup>10</sup>University of Miami, Miami, FL, United States, <sup>11</sup>Pennsylvania State University, University Park, PA, United States

2 p.m.

7119

### SEROPREVALENCE FOR NOVEL ORAL POLIOVIRUS VACCINE TYPE 2 (NOPV2) FOLLOWING OUTBREAK RESPONSE IN LIBERIA: FINDINGS, IMPLICATIONS & FUTURE DIRECTIONS

Gloria M. Ross<sup>1</sup>, Stephen B. Kennedy<sup>1</sup>, Mark WS Kieh<sup>1</sup>, Moses BF Massaquoi<sup>1</sup>, Hannah Berrian<sup>2</sup>, Grace R. Macklin<sup>3</sup>, Ondrej Mach<sup>3</sup>

<sup>1</sup>West African Consortium for Clinical Research on Epidemic Pathogens (WAC-CREP), Monrovia, Liberia, <sup>2</sup>UL-PIRE Africa Center, University of Liberia, Monrovia, Liberia, <sup>3</sup>Polio Department, World Health Organization (WHO), Geneva, Switzerland

## Scientific Session 121

### American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Parasite Drug Resistance, Genomics and Biomarkers

Grand Ballroom B - Ballroom Level (East Tower)

Supported with funding from the Burroughs Wellcome Fund

Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone

#### CHAIR

Selina Bopp  
Harvard T.H. Chan School of Public Health, Boston, MA, United States

William J. Sears  
NIAID, Bethesda, MD, United States

12:45 p.m.

7120

### GENOMIC SURVEILLANCE OF TRICLABENDAZOLE RESISTANCE IN FASCIOLA HEPATICA

Young-Jun Choi<sup>1</sup>, Bruce A. Rosa<sup>1</sup>, Martha V. Fernandez-Baca<sup>2</sup>, Rodrigo A. Ore<sup>2</sup>, John Martin<sup>1</sup>, Miguel M. Cabada<sup>3</sup>, Makedonka Mitreva<sup>1</sup>

<sup>1</sup>Washington University School of Medicine, St. Louis, MO, United States, <sup>2</sup>The Instituto de Medicina Tropical Alexander von Humboldt, Cusco, Peru, <sup>3</sup>University of Texas Medical Branch John Sealy School of Medicine, Galveston, TX, United States

1 p.m.

7121

### NATURAL VARIATION IN A PARASITIC FLATWORM ION CHANNEL UNDERPINS DIFFERENTIAL SENSITIVITY OF PARASITES TO PRAZIQUANTEL

Claudia M. Rohr, Daniel J. Sprague, Sang-Kyu Park, Nicholas J. Malcolm, Jonathan S. Marchant

Medical College of Wisconsin, Milwaukee, WI, United States

1:15 p.m.

7122

**CHARACTERIZATION OF AN ENDOGENOUS ION CHANNEL ACTIVATED BY PRAZIQUANTEL WITHIN A LIVE, ADULT SCHISTOSOME**Evgeny G. Chulkov, Jonathan S. Marchant  
Medical College of Wisconsin, Milwaukee, WI, United States

1:30 p.m.

7123

**CHROMOSOME LEVEL ASSEMBLY OF BAYLISASCARIS PROCYONIS GENOME**William Sears<sup>1</sup>, Sriveny Dangoudoubiyam<sup>2</sup>, Sasisekhar Bennuru<sup>1</sup>, Pedro Gazzinelli-Guimaraes<sup>1</sup>, Myndi Holbrook<sup>3</sup>, Craig Martens<sup>3</sup>, Kent Barbian<sup>2</sup>, Kimmo Virteneva<sup>3</sup>, Shelise Brooks<sup>4</sup>, Gerard Bouffard<sup>1</sup>, Thomas Nutman<sup>1</sup><sup>1</sup>NIAID, Bethesda, MD, United States, <sup>2</sup>Purdue, West Lafayette, IN, United States, <sup>3</sup>NIAID, Hamilton, MT, United States, <sup>4</sup>NISC, Rockville, MD, United States

1:45 p.m.

7124

**A UNIVERSAL METABARCODING PIPELINE AND HOST SIGNAL REDUCTION METHOD FOR CHARACTERIZATION OF VERTEBRATE SYMBIONT/PARASITE ASSEMBLAGES**Leah Ann Owens<sup>1</sup>, Sagan Friant<sup>2</sup>, Bruno Martorelli Di Genova<sup>3</sup>, Laura J. Knoll<sup>1</sup>, Monica Contreras<sup>4</sup>, Oscar Noya<sup>5</sup>, Maria G. Dominguez-Bello<sup>6</sup>, Tony L. Goldberg<sup>1</sup><sup>1</sup>University of Wisconsin-Madison, Madison, WI, United States, <sup>2</sup>The Pennsylvania State University, University Park, PA, United States, <sup>3</sup>The University of Vermont, Burlington, VT, United States, <sup>4</sup>Venezuelan Institute of Scientific Research, Caracas, Bolivarian Republic of Venezuela, <sup>5</sup>Universidad Central de Venezuela, Caracas, Bolivarian Republic of Venezuela, <sup>6</sup>Rutgers University, New Brunswick, NJ, United States

2 p.m.

7125

**THE PROGNOSTIC POTENTIAL OF BIOMARKERS ASSOCIATED WITH FILARIAL LYMPHEDEMA DEVELOPMENT**Derrick Adu Mensah<sup>1</sup>, Linda Batsa Debrah<sup>1</sup>, Vera Serwaa Opoku<sup>1</sup>, Jubin Osei-Mensah<sup>2</sup>, Charles Gyasi<sup>1</sup>, Patricia Jebett Korir<sup>3</sup>, Manuel Ritter<sup>4</sup>, Tomabu Adjobiney<sup>4</sup>, Ute Klarmann-Schulz<sup>2</sup>, Achim Hoerauf<sup>5</sup>, Alexander Yaw Debrah<sup>5</sup><sup>1</sup>Department of Clinical Microbiology, Kwame Nkrumah University of Science and Technology, KUMASI, Ghana, <sup>2</sup>Department of Veterinary Pathobiology, Kwame Nkrumah University of Science and Technology, KUMASI, Ghana, <sup>3</sup>Institute for Medical Microbiology, Immunology and Parasitology, University Hospital Bonn, Germany/German Center for Infection Research (DZIF), partner site Bonn-Cologne, Germany, Bonn, Germany, <sup>4</sup>Institute for Medical Microbiology, Immunology and Parasitology, University Hospital Bonn, Germany, Bonn, Germany, <sup>5</sup>Department of Medical Diagnostics, Kwame Nkrumah University of Science and Technology, KUMASI, Ghana

2:15 p.m.

7126

**MULTIANTIGEN PRINT IMMUNOASSAY (MAPIA): TOWARDS A GLOBALLY ACCESSIBLE SEROLOGICAL DIAGNOSIS OF NEUROCYSTICERCOSIS**Luz M. Toribio<sup>1</sup>, Carolina Guzman<sup>1</sup>, Sassan Noazin<sup>2</sup>, Herbert Saavedra<sup>2</sup>, Javier Bustos<sup>1</sup>, Sukwan Handali<sup>4</sup>, Hector H. Garcia<sup>1</sup><sup>1</sup>Center for Global Health, Universidad Cayetano Heredia, Lima, Peru, <sup>2</sup>Department of International Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, United States, <sup>3</sup>Instituto Nacional de Ciencias Neurológicas, Lima, Peru, <sup>4</sup>Division of Parasitic Diseases, Centers for Disease Control and Prevention, Atlanta, GA, United States**ASTMH Annual Business Meeting Session 122**

Grand Hall J - Ballroom Level (East Tower)

Saturday, October 21, 12:45 p.m. - 1:45 p.m. U.S. Central Time Zone

Open to all attendees! Come learn about the work ASTMH is doing on your behalf.

**CHAIR**Kent E. Kester  
IAVI, New York, NY, United StatesKaren A. Goraleski  
American Society of Tropical Medicine and Hygiene, Arlington, VA, United States**Symposium 123****To Infinity and Beyond: The Tale of Eradication, Why it Matters and the Lessons Learned from Smallpox, Rinderpest, Polio and Guinea Worm**

Grand Ballroom CDEF - Ballroom Level (East Tower)

Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone

To date, the World Health Organization (WHO) has declared only two diseases officially eradicated: Smallpox caused by variola virus (VARV) and Rinderpest caused by the rinderpest virus (RPV). Three other diseases are targeted for eradication: polio caused by wild polio virus (WPV), Guinea worm caused by the parasite *Dracunculiasis medinensis*, and Yaws caused by the bacteria *Treponema pallidum pertenuis*, per World Health Assembly resolutions. The Global Polio Eradication program has successfully eradicated WPV 2 and 3, with efforts to eradicate WPV 1 still underway. The global Guinea worm Eradication program has certified 200 countries free of Guinea worm, with 5 endemic and 1 pre-certification country remaining. Yaws is currently endemic in at least 9 countries. Neglected tropical diseases (NTDs) are a group of 20 diseases that impact more than 1 billion people worldwide, predominantly in tropical and impoverished areas. They cause devastating health, social and economic consequences. Strategies to address the burden of NTDs include control, elimination and eradication measures and are implemented through local, regional and national active and/or passive surveillance systems. Disease eradication is often considered the holy grail for addressing disease, as eradication provides global benefits through improved health outcomes and financial savings in perpetuity. However, tension persists between the investment and prioritization of vertical structures and the desire for integration. Integrating disease control and elimination programs into existing health systems, when feasible may reduce costs, but can sacrifice attention to detail and the speed of progress. Past and ongoing eradication programs have demonstrated that a narrow focus on diseases can accelerate the achievement of global health goals and strengthen health systems. Drawing on the successful campaign to eradicate smallpox and rinderpest, and ongoing efforts to eradicate Polio and Guinea worm disease, this symposium will highlight the approaches taken to eradicate Smallpox and Rinderpest, with discourse describing the contribution of eradication and holistic approaches (e.g., One Health) to disease eradication. Ongoing efforts to eradicate Guinea worm and Polio and lessons learned will be described, including

Saturday  
October 21

their contributions to health system strengthening and the reduction of global burden of NTDs. Finally, symposium panelists will discuss country-level perspectives on eradication in insecure settings and contributions to health system strengthening to inform future disease eradication efforts.

#### **CHAIR**

Kashef Ijaz

*The Carter Center, Atlanta, GA, United States*

Sharon L. Roy

*Centers for Disease Control and Prevention, Atlanta, GA, United States*

#### **12:45 p.m.**

##### **INTRODUCTION**

#### **12:55 p.m.**

##### **DISEASE ERADICATION: FROM MOONSHOT TO REALITY AND THE RESIDUAL BENEFITS FOR HUMANKIND**

Donald R. Hopkins

*The Carter Center, Atlanta, GA, United States*

#### **1:10 p.m.**

##### **FROM SMALLPOX TO POLIO: LESSONS LEARNED AND WHY IT MATTERS**

Walter Orenstein

*Emory University - Emory Vaccine Center, Atlanta, GA, United States*

#### **1:25 p.m.**

##### **FREEDOM FROM RINDERPEST: HOW TO BUILD A GLOBAL COMMUNITY FOR A GLOBAL GOOD**

David M. Morens

*National Institute of Allergy and Infectious Diseases (NIAID)/National Institutes of Health, Bethesda, MD, United States*

#### **1:40 p.m.**

##### **WHAT DISEASE ERADICATION MEANS IN ETHIOPIA**

Lia Tadesse

*Ministry of Health, Federal Democratic Republic of Ethiopia, Addis Ababa, Ethiopia*

#### **1:55 p.m.**

##### **MODERATOR, PANEL DISCUSSION**

Kashef Ijaz

*The Carter Center, Atlanta, GA, United States*

## **Symposium 124**

### **Applications of Novel Functional Genomic Approaches in *Plasmodium falciparum* to Elucidate Antimalarial Action and Genetic Determinants of Drug Resistance and Host Red Blood Cell Invasion**

*Grand Hall K - Ballroom Level (East Tower)*

**Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone**

This symposium aims to showcase the application of novel and cutting-edge genetic, genomic and proteomic technologies to elucidate the action of antimalarial compounds, identify resistance markers, and understand the mechanisms of host cell invasion in human malaria *Plasmodium falciparum* parasites. The symposium commences with a presentation on thermal profiling proteomics (TPP) techniques to identify drug targets in the asexual stage of *Plasmodium* parasites using drug treatments on intact cells and lysates. The speaker will present their latest results of the TPP

approach on defining protein targets to artemisinin and a variety of antimalarial compounds. The second presentation will highlight the use of functional screens on a high-coverage genome library to identify candidate determinants of resistance to antimalarial drugs such as chloroquine and mefloquine. The third speaker will present their latest findings on the identification and validation of new genetic markers of resistance to antimalarial drugs including piperazine, artemisinin, chloroquine and quinine, as well as to pre-clinical compounds by leveraging *P. falciparum* genetic crosses performed in a humanized mouse model. Our fourth speaker will present data combining genomic epidemiological analyses with *P. falciparum* genetic cross studies to investigate the role of pfaat1 in the evolution and selection of pfcr1 alleles and its impact on chloroquine resistance. Our final speaker will demonstrate the application of CRISPR/Cas9-based screens and genetic crosses to study the key determinants in invasion-related processes of asexual blood stage parasites, which can serve as useful targets for drug and vaccine development.

#### **CHAIR**

David A. Fidock

*Columbia University Irving Medical Center, New York, NY, United States*

Sachel Mok

*Columbia University Irving Medical Center, New York, NY, United States*

#### **12:45 p.m.**

##### **INTRODUCTION**

#### **12:55 p.m.**

##### **DECIPHERING ANTIMALARIAL DRUG MODES OF ACTION BY THERMAL PROFILING PROTEOMICS**

Zbynek Bozdech

*Nanyang Technological University, Singapore, Singapore*

#### **1:15 p.m.**

##### **GENOME-WIDE FUNCTIONAL SCREENING OF DRUG RESISTANCE GENES IN *PLASMODIUM FALCIPARUM* USING AN ARTIFICIAL CHROMOSOME SYSTEM**

Shiroh Iwanaga

*Osaka University, Osaka, Japan*

#### **1:35 p.m.**

##### **ELUCIDATING THE GENETIC DETERMINANTS OF ANTIMALARIAL DRUG RESISTANCE USING *PLASMODIUM FALCIPARUM* GENETIC CROSSES IN A HUMANIZED MOUSE MODEL**

Sachel Mok

*Columbia University Irving Medical Center, New York, NY, United States*

#### **1:55 p.m.**

##### **THE AMINO ACID TRANSPORTER PFAAT1 MODULATES CHLOROQUINE RESISTANCE AND FITNESS IN MALARIA PARASITES**

Xue Li

*Texas Biomedical Research Institute, San Antonio, TX, United States*



**2:15 p.m.**  
**FORWARD GENETIC SCREENS TO IDENTIFY ESSENTIAL DETERMINANTS OF RED BLOOD CELL INVASION BY MALARIA PARASITES**Manoj Duraisingh  
*Harvard School of Public Health, Boston, MA, United States***Scientific Session 125****Nematodes***Grand Hall L - Ballroom Level (East Tower)*  
**Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone****CHAIR**Ayman Elbadry  
*Cairo University Kasr Al-Ainy Faculty of Medicine, Cairo, Egypt*Jill Weatherhead  
*National School of Tropical Medicine Baylor College of Medicine, Houston, TX, United States***12:45 p.m.** **7127****EPIDEMIOLOGY OF HOOKWORM (NECATOR AMERICANUS) IN BEPOSO, GHANA: APPLICATION OF MOLECULAR AND SEROLOGIC METHODS TO DEFINE THE PREVALENCE OF INFECTION****Savanna Randi**<sup>1</sup>, Irene O. Owusu Donkor<sup>2</sup>, Jeffrey Sumbah<sup>2</sup>, Dickson Osabutay<sup>2</sup>, Rahmat bin Yusuf<sup>2</sup>, Francis Appiah-Twum<sup>2</sup>, Amanda Lamptey<sup>2</sup>, Christina Paraggio<sup>3</sup>, Lisa M. Harrison<sup>1</sup>, Debbie Humphries<sup>1</sup>, Michael D. Wilson<sup>2</sup>, Michael Cappello<sup>1</sup>  
<sup>1</sup>*Yale School of Public Health, New Haven, CT, United States*, <sup>2</sup>*University of Ghana, Accra, Ghana*, <sup>3</sup>*Yale School of Medicine, New Haven, CT, United States***1 p.m.** **7128****BIOMETRIC DATA CAPTURE DURING SOIL-TRANSMITTED HELMINTHS AND SCHISTOSOMIASIS MASS DRUG ADMINISTRATION IN A LARGE-SCALE GESHIYARO PROJECT****Ewnetu Firdawek Liyew**<sup>1</sup>, Melkie Chernet Leikun<sup>1</sup>, Rosie Maddren<sup>2</sup>, Roy Anderson<sup>2</sup>  
<sup>1</sup>*Ethiopian Public Health Institute, Addis Ababa, Ethiopia*, <sup>2</sup>*Imperial College, London, London, United Kingdom***1:15 p.m.** **7129****RAPID SPREAD OF TRICHURIS TRICHIURA INFECTION FOLLOWING TREATMENT AMONG POPULATION LIVING IN RURAL AREAS OF GABON, CENTRAL AFRICA****Jean Claude Dejon Agobé**<sup>1</sup>, Christian Chassem Lapue<sup>1</sup>, Jean Ronald Edoa<sup>1</sup>, Jeannot Fréjus Zinsou<sup>1</sup>, Yabo Josiane Honkpèhèdji<sup>1</sup>, Romeo Bayodé Adegbitè<sup>1</sup>, Stravensky Térance Boussougou-Sambe<sup>1</sup>, Tamirat Gebru Woldearegai<sup>2</sup>, Benjamin Mordmüller<sup>3</sup>, Ayôla Akim Adegnika<sup>1</sup>  
<sup>1</sup>*Centre de Recherches Médicales de Lambaréné (CERMEL), Lambaréné, Gabon*, <sup>2</sup>*Institut für Tropenmedizin, Universitätsklinikum Tübingen, Tübingen, Germany*, <sup>3</sup>*Department of Medical Microbiology, Radboud University Medical Center, Nijmegen, Netherlands***1:30 p.m.** **7130****NATURAL AND VACCINE-MEDIATED IMMUNITY TO NIPPOSTRONGYLUS BRASILIENSIS****Neima Briggs**, Aurobind Vidyarthi, Joseph Craft  
*Yale University, New Haven, CT, United States***1:45 p.m.** **7131****WASTEWATER-BASED EPIDEMIOLOGY FOR SOIL-TRANSMITTED HELMINTH SURVEILLANCE IN BENIN AND INDIA****Heather K. Amato**<sup>1</sup>, Edoux JE Siko<sup>2</sup>, Malathi Manuel<sup>3</sup>, Zayina Zondervenni<sup>3</sup>, Michael Harris<sup>1</sup>, Christopher LeBoa<sup>4</sup>, Parfait Houngbegnon<sup>2</sup>, Rohan M. Ramesh<sup>3</sup>, Gideon J. Israel<sup>5</sup>, Venkateshprabhu Janagaraj<sup>5</sup>, Nils Pilotte<sup>5</sup>, Steve Williams<sup>6</sup>, Adrian JF Luty<sup>7</sup>, Moudachirou Ibikounlé<sup>2</sup>, Sitara SR Ajjampur<sup>3</sup>, Amy J. Pickering<sup>1</sup>  
<sup>1</sup>*Department of Civil and Environmental Engineering, University of California, Berkeley, CA, United States*, <sup>2</sup>*Institut de Recherche Clinique du Bénin, Abomey-Calavi, Benin*, <sup>3</sup>*The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Christian Medical College, Vellore, India*, <sup>4</sup>*Division of Environmental Health Sciences, Berkeley School of Public Health, University of California, Berkeley, CA, United States*, <sup>5</sup>*Department of Biological Sciences, Quinnipiac University, Hamden, CT, United States*, <sup>6</sup>*Department of Biological Sciences, Smith College, Northampton, MA, United States*, <sup>7</sup>*Institut de Recherche pour le Développement, Paris, France***2 p.m.** **7132****TWENTY-FOUR MONTH LONGITUDINAL STUDY OF HOOKWORM INFECTION IN GHANAIA SCHOOL CHILDREN****Irene A. Larbi**<sup>1</sup>, Debbie Humphries<sup>2</sup>, Jana Lohrova<sup>2</sup>, Molly McLaughlin<sup>3</sup>, Luis Maldonado<sup>2</sup>, Joseph Otchere<sup>1</sup>, Josephine Quagraine<sup>1</sup>, Sena Seddoh<sup>1</sup>, Hibbah Saeed<sup>1</sup>, George Mensah<sup>1</sup>, Dickson Osabutay<sup>1</sup>, Lisa M. Harrison<sup>2</sup>, Hector Samani<sup>1</sup>, Michael Cappello<sup>2</sup>, Michael D. Wilson<sup>1</sup>  
<sup>1</sup>*Noguchi Memorial Institute for Medical Research, Accra, Ghana*, <sup>2</sup>*Yale School of Public Health, New Haven, CT, United States*, <sup>3</sup>*Yale University, New Haven, CT, United States***2:15 p.m.** **7133****STRONGYLOIDES STERCORALIS COINFECTION IS ASSOCIATED WITH ALTERED SYSTEMIC CYTOKINE PROFILES, GREATER DISEASE SEVERITY, HIGHER BACTERIAL BURDENS AND INCREASED FREQUENCIES OF UNFAVORABLE TREATMENT OUTCOMES IN PULMONARY TUBERCULOSIS****Saravanan Munisankar**  
*ICER-NIRT, Chennai, India***Symposium 126****Immune Mechanisms in Parasitic Diseases: Lesson Learned From Controlled Human Infection Models***Plaza Ballroom - Lobby Level (East Tower)*  
**Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone**

Neglected tropical diseases caused by protozoan and helminth parasites have a major impact on human health and economic development in many lower-and middle-income countries. Vaccines are widely regarded to be potentially effective tools for disease prevention and control but few vaccines for human NTDs exist. Over the past few years, controlled human infection models (CHIMs) have been developed for a variety of respiratory and enteric diseases of bacterial and viral origin, including cholera, typhoid, streptococcal infections and most recently SARS-CoV-2. The development of CHIMs for parasitic diseases has often required unique solutions to accommodate the complexity of parasite life cycles, but despite these challenges CHIMs have been developed for malaria, schistosomiasis, hookworm and, more recently, cutaneous leishmaniasis and trichuriasis. These parasite CHIMs provide new opportunities for validating existing vaccine candidates. Of equal importance, however, they provide unique opportunities to study the human immune response to parasitic infection in a timed and controlled manner and to

identify correlates of immunity that may fuel future vaccine development programs. The aim of this symposium is to bring together researchers conducting CHIMs of helminth and protozoal infections, to review new data and to compare and contrast methodological approaches to studying immunity during CHIM studies. This symposium will focus on the presentation of data that provides new mechanistic understanding and/or new insights into correlates of immunity, rather than reviewing the use of CHIMs to evaluate vaccines. After a brief Chair's introduction, specific talks will cover malaria, hookworm, cutaneous leishmaniasis, schistosomiasis and trichuriasis. The session will close with a moderated open discussion on future research priorities and how CHIMs might best be used to understand the immunopathogenesis of these important neglected parasitic diseases.

#### **CHAIR**

Paul M. Kaye  
*University of York, York, United Kingdom*

David Diemert  
*George Washington University, Washington, DC, United States*

#### **12:45 p.m.** **INTRODUCTION**

#### **12:55 p.m.** **UNDERSTANDING IMMUNOREGULATION IN MALARIA USING CHIM STUDIES**

Christian Engwerda  
*QIMR Berghofer, Brisbane, Australia*

#### **1:15 p.m.** **USING A MALARIA CHIM TO IDENTIFY CORRELATES OF PROTECTION**

Francis Ndungu  
*KEMRI, Kilifi, Kenya*

#### **1:35 p.m.** **MAPPING THE IMMUNE RESPONSE TO SCHISTOSOMIASIS USING A CHIM**

Emma L. Houlder  
*Leiden University Medical Centre, Leiden, Netherlands*

#### **1:55 p.m.** **USING A CHIM TO STUDY LOCAL IMMUNE RESPONSES IN SAND FLY TRANSMITTED CUTANEOUS LEISHMANIASIS**

Paul M. Kaye  
*University of York, Heslington, York, United Kingdom*

#### **2:15 p.m.** **USING CHIMs TO UNDERSTAND THE IMMUNOLOGY OF HOOKWORM AND TRICHURIASIS**

David Diemert  
*George Washington University, Washington, DC, United States*

## **Symposium 127**

### **Update on Malaria Management in Travelers 2023**

*Crystal Ballroom A - Lobby Level (West Tower)*

**Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone**

The aim of the symposium is to provide updated information to healthcare providers and travel medicine specialists to help them better care for returning travelers who have malaria. A review of best practices and update on management is timely. We have brought together CDC experts from the Malaria Branch to discuss epidemiology and prevalence of travelers' malaria in the U.S. with an emphasis on best practices. Cerebral malaria, a severe complication of malaria, poses management challenges, and our discussant who has a large clinical experience with this presentation will discuss cases of severe malaria. Finally, our session will review the benefits and limitations of primaquine and tafenoquine for prevention and radical cure.

#### **CHAIR**

Johanna Daily  
*Albert Einstein College of Medicine, Bronx, NY, United States*

Christina Coyle  
*Albert Einstein College of Medicine, Bronx, NY, United States*

#### **12:45 p.m.** **INTRODUCTION**

#### **12:55 p.m.** **REVIEW OF MALARIA AMONG TRAVELERS IN THE U.S.: SURVEILLANCE AND TREATMENT. PART I**

Kimberly Mace  
*CDC, Atlanta, GA, United States*

#### **1:10 p.m.** **REVIEW OF MALARIA AMONG TRAVELERS IN THE U.S.: SURVEILLANCE AND TREATMENT. PART II**

Alison Ridpath  
*CDC, Atlanta, GA, United States*

#### **1:25 p.m.** **MANAGEMENT OF CEREBRAL MALARIA: CASE BASED DISCUSSION**

Terrie E. Taylor  
*Michigan State University, E. Lansing, MI, United States*

#### **2 p.m.** **CLINICAL USE OF TAFENOQUINE VERSUS PRIMAQUINE: BEST PRACTICES**

Johanna Daily  
*Albert Einstein College of Medicine, Bronx, NY, United States*

#### **2:15 p.m.** **CLINICAL USE OF TAFENOQUINE VERSUS PRIMAQUINE: BEST PRACTICES**

Scott Weisenberg  
*NYU Langone Hospital, New York City, NY, United States*

## Scientific Session 128

### Clinical Tropical Medicine: CNS Infections and HIV

Crystal Ballroom B - Lobby Level (West Tower)

Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone

#### CHAIR

John Sanders

Wake Forest University School of Medicine, Winston-Salem, NC, United States

Joseph Donovan

London School of Hygiene & Tropical Medicine, London, United Kingdom

12:45 p.m.

7134

#### ACUTE ENCEPHALITIS SYNDROME IN ADULTS IN EASTERN INDIA: AN AETIOLOGICAL STUDY

Jaya chakravarty Tapadar, Tulika Rai, shubham kashyap, sumit chatterjee, Gopal Nath

Institute of Medical Sciences, Banaras Hindu University, Varanasi, India

1 p.m.

7135

#### THE DIAGNOSIS OF SUBARACHNOID NEUROCYSTICERCOSIS IS OFTEN DELAYED AND OTHER FINDINGS OF A MULTICENTER RETROSPECTIVE IN THE USA

Janitzio Guzman<sup>1</sup>, Jessica Herrick<sup>2</sup>, Timothy J. Hatlen<sup>3</sup>, Jill Weatherhead<sup>4</sup>, Eva H. Clark<sup>4</sup>, Jose Serpa<sup>4</sup>, Felicia C. Chow<sup>5</sup>, Paul Allyn<sup>6</sup>, Noah Wald-Dickler<sup>7</sup>, Martin Rodriguez<sup>2</sup>, Natalie M. Bowman<sup>9</sup>, Anna Cervantes-Arslanian<sup>10</sup>, Christina Coyle<sup>11</sup>, A. Clinton White<sup>12</sup>, Senate Amusu<sup>2</sup>, Danae Martin<sup>13</sup>, Megan M. Duffey<sup>4</sup>, Travis Larsen<sup>7</sup>, Elliott Welford<sup>14</sup>, Jeffery Jenks<sup>14</sup>, Annie N. Cowell<sup>14</sup>, Andres F. Henao-Martinez<sup>15</sup>, Carlos Franco-Paredes<sup>16</sup>, Glenn Mathisen<sup>17</sup>, Paola Lichtenberger<sup>18</sup>, Rory Bouzigard<sup>19</sup>, Laila Castellino<sup>19</sup>, Elise M. O'Connell<sup>1</sup>

<sup>1</sup>National Institute of Allergy and Infectious Diseases, Bethesda, MD, United States, <sup>2</sup>University of Illinois at Chicago, Chicago, IL, United States, <sup>3</sup>The Lundquist Institute at Harbor-UCLA Medical Center, UCLA, CA, United States, <sup>4</sup>Baylor College of Medicine, Houston, TX, United States, <sup>5</sup>University of California San Francisco Medical Center, San Francisco, CA, United States, <sup>6</sup>David Geffen School of Medicine at UCLA, Los Angeles, CA, United States, <sup>7</sup>Los Angeles County + University of Southern California Medical Center, Los Angeles, CA, United States, <sup>8</sup>UAB Heersink School of Medicine, Birmingham, AL, United States, <sup>9</sup>University of North Carolina School of Medicine, Chapel Hill, NC, United States, <sup>10</sup>Boston University Medical Center, Boston, MA, United States, <sup>11</sup>Albert Einstein College of Medicine, New York, NY, United States, <sup>12</sup>University of Texas Medical Branch, Galveston, TX, United States, <sup>13</sup>The Lundquist Institute at Harbor-UCLA Medical Center, Los Angeles, CA, United States, <sup>14</sup>University of California San Diego Medical Center, San Diego, CA, United States, <sup>15</sup>University of Colorado School of Medicine, Aurora, CO, United States, <sup>16</sup>Colorado State University, Fort Collins, CO, United States, <sup>17</sup>Olive View-UCLA Medical Center, Bethesda, MD, United States, <sup>18</sup>University of Miami Miller School of Medicine, Miami, FL, United States, <sup>19</sup>University of Texas Southwestern Medical Center, Dallas, TX, United States

1:15 p.m.

7136

#### CO-INFECTION WITH STRONGYLOIDES STERCORALIS IN ADULTS WITH CRYPTOCOCCAL MENINGITIS IN AFRICA

Mary Foley<sup>1</sup>, Joseph Donovan<sup>2</sup>, Kwana Lechiile<sup>3</sup>, Ronan Doyle<sup>2</sup>, Monika Struebig<sup>2</sup>, David B. Meya<sup>4</sup>, Henry C. Mwandumba<sup>5</sup>, Cecilia Kanyama<sup>6</sup>, Graeme Meintjes<sup>7</sup>, Tshupo Leeme<sup>8</sup>, Chiraitidzo E. Ndhlovu<sup>9</sup>, Conrad Muzooru<sup>4</sup>, David S. Lawrence<sup>2</sup>, Thomas S. Harrison<sup>9</sup>, Joseph N. Jarvis<sup>2</sup>

<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Clinical Research Department, Faculty of Infectious and Tropical Diseases, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Botswana Harvard AIDS Institute Partnership, Gaborone, Botswana, <sup>4</sup>Infectious Diseases Institute, College of Health Sciences, Makerere University, Kampala, Uganda, <sup>5</sup>Department of Medicine, Kamuzu University of Health Sciences, Blantyre, Malawi, <sup>6</sup>Lilongwe Medical Relief Trust (University of North Carolina Project), Lilongwe, Malawi, <sup>7</sup>Wellcome Centre for Infectious Diseases Research in Africa, Institute of Infectious Disease and Molecular Medicine, University of Cape Town, Cape Town, South Africa, <sup>8</sup>Internal Medicine Unit, Faculty of Medicine and Health Sciences, University of Zimbabwe, Harare, Zimbabwe, <sup>9</sup>Institute of Infection and Immunity, St George's University London, London, United Kingdom

1:30 p.m.

7137

#### SEROLOGIC RESPONSE USING ELISA ANTI-VI IGG ANTIBODIES AT SEVERAL TIME POINTS FOLLOWING IMMUNIZATION WITH TYPBAR-TCV AMONG HIV INFECTED CHILDREN IN KARACHI PAKISTAN

Zoya Haq<sup>1</sup>, Farah Qamar<sup>2</sup>, Sonia Qureshi<sup>2</sup>, Fatima Mir<sup>2</sup>, Mohammad Tahir Yousafzai<sup>2</sup>, Rabab Batool<sup>2</sup>

<sup>1</sup>Liaquat National Medical College, Karachi, Pakistan, <sup>2</sup>Aga Khan University Hospital, Karachi, Pakistan

1:45 p.m.

7138

#### TRIM-HIV: TARGETING THE RESTORATION OF INNATE IMMUNITY IN MEN WHO HAVE SEX WITH MEN WITH EARLY INITIATION OF ANTIRETROVIRAL THERAPY IN HIV-1 INFECTION FOR MANAGEMENT IN TROPICAL REGIONS

Matrona Akiso Mbendo, Robert Langa<sup>t</sup>, daniel Muema, Geoffrey Ombati, Omu Anzala, Marianne W. Mureithi

Univeristy of Nairobi, Nairobi, Kenya

2 p.m.

7139

#### ASSOCIATION OF UROGENITAL SCHISTOSOMIASIS WITH HIV INFECTION IN A LARGE COMMUNITY-BASED COHORT IN ZAMBIA (THE ZIPIME WEKA SCHISTA STUDY)

Kwame Shanaube<sup>1</sup>, Rhoda Ndubani<sup>1</sup>, Olimpia Lambert<sup>2</sup>, Nkatya Kasese<sup>1</sup>, Emily Webb<sup>3</sup>, Beatrice Nyondo<sup>1</sup>, Maina Cheeba<sup>1</sup>, Jennifer Fitzpatrick<sup>1</sup>, Helen Kelly<sup>2</sup>, Helen Ayles<sup>1</sup>, Amaya Bustinduy<sup>2</sup>

<sup>1</sup>Zambart, Lusaka, Zambia, <sup>2</sup>Department of Clinical Research, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Department of Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, London, United Kingdom

2:15 p.m.

7140

#### FALLING THROUGH THE CRACKS: APPLYING THE 95-95-95 METRIC TO PROVIDE INSIGHT INTO HIV PROGRAMME GAPS IN HIV-INFECTED INFANT DEATHS INVESTIGATED IN KENYA, SOUTH AFRICA AND MOZAMBIQUE

Beth A. Tippet Barr<sup>1</sup>, Zachary Madewell<sup>2</sup>, Victor Akelo<sup>3</sup>, Dickens Onyango<sup>4</sup>, Inacio Mandomando<sup>5</sup>, Quique Bassat<sup>6</sup>, Shabir Madhi<sup>7</sup>, Sana Mahtab<sup>7</sup>, Portia Mutevedzi<sup>8</sup>, Cynthia Whitney<sup>8</sup>, Dianna Blau<sup>2</sup>

<sup>1</sup>Nyanja Health Research Institute, Salima, Malawi, <sup>2</sup>US Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>3</sup>US Centers for Disease Control and Prevention, Kisumu, Kenya, <sup>4</sup>Kisumu County Department of Health, Kisumu, Kenya, <sup>5</sup>Centro de Investigacao em Saude do Manhica, Maputo, Mozambique, <sup>6</sup>ISGlobal Universitat de Barcelona, Barcelona, Spain, <sup>7</sup>Witwatersrand University, Johannesburg, South Africa, <sup>8</sup>Emory University, Atlanta, GA, United States

## Scientific Session 129

### Viruses - Viral Pathogenesis and Biology

Regency Ballroom A - Ballroom Level (West Tower)

Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone

#### CHAIR

Hannah Mueller

Bernhard-Nocht-Institut for Tropical Medicine, Hamburg, Germany

Stacey Scroggs

ARS, USDA, Manhattan, KS, United States

12:45 p.m.

7141

### CULEX PIPIENS AND CULEX MODESTUS ARE VECTORS FOR WEST NILE VIRUS AND USUTU VIRUS, RESPECTIVELY, IN BELGIUM

Alina Soto, Lander De Coninck, Celine Van De Wiele, Ann-Sophie Devlies, Ana Lucia Rosales Rosas, Lanjiao Wang, Jelle Matthijnsens, Leen Delang  
Rega Institute for Medical Research, KU Leuven, Leuven, Belgium

1 p.m.

7142

### INVESTIGATION OF VIRUS-HOST INTERACTIONS IN SEVERE FEVER WITH THROMBOCYTOPENIA SYNDROME VIRUS INFECTION USING A LIPIDOMICS APPROACH

Hin Chu, Bingpeng Yan, Bingjie Hu, Terrence Tsz-Tai Yuen, Jasper Fuk-Woo Chan  
The University of Hong Kong, Hong Kong, Hong Kong

1:15 p.m.

7143

### APOLIPOPROTEIN-A1 MIMETIC PEPTIDE 4F BLOCKS FLAVIVIRUS NS1-INDUCED ENDOTHELIAL BARRIER DYSFUNCTION

Pedro H. Carneiro<sup>1</sup>, Scott B. Biering<sup>1</sup>, Ronaldo Mohana-Borges<sup>2</sup>, Eva Harris<sup>1</sup>  
<sup>1</sup>Division of Infectious Diseases and Vaccinology, School of Public Health, University of California, Berkeley, Berkeley, CA, United States, <sup>2</sup>Laboratório de Biotecnologia e Bioengenharia Estrutural, Instituto de Biofísica Carlos Chagas Filho, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil

1:30 p.m.

7144

### DEVELOPING A MODEL OF PERSISTENT POWASSAN DISEASE IN C57BL/6 MICE

Stacey L.P. Scroggs<sup>1</sup>, Danielle K. Offerdahl<sup>2</sup>, Philip E. Stewart<sup>2</sup>, Carl Shaia<sup>2</sup>, Amanda J. Griffin<sup>2</sup>, Marshall E. Bloom<sup>2</sup>  
<sup>1</sup>United States Department of Agriculture, Manhattan, KS, United States, <sup>2</sup>National Institutes of Health, Hamilton, MT, United States

1:45 p.m.

7145

### FACTORS ASSOCIATED WITH LASSA FEVER FATALITY IN LIBERIA, 2016 - 2021: A SECONDARY DATA ANALYSIS

Emmanuel Dwalu<sup>1</sup>, Ralph W. Jetoh<sup>1</sup>, Bode I. Shobayo<sup>1</sup>, Irene P. Pewu<sup>1</sup>, Fahn M. Tarweh<sup>1</sup>, Julius S M Gilayeneh<sup>1</sup>, Himiede W. Wilson-Sesay<sup>2</sup>, Godwin E. Akpan<sup>2</sup>, Chukwuma D. Umeokonkwo<sup>2</sup>, Jane A. MacCauley<sup>1</sup>  
<sup>1</sup>National Public Health Institute of Liberia, Monrovia, Liberia, <sup>2</sup>Africa Field Epidemiology Network, Monrovia, Liberia

2 p.m.

7146

### EEG PATHOLOGIES IN LASSA FEVER INDICATING CEREBRAL INVOLVEMENT: RESULTS FROM 53 PROSPECTIVELY FOLLOWED PATIENTS

Hannah Mueller<sup>1</sup>, Cyril Erameh<sup>2</sup>, Mathias Gelderblom<sup>3</sup>, Joseph Okegualé<sup>4</sup>, Osas Edeawe<sup>2</sup>, Stephan Guenther<sup>5</sup>, Sylvanus Okogbenin<sup>4</sup>, Michael Ramharter<sup>6</sup>, Lisa Oestereich<sup>5</sup>, Till Omansen<sup>7</sup>  
<sup>1</sup>Department of Tropical Medicine, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>2</sup>Institute of Lassa Fever Research and Control & Department of Medicine, Irrua Specialist Teaching Hospital, Irrua, Nigeria, <sup>3</sup>Department of Neurology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, <sup>4</sup>Institute of Lassa Fever Research and Control & Department of Obstetrics and Gynaecology, Irrua Specialist Teaching Hospital, Irrua, Nigeria, <sup>5</sup>Department of Virology, Bernhard Nocht Institute for Tropical Medicine and German Center for Infection Research, Hamburg, Germany, <sup>6</sup>Department of Tropical Medicine, Bernhard Nocht Institute for Tropical Medicine & I. Department of Medicine, University Medical Center Hamburg-Eppendorf, German Center for Infection Research, Hamburg, Germany, <sup>7</sup>Department of Virology and Department of Tropical Medicine, Bernhard Nocht Institute for Tropical Medicine & I. Department of Medicine, University Medical Center Hamburg-Eppendorf, German Center for Infection Research, Hamburg, Germany

2:15 p.m.

7147

### POTENTIAL FOR PREEXISTING IMMUNITY TO SARS-COV2 IN EASTERN SIERRA LEONE

Nell G. Bond<sup>1</sup>, Emily J. Engel<sup>1</sup>, Foday Al-Hasan<sup>2</sup>, Ibrahim M. Kanneh<sup>2</sup>, Lansana D. Kanneh<sup>2</sup>, Mambu Momoh<sup>2</sup>, Ibrahim Sumah<sup>2</sup>, Sruti Chandra<sup>1</sup>, Robert F. Garry<sup>1</sup>, James E. Robinson<sup>1</sup>, Donald S. Grant<sup>2</sup>, Troy D. Moon<sup>3</sup>, John S. Schieffelin<sup>1</sup>, Robert Samuels<sup>2</sup>  
<sup>1</sup>Tulane University SOM, New Orleans, LA, United States, <sup>2</sup>Kenema Government Hospital, Kenema, Sierra Leone, <sup>3</sup>Tulane University School of Public Health, New Orleans, LA, United States

## Symposium 130

### WASHing Away Guinea Worm: Innovative Water, Sanitation, and Environmental Health Methodologies to Accelerate the Eradication of Guinea Worm

Regency Ballroom B - Ballroom Level (West Tower)

Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone

Guinea worm disease (caused by the helminth parasite *Dracunculus medinensis*) has become increasingly rare in humans due to more than 35 years of intensive efforts towards its eradication. Recent reported infection of Guinea worm in non-human hosts such as domestic dogs, cats, wildlife, and the implication of aquatic animals as potential paratenic and transport hosts has caused a rethink of the traditional interventions and surveillance infrastructure. As Guinea worm transmission is fundamentally associated with water, the environment, and their interaction with the pathogen, the global Guinea Worm Eradication Program (GWEP), in collaboration with research partners, has embarked on reshaping its scientific research agenda to optimize water, sanitation, and environmental health intervention methodologies. This symposium will discuss innovative WASH-e approaches employed to better understand Guinea worm transmission mechanisms and novel methods for intervention. For instance, we employ state-of-the-art technologies such as geospatial machine learning methods to describe the risk of infection across large populations, identify potential new areas with ecological characteristics capable of sustaining infection, and identify drivers of infection. Also, optical satellite imagery and synthetic aperture radar data are used to detect water bodies under tree canopy, ensuring that vector management interventions are deployed to the most hard-to-reach areas. These methodologies complement traditional surveillance infrastructure, thus vastly improving efforts towards disease eradication. Furthermore, we will also discuss water ecology studies that assess abundance of copepods in bodies of water with varying ecological characteristics. This work will further inform efficient vector management tools (i.e., Abate treatment). Finally, improving the uptake of environmental sanitation behaviors related to aquatic animal waste disposal and management can serve to interrupt emerging Guinea worm transmission pathways involving aquatic paratenic and transport hosts. This symposium will highlight the use of evidence from exploratory research to inform the design of novel aquatic animal waste interventions and address factors influencing their adoption.

#### CHAIR

David J. Civitello  
Emory University, Atlanta, GA, United States



**12:45 p.m.**  
**INTRODUCTION****12:50 p.m.**  
**EYES IN THE SKY: ASSESSING THE RISK OF GUINEA WORM IN CHAD USING MACHINE LEARNING AND REMOTE SENSING METHODS**Obiora Eneanya  
*The Carter Center, Atlanta, GA, United States***1:05 p.m.**  
**THE USE OF OPTICAL SATELLITE IMAGERY AND SYNTHETIC APERTURE RADAR DATA FOR DETECTION OF WATER BODIES**Aragaw Lamesgim  
*The Carter Center, Atlanta, GA, United States***1:20 p.m.**  
**ECOLOGY OF COPEPODS AND THEIR DYNAMIC RESPONSES TO PREDATORS AND ABATE TREATMENT**Stephanie O. Gutierrez  
*Emory University, Atlanta, GA, United States***1:35 p.m.**  
**ENVIRONMENTAL SANITATION AS A GUINEA WORM ERADICATION PROGRAM INTERVENTION: FINDINGS FROM EXPLORATORY RESEARCH ON AQUATIC ANIMAL WASTE DISPOSAL & MANAGEMENT IN CHAD**Ariane S. Ngo Bea Hob  
*Chad Guinea Worm Eradication Program, N'Djamena, Chad***1:50 p.m.**  
**PANEL MODERATOR**Adam J. Weiss  
*The Carter Center, Atlanta, GA, United States***Symposium 131****The Influence of Arboviruses on the Mosquito's Journey from Host - Seeking to Blood - Feeding***Regency Ballroom C - Ballroom Level (West Tower)*  
**Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone**

This symposium explores how mosquito-borne viruses influence the vectorial capacity of the yellow fever mosquito, *Aedes aegypti*. Vectorial capacity can be defined as the efficiency of a vector to transmit a pathogen and it depends on several factors, such as the feeding behavior of mosquitoes, mosquito abundance, mosquito survival, and environmental conditions. One of the key components of vectorial capacity is vector competence, which is defined as the ability of a vector to acquire, maintain and transmit a pathogen. After the mosquito's acquisition of a virus by feeding on an infected human host, relevant aspects of the mosquito's behavior can be directly influenced. Changes can be reflected by, for example, feeding frequency and biting persistence, patterns of activity and movement, and perception of and response to host-derived cues. On another level, mosquito-borne viruses could interact directly with insect-specific viruses or other pathogens present in the microbiome and virome of the mosquito. In addition, indirect effects, such as those modulating the mosquito's immune responses upon infection with a mosquito borne-virus or other processes when obtaining a blood-meal can also be

observed. Indeed, there is evidence that both direct and indirect effects of viral infection are frequently enhancing transmission, and thereby increase disease risk in humans. Despite significant research in the last decade, evidence regarding the nature and extent of the effects of mosquito-borne viruses on mosquito behavior and transmission risks remains fragmented and it can be challenging to draw general conclusions across studies that focus on different systems and behaviors that frequently employ different methodologies. Given their relevance in transmission of human pathogens, there is a need for additional research aimed at documenting the effect of arboviruses on their vector behavior, elucidating the mechanisms and understanding the implications for epidemiology and global health. The organized discussion will focus on questioning which knowledge still needs to be generated on the virus-mosquito interface to understand the underlying mechanisms. Moreover, we will discuss how we could utilize these studies to improve control measurements and ultimately prevent mosquito-borne diseases.

**CHAIR**Tessa M. Visser  
*Wageningen University and Research, Wageningen, Netherlands*Berlin L. Londono  
*Tulane University, New Orleans, LA, United States***12:45 p.m.**  
**INTRODUCTION****12:55 p.m.**  
**WHO IS IN CONTROL? DO FLAVI- AND ALPHAVIRUSES MANIPULATE THE HOST-SEEKING BEHAVIOR OF AEADES AEGYPTI?**Tessa M. Visser  
*Wageningen University & Research, Wageningen, Netherlands***1:10 p.m.**  
**TIME-DEPENDENT MODULATION OF LOCOMOTION AND HOST-SEEKING BEHAVIOR IN AEADES AEGYPTI BY DENGUE VIRUS**Anaïs K. Tallon  
*Mississippi State University, Starkville, MS, United States***1:25 p.m.**  
**THE VECTOR COMPETENCE OF AEADES AEGYPTI MOSQUITOES FOR DENGUE IS MODULATED BY INSECT-SPECIFIC VIRUSES**Roénick P. Olmo  
*IBMC, Institute of Molecular and Cell Biology, Strasbourg, France***1:40 p.m.**  
**VIRUS-VECTOR INTERACTIONS: OVERCOMING BARRIERS TO INFECTION**Douglas E. Brackney  
*The Connecticut Agricultural Experiment Station, New Haven, CT, United States***1:55 p.m.**  
**BLOOD MEALS WITH HEAT-INACTIVATED SERUM REVEAL THAT HUMAN COMPLEMENT PROTEINS MODIFY GENE EXPRESSION AND THE MICROBIOME OF AEADES MOSQUITO VECTORS**Arley F. Calle Tobón  
*Universidad de Antioquia, Medellín, Colombia*

## Symposium 132

### Effectiveness and Efficacy of Chemoprevention for Children Under Five

Regency Ballroom D - Ballroom Level (West Tower)

Saturday, October 21, 12:45 p.m. - 2:30 p.m. U.S. Central Time Zone

In sub-Saharan Africa, almost 70% of malaria deaths in 2018 occurred in children under five years of age. Most childhood malarial disease and deaths occur during and immediately after the rainy season. Ongoing epidemiological shifts in the high-risk populations raise important technical, risk communication and operational challenges for malaria endemic countries, as traditional control interventions are inadequate. In developing novel approaches to prevent malaria, a major focus has been chemoprevention, the use of malaria drugs to prevent infection and disease during the high transmission season. Chemoprevention strategies work on the basis that a malaria treatment will clear any existing infections and prevent new infections. Since the 1980s, researchers have been investigating the use of medicines to prevent malaria among children living in the Sahel, where transmission is highly seasonal. Leading to Seasonal Malaria Chemoprevention (SMC) originally being recommended by WHO 10 years ago. In June 2022, WHO published consolidated guidelines for malaria, a package of new and updated recommendations across several technical areas, from malaria chemoprevention and mass drug administration to elimination. Encouraging countries to tailor recommendations to local disease settings for maximum impact. Within chemoprevention, interventions include SMC, intermittent preventive treatment in pregnancy (IPTp), perennial malaria chemoprevention (PMC) (formerly intermittent preventive treatment in infants (IPTi)), and intermittent preventive treatment in school children (IPTsc). Speakers will present findings highlighting recent innovations supporting malaria chemoprevention campaigns in different populations, locations and distribution models. Important findings and lessons learned will be presented from studies on implementing chemoprevention to school children in Uganda, a rapid assessment of SMC in a new location in Niassa, Mozambique, chemoprevention efficacy in traditional and new areas compared between Burkina Faso and Mozambique, and PMC in Nigeria. Finally, a moderated discussion on the key similarities and differences between the four studies will be held to advance the science of malaria chemoprevention campaigns.

#### CHAIR

Kevin Baker  
Malaria Consortium, London, United Kingdom

#### 12:45 p.m. INTRODUCTION

#### 12:50 p.m. RESULTS FROM A STUDY TO UNDERSTAND MALARIA BURDEN AND TRANSMISSION DYNAMICS IN OLDER CHILDREN AND ADOLESCENTS IN UGANDA, AND TO EVALUATE THE IMPACT OF INNOVATIVE INTERMITTENT PREVENTIVE TREATMENT APPROACHES IN REDUCING MALARIA BURDEN

Jane Achan  
Malaria Consortium, Kampala, Uganda

#### 1:10 p.m.

#### RESULTS FROM A RAPID ASSESSMENT OF THE EFFECTIVENESS OF IMPLEMENTING SEASONAL MALARIA CHEMOPREVENTION IN A NEW LOCATION, NIASSA PROVINCE, IN MOZAMBIQUE

Baltazar Candrinho  
Mozambique National Malaria Control Program, Maputo, Mozambique

#### 1:30 p.m.

#### CHEMOPREVENTION EFFICACY OF SMC – A COMPARISON OF RESULTS FROM TRADITIONAL SAHEL SMC COUNTRIES VERSUS NEW GEOGRAPHIES IN EAST AND SOUTHERN AFRICA

Craig Bonnington  
Malaria Consortium, London, United Kingdom

#### 1:50 p.m.

#### CHEMOPREVENTION OPTIONS FROM SMC NON-ELIGIBLE AREAS – EXPERIENCES FROM NIGERIA

Olusola Oresanya  
Malaria Consortium, Abuja, Nigeria

### Career Chats: Meet the Editors

Grand Hall MN - Ballroom Level (East Tower)

Saturday, October 21, 2 p.m. - 3 p.m. United States Central Time Zone

This is an opportunity for ASTMH trainees and early career researchers to meet and talk with the editors of the global health-associated journals. Editors will answer questions about the journals, discuss the submission and review processes, and provide attendees with advice on how to increase the likelihood of publication and highlight common pitfalls to avoid. The editors will walk you through all stages of the editorial and peer review process, from how editors select referees, to how decisions are made from the set of reports. Trainees will also learn the components of a convincing cover and response letter and putting together a successful appeal.

#### CHAIR

Bartholomew Ondigo  
Egerton University, Nakuru, Kenya

Dibyadyuti Datta, Assistant Professor  
Indiana University, Bloomington, IN, United States

#### PANELISTS

Marco De Ambrogi, Deputy Editor  
The Lancet Infectious Diseases, London, United Kingdom

Justin Yai, Research Fellow and Associate Editor  
NIH/NIAID, Bethesda, MD, United States

Alison Jaeb, Managing Editor and Publisher, AJTMH  
ASTMH, Arlington, VA, United States

### Break

Saturday, October 21, 2:30 p.m. - 3 p.m. U.S. Central Time Zone

## Poster Session C Dismantle

Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI – Ballroom Level (East Tower)

Saturday, October 21, 3 p.m. - 5:15 p.m.

## Symposium 133

### Enhancing Diversity, Equity and Inclusion in the Global Health Workforce by Increasing Participation of Under Represented Minorities (URM)

Grand Ballroom A - Ballroom Level (East Tower)

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

Various high-impact studies conducted by the NIH point to the astonishingly low involvement of US underrepresented minorities (URM; American descendants of slaves (ADOS), Native Americans, Hispanics, Native Hawaiian and Asians) in the global health workforce and the need for radically improving research training, mentoring, and career development to advance health equity. Recent efforts by the NIH to promote diversity and inclusion in the biomedical workforce have achieved modest gains, especially among URM scientists involved in global health research. Interestingly, the URM's include diasporan scientists who originate from the LMICs, and their efforts to reach out and collaborate with LMIC communities to advance health equity as well as the challenges and opportunities they encounter have received little attention. Significant work is needed to harness this untapped capacity and human capital to contribute to the advancement of global health equity in developing countries. This symposium will explore the often-neglected role of the URM's in connecting with the LMIC to enhance diversity, equity, and inclusion in the global health research workforce. It will explore some unique relationships between the URM's based in the global North and those currently living in the LMIC and consider some opportunities for partnerships and capacity building. Perspectives (Challenges and Opportunities) of URM's in the diaspora working in advanced laboratories in the global north with ties to LMIC will be explored and contrasted with those that differ. It is hoped that this dialogue will sensitize and provide a forum for discussing difficult truths regarding differentials in power, and how subtle cultural or perceived cultural differences may affect collaborative research success. An underlying theme of this symposium is that such discussions will permit more meaningful and long-term collaborations as well as provide paths to transform international biomedical science and lead us into a truly post-colonial era.

#### CHAIR

Jonathan K. Stiles  
Morehouse School of Medicine, Atlanta, GA, United States

Linnie M. Golightly  
Associate Dean, Diversity, Associate Professor of Medicine in Microbiology and Immunology, Weill Cornell Medical College, New York, NY, United States

### 3 p.m. INTRODUCTION

#### 3:10 p.m. MODERATOR, PANEL DISCUSSION

Renee Alexander  
Cornell University, Ithaca, NY, United States

#### PANELISTS

Linnie M. Golightly  
Associate Dean, Diversity, Associate Professor of Medicine in Microbiology and Immunology, Microbiology and Immunology, Weill Cornell Medical College, New York, NY, United States

Frank Richards  
The Carter Center, Atlanta, GA, United States

Jonathan K. Stiles  
Morehouse School of Medicine, Atlanta, GA, United States

## Scientific Session 134

### American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Parasite Biology – Genetic Approaches

Grand Ballroom B - Ballroom Level (East Tower)

Supported with funding from the Burroughs Wellcome Fund

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

#### CHAIR

Michael Ferdig  
University of Notre Dame, Notre Dame, IN, United States

Camilla V. Pires  
University of South Florida, Tampa, FL, United States

### 3 p.m.

### 7267

#### DYNAMICS AND SIGNALING OF MITOCHONDRIAL MRNA U-INDEL EDITING DURING *T. BRUCEI* DIFFERENTIATION

Joseph T. Smith Jr.<sup>1</sup>, Brianna Tylec<sup>1</sup>, Arunasalam Naguleswaran<sup>2</sup>, Isabel Roditi<sup>2</sup>, Laurie K. Read<sup>1</sup>

<sup>1</sup>University at Buffalo, Buffalo, NY, United States, <sup>2</sup>University of Bern, Bern, Switzerland

### 3:15 p.m.

### 7148

#### FIRST STAGE GENOME-WIDE ASSOCIATION STUDY OF LYMPHATIC FILARIASIS PATHOLOGY IN AN AFRICAN POPULATION

Vera Serwaa Opoku<sup>1</sup>, Sandeep Grover<sup>2</sup>, Linda Batsa Debrah<sup>3</sup>, Carlo Maj<sup>3</sup>, Jubin Osei-Mensah<sup>4</sup>, Derrick Adu Mensah<sup>1</sup>, Achim Hoerauf<sup>5</sup>, Alexander Yaw Debrah<sup>6</sup>, Johannes Schumacher<sup>2</sup>, Kenneth Pfarr<sup>6</sup>

<sup>1</sup>Kumasi Centre for Collaborative Research in Tropical Medicine, Kumasi, Ghana, <sup>2</sup>Centre for Human Genetics, Philipps University of Marburg, Marburg, Germany, <sup>3</sup>Department of Clinical Microbiology, School of Medicine and Dentistry, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, <sup>4</sup>School of Veterinary Medicine, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, <sup>5</sup>Institute of Medical Microbiology, Immunology and Parasitology, Bonn, Germany, <sup>6</sup>Department of Medical Diagnostics, Faculty of Allied Health Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

3:30 p.m.

7149

**GYPB GENE DELETIONS AFFECTS *PLASMODIUM FALCIPARUM* INVASION OF ERYTHROCYTES AND GROWTH OF SIALIC ACID DEPENDENT PARASITES**

**Dominic SY Amuzu<sup>1</sup>**, Lucas N. Amenga-Etego<sup>1</sup>, Collins M. Moranga<sup>1</sup>, Evelyn B. Quansah<sup>1</sup>, Henrietta Mensah-Brown<sup>1</sup>, Nancy K. Nyakoe<sup>1</sup>, Christina Hubbard<sup>2</sup>, Kate Rowlands<sup>2</sup>, Anna Jeffreys<sup>2</sup>, Kirk A. Rockett<sup>3</sup>, Dominic P. Kwiatkowski<sup>4</sup>, Gordon A. Awandare<sup>1</sup>  
<sup>1</sup>West African Centre for Cell Biology of Infectious Pathogens, University of Ghana, Accra, Ghana, <sup>2</sup>Wellcome Centre for Human Genetics, University of Oxford, Oxford, United Kingdom, <sup>3</sup>Wellcome Sanger Institute, Wellcome Genome Campus, Cambridge, United Kingdom, <sup>4</sup>Wellcome Sanger Institute, Wellcome Genome Campus, Oxford, United Kingdom

3:45 p.m.

7150

**OXIDATIVE STRESS AND ANTIMALARIAL RESPONSES OF BLOOD-STAGE *PLASMODIUM FALCIPARUM***

**Camilla V. Pires<sup>1</sup>**, Shulin Xu<sup>1</sup>, Min Zhang<sup>1</sup>, Chengqi Wang<sup>1</sup>, Jenna Oberstaller<sup>1</sup>, Thomas Otto<sup>2</sup>, Julian Rayner<sup>3</sup>, Benoit Laleu<sup>4</sup>, Jeremy Burrows<sup>4</sup>, John Adams<sup>5</sup>  
<sup>1</sup>University of South Florida, Tampa, FL, United States, <sup>2</sup>University of Glasgow, Glasgow, United Kingdom, <sup>3</sup>University of Cambridge, Cambridge, United Kingdom, <sup>4</sup>Medicines for Malaria Venture, Geneva, Switzerland, <sup>5</sup>University of South Florida, TAMPA, FL, United States

4 p.m.

7151

**IDENTIFYING THE DEVELOPMENTAL REGULATORS OF *PLASMODIUM FALCIPARUM* IN THE MALARIA MOSQUITO *ANOPHELES GAMBIAE***

**Yan Yan<sup>1</sup>**, Elaine Cheung<sup>1</sup>, Duo Peng<sup>2</sup>, W. Robert Shaw<sup>3</sup>, Esrah Du<sup>1</sup>, Alexandra Probst<sup>1</sup>, Flaminia Catteruccia<sup>3</sup>  
<sup>1</sup>Harvard TH Chan School of Public Health, Boston, MA, United States, <sup>2</sup>The Chan Zuckerberg Biohub, San Francisco, CA, United States, <sup>3</sup>Harvard TH Chan School of Public Health/Howard Hughes Medical Institute, Boston, MA, United States

4:15 p.m.

7152

**GENETICS OF THE INTERACTION BETWEEN *PLASMODIUM FALCIPARUM* AND *ANOPHELES ALBIMANUS***

**Prince Chigozirim Ubiaru<sup>1</sup>**, Sabyasachi Pradhan, Virginia Howick, Lisa Ranford-Cartwright  
<sup>1</sup>University of Glasgow, Glasgow, United Kingdom

4:30 p.m.

7153

**FIRST EVIDENCE OF EXPERIMENTAL GENETIC HYBRIDIZATION BETWEEN CUTANEOUS AND VISCERAL STRAINS OF *LEISHMANIA DONOVANI* WITHIN ITS NATURAL VECTOR *PHLEBOTOMUS ARGENTIPES***

**Hasna Riyal<sup>1</sup>**, Andrea Paun<sup>2</sup>, Tiago R. Ferreira<sup>2</sup>, Nilakshi Samaranyake<sup>1</sup>, David Sacks<sup>2</sup>, Nadira Karunaweera<sup>1</sup>  
<sup>1</sup>Department of Parasitology, Faculty of Medicine, University of Colombo, Colombo 08, Sri Lanka, <sup>2</sup>National Institute of Allergy & Infectious Diseases, National Institutes of Health, Bethesda, MD, United States

**Symposium 135**

**Integrating Malaria Into Public Health Emergency Operations Centers (PHEOCs) to Support Malaria Burden Reduction and Elimination: Lessons Learned from Sub-Saharan Africa and the Greater Mekong Subregion**

Grand Hall J - Ballroom Level (East Tower)  
Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

As countries approach malaria elimination and adopt aggressive strategies to accelerate burden reduction, malaria-specific surveillance systems need to be integrated into comprehensive national public health information systems. In turn, efforts to strengthen and integrate real-time surveillance systems and tools for malaria can bolster capacity for early detection and response of other communicable diseases and public health emergencies and support pandemic preparedness. Public Health Emergency Operations Centers (PHEOCs) represent the ideal platform to integrate disease surveillance systems, serving as epidemic intelligence hubs that receive, analyze, and visualize multiple data streams. In countries with well-established PHEOCs, malaria integration can improve the availability of malaria surveillance data to rapidly identify outbreaks and provide additional capacity to plan, implement, and monitor interventions. For countries with weak global health security capacities, malaria integration can serve as an entry point for outbreak detection, data-driven targeted interventions, multi-sectoral response, and cross-border collaboration to reduce the risk of widespread health emergencies. In sub-Saharan Africa and the Greater Mekong Subregion, PHEOCs are being leveraged to accelerate and sustain malaria burden reduction and elimination efforts in a range of epidemiological settings, from Lao PDR and Vietnam to Senegal, The Gambia, and the Democratic Republic of the Congo. In this symposium, representatives from ministries of health and their partners will share their experiences and findings. Phetsouvanh Rattanaxay from the Lao PDR Ministry of Health will describe establishing a PHEOC for malaria elimination, including the process and challenges associated with making malaria a notifiable disease and integrating its surveillance and response mechanisms at central, provincial, and district levels. Seynabou Ndiaye will describe how a decentralized integration model has supported epidemic preparedness and response and malaria elimination efforts in both high and low transmission settings in Senegal. Abdoulaye Bousso will provide perspectives from Senegal and The Gambia around key enablers and challenges to malaria integration into PHEOCs, focusing on governance and the relative capacities of PHEOCs and endemic disease programs. Marie-Julie Lambert will use examples from multiple countries to showcase how PHEOCs combine data from disease programs, surveillance platforms, or logistical systems to build strong data analysis and modeling infrastructures.

**CHAIR**

Hana K. Bilak  
PATH, Geneva, Switzerland  
Abdoulaye Bousso  
Resolve To Save Lives, New York, NY, United States

3 p.m.

**INTRODUCTION**

3:10 p.m.

**GOVERNMENT PERSPECTIVE ON LEVERAGING THE PHEOC FOR MALARIA ELIMINATION AND INTEGRATING SURVEILLANCE AND RESPONSE MECHANISMS**

Phetsouvanh Rattanaxay  
Department of Communicable Disease Control (DCDC), Ministry of Health, Lao PDR, Vientiane, Lao People's Democratic Republic



3:35 p.m.

**ADVANCED MIXED-COORDINATION UNITS FOR THE DECENTRALIZATION OF DISEASE SURVEILLANCE AND RESPONSE: LESSONS LEARNED FROM A REGIONAL “ONE HEALTH” APPROACH IN SENEGAL**

Seynabou Ndiaye  
Senegal Ministry of Health and Social Action, Saint-Louis, Senegal

3:50 p.m.

**GOVERNANCE CONSIDERATIONS FOR EFFECTIVE COLLABORATIONS BETWEEN VERTICAL DISEASE PROGRAMS AND PUBLIC HEALTH EMERGENCY OPERATIONS CENTERS**

Abdoulaye Bouso  
Resolve To Save Lives, New York, NY, United States

4:05 p.m.

**BUILDING DATA INTEGRATION PLATFORMS FOR MALARIA ELIMINATION: A REPLICABLE APPROACH IN SIX COUNTRIES**

Marie-Julie Lambert  
Bluesquare, Brussels, Belgium

**Scientific Session 136**



**Malaria – Surveillance and Data Utilization**

Grand Ballroom CDEF - Ballroom Level (East Tower)  
Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

**CHAIR**

Jailos Lubinda  
Telethon Kids Institute, Malaria Atlas Project, Cockburn City, Australia

Richard Maude  
Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand

3 p.m.

7154

**REDUCING MORTALITY DUE TO MALARIA THROUGH IMPROVED HEALTH WORKER PRACTICE, LESSONS FROM A DATA DRIVEN MENTORSHIP PROGRAM IN BUSOGA REGION IN EASTERN UGANDA**

Patricia Mukose<sup>1</sup>, Chris Mugenyi<sup>1</sup>, Edward Mugwanya<sup>1</sup>, Susan Nabirye<sup>1</sup>, Irene Ayaa<sup>2</sup>, Richard Opio Ongom<sup>1</sup>, Irene Ochola<sup>1</sup>, Angela Kateemu<sup>1</sup>, Myers Lugemwa<sup>3</sup>, Patrick Bukoma<sup>3</sup>, Dorah Anita Talanta<sup>1</sup>, Amy Casella<sup>4</sup>, Aliza Hasham<sup>5</sup>, Benjamin Binagwa<sup>1</sup>, Natalia Whitley<sup>4</sup>  
<sup>1</sup>John Snow Inc, Kampala, Uganda, <sup>2</sup>MCD Global Health, Kampala, Uganda, <sup>3</sup>Ministry of Health Uganda, Kampala, Uganda, <sup>4</sup>John Snow Inc, Boston, VA, United States, <sup>5</sup>John Snow Inc, Dar es Salam, United Republic of Tanzania

3:15 p.m.

7155

**MAPPING THE EPIDEMIOLOGY OF DRUG-RESISTANT PLASMODIUM FALCIPARUM STRAINS IN THE GREATER MEKONG SUBREGION THROUGH CROSS-BORDER GENETIC SURVEILLANCE**

Tess Danielle Verschuuren<sup>1</sup>, Varanya Wasakul<sup>1</sup>, Ethan Booth<sup>1</sup>, Nguyen Thuy-Nhien<sup>2</sup>, Mayfong Mayxay<sup>3</sup>, Siv Sovannaroth<sup>4</sup>, Keobouphaphone Chindavongsa<sup>5</sup>, Viengphone Sengsavath<sup>6</sup>, Huynh Hong Quang<sup>6</sup>, Sónia Gonçalves<sup>7</sup>, Shavanthi Rajatileka<sup>7</sup>, Cristina Ariani<sup>7</sup>, Richard J. Maude<sup>1</sup>, Nicholas P. Day<sup>1</sup>, Elizabeth A. Ashley<sup>2</sup>, Dominic P. Kwiatkowski<sup>7</sup>, Arjen M. Dondorp<sup>1</sup>, Olivo Miotto<sup>1</sup>  
<sup>1</sup>MORU, Bangkok, Thailand, <sup>2</sup>Oxford University Clinical Research Unit, Ho Chi Minh City, Vietnam, <sup>3</sup>Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Vientiane, Lao People's Democratic Republic, <sup>4</sup>National Center for Parasitology, Entomology and Malaria Control (CNM), Phnom Penh, Cambodia, <sup>5</sup>Centre for Malariology, Parasitology, and Entomology, Vientiane, Lao People's Democratic Republic, <sup>6</sup>Institute of Malariology, Parasitology and Entomology (IMPE-QN), Quy Nhon, Vietnam, <sup>7</sup>Wellcome Sanger Institute, Hinxton, United Kingdom

3:30 p.m.

7156

**LOSING SLEEP OVER DENOMINATORS: A NOVEL METHODOLOGY FOR MALARIA EPIDEMIOLOGICAL SURVEILLANCE USING FACILITY BASED DATA FROM SOUTHERN SENEGAL**

Daniel Zachary Hodson<sup>1</sup>, Médoune Diouf<sup>2</sup>, Mamadou Lamine Diouf<sup>2</sup>, Boubacar Kandé<sup>3</sup>  
<sup>1</sup>United States Peace Corps Senegal, Dakar, Senegal, <sup>2</sup>National Malaria Control Program, Dakar, Senegal, <sup>3</sup>Médina Yoro Foulah Health District, Médina Yoro Foulah, Senegal

3:45 p.m.

7157

**UPDATING THE MALARIA RISK STRATIFICATION IN LAO PDR TO INFORM INTERVENTION TARGETING AND RESOURCE ALLOCATION**

Phoutnalong Vilay<sup>1</sup>, Julia Dunn<sup>2</sup>, Oдай Sichanthongthip<sup>1</sup>, Rita Reyburn<sup>3</sup>, Phonphet Butphomvihane<sup>3</sup>, Vilaisak Phiphakavong<sup>3</sup>, Punam Amratia<sup>4</sup>, Mary Hahm<sup>2</sup>, Vilayphone Phongchantha<sup>2</sup>, Chitsavang Chanthavisouk<sup>2</sup>, Boualam Khamlome<sup>1</sup>, Keobouphaphone Chindavongsa<sup>1</sup>, Matthew Shortus<sup>3</sup>  
<sup>1</sup>Centre of Malariology, Parasitology and Entomology, Vientiane, Lao People's Democratic Republic, <sup>2</sup>Clinton Health Access Initiative, Vientiane, Lao People's Democratic Republic, <sup>3</sup>World Health Organization, Vientiane, Lao People's Democratic Republic, <sup>4</sup>Malaria Atlas Project, Perth, Australia

4 p.m.

7158

**QUANTIFYING THE VALUE OF ENTOMOLOGICAL SURVEILLANCE FOR PROGRAMMATIC DECISION-MAKING ON MALARIA CONTROL IN SUB-SAHARAN AFRICA**

Nora Schmit, Hillary M. Topazian, Matteo Pianella, Giovanni D. Charles, Peter Winskill, Penelope A. Hancock, Ellie Sherrard-Smith, Katharina Hauck, Thomas S. Churcher, Azra C. Ghani  
Imperial College London, London, United Kingdom

4:15 p.m.

7159

**MAP HBHI GEOSPATIAL FRAMEWORK; LESSONS LEARNT FROM SUPPORTING THE GLOBAL FUND APPLICATIONS**

Punam Amratia<sup>1</sup>, Samuel Oppong<sup>2</sup>, Tasmin Symons<sup>1</sup>, Susan Rumisha<sup>1</sup>, Beatriz Galatas<sup>3</sup>, James Colborn<sup>4</sup>, Balthazar Candrinho<sup>5</sup>, Celestin Danwang<sup>1</sup>, Mark Connell<sup>1</sup>, Abdisalan Noor<sup>6</sup>, Peter Gething<sup>1</sup>  
<sup>1</sup>Malaria Atlas Project, Perth, Australia, <sup>2</sup>PMI Ghana, Accra, Ghana, <sup>3</sup>World Health Organization, Geneva, Switzerland, <sup>4</sup>Clinton Health Access Initiative, Boston, MA, United States, <sup>5</sup>National Malaria Control Program Mozambique, Maputo, Mozambique

Saturday  
October 21

4:30 p.m.  
Lightning Talks

(Lightning Talks are two-minute talks to highlight abstracts assigned to poster presentations.)

6943

**A PROGRAM EVALUATION OF COMMUNITY HEALTH WORKER-LED REACTIVE CASE DETECTION AND ITS IMPACT ON MALARIA MORBIDITY AND MORTALITY IN ZAMBIA**

Ellen Ferriss<sup>1</sup>, William Sheahan<sup>1</sup>, Chris Lungu<sup>2</sup>, Kafula Silumbe<sup>2</sup>, John M. Miller<sup>2</sup>, Hannah Slater<sup>1</sup>, Adam Bennett<sup>1</sup>

<sup>1</sup>PATH, Seattle, WA, United States, <sup>2</sup>PATH, Lusaka, Zambia

6214

**INTEGRATING ANTENATAL CLINIC-BASED MALARIA SCREENING DATA AND MATHEMATICAL MODELLING TO CAPTURE THE TRAJECTORY OF MALARIA TRANSMISSION IN WESTERN KENYA IN THE CONTEXT OF THE COVID-19 PANDEMIC.**

Patrick GT Walker<sup>1</sup>, Joseph Hicks<sup>1</sup>, Oliver Towett<sup>2</sup>, Brian Seda<sup>2</sup>, Ryan Wiegand<sup>2</sup>, Simon Kariuki<sup>2</sup>, Julie Gutman<sup>3</sup>, Aaron Samuels<sup>3</sup>, Feiko ter Kuile<sup>4</sup>

<sup>1</sup>MRC Centre for Outbreak Analysis & Modelling, Imperial College London, London, United Kingdom, <sup>2</sup>Centre for Global Health Research, Kenya Medical Research Institute, Kisumu, Kenya, <sup>3</sup>Division of Parasitic Diseases and Malaria, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>4</sup>Department of Clinical Sciences, Liverpool School of Tropical Medicine, Liverpool, United Kingdom

6938

**THE POTENTIAL OF SATELLITE-DERIVED BUILDING POLYGONS DATA AS A PROXY TO ON-THE-GROUND HOUSEHOLD MAPPING TO PROVIDE DENOMINATOR FOR PUBLIC HEALTH INTERVENTIONS: A PILOT STUDY IN BATA DISTRICT, EQUATORIAL GUINEA**

Jeremias Nzamio Mba Eyono<sup>1</sup>, Restituto Mba Nguema Avue<sup>1</sup>, David Galick<sup>1</sup>, Victor Mba Micha<sup>1</sup>, Julia Yumbe Baka<sup>1</sup>, Jose Osa Osa Nfumu<sup>2</sup>, Matilde Riloha Rivas<sup>3</sup>, Carlos A. Guerra<sup>1</sup>, Guillermo A. Garcia<sup>4</sup>

<sup>1</sup>MCD Global Health, Malabo, Equatorial Guinea, <sup>2</sup>Ministry of Health and Social Welfare, Malabo, Equatorial Guinea, <sup>3</sup>Ministry of Health and Social Welfare, National Malaria Control Program, Malabo, Equatorial Guinea, <sup>4</sup>MCD Global Health, Silver Spring, MD, United States

6209

**OPTIMAL STRATIFICATION STRATEGIES IN THE SELECTION OF SENTINEL SITES FOR AN INTEGRATED MALARIA SURVEILLANCE IN BENIN**

Didier Adjakidje<sup>1</sup>, Florian D. Siaken Yabou<sup>1</sup>, S. Emeric Chris Gbodo<sup>1</sup>, Rock Aikpon<sup>2</sup>

<sup>1</sup>University of Abomey Calavi, Cotonou, Benin, <sup>2</sup>National Malaria Control Program, Ministry of Health, Cotonou, Benin

6941

**SUBNATIONAL TAILORING AND TARGETING OF ANTI-MALARIA INTERVENTIONS IN ETHIOPIA**

Amir Siraj<sup>1</sup>, Gudissa Assefa<sup>2</sup>, Hiwot Solomon<sup>2</sup>, Asefaw Getachew<sup>3</sup>, Gezahegn Tesfaye<sup>3</sup>, Achamyelesh Sisay<sup>2</sup>, Kebede Etana<sup>2</sup>, Ayele Tiyou<sup>2</sup>, Mebrahtom Haile<sup>2</sup>, Belendia Serda<sup>3</sup>, Asnakew Yeshiwondim<sup>3</sup>, Dereje Dillu<sup>3</sup>, Berhane Tesfay<sup>3</sup>, Getachew Abebe<sup>3</sup>, Arantxa Roca-Feltrer<sup>4</sup>, Adam Bennett<sup>1</sup>, Hannah Slater<sup>1</sup>

<sup>1</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Seattle, WA, United States, <sup>2</sup>Ministry of Health, Addis Ababa, Ethiopia, <sup>3</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Addis Ababa, Ethiopia, <sup>4</sup>PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Maputo, Mozambique

Scientific Session 137

Integrated Control Measures for Neglected Tropical Diseases II

Grand Hall K - Ballroom Level (East Tower)

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

CHAIR

Darin Evans

U.S. Agency for International Development, Washington, DC, United States

Victoria Turay

Helen Keller International, Freetown, Sierra Leone

3 p.m.

7160

**PROGRESS TOWARDS INTERRUPTING TRANSMISSION OF ONCHOCERCIASIS IN ETHIOPIA**

Tekola Endeshaw<sup>1</sup>, Aderajew Mohammed<sup>1</sup>, Abebual Yilak<sup>2</sup>, Yewondwossen Bitew<sup>1</sup>, Tewodros Seid<sup>1</sup>, Geremew Haileyesus<sup>1</sup>, Desalegn Jemberie<sup>1</sup>, Mohammed Hassen<sup>1</sup>, Fikresilassie Samuel<sup>1</sup>, Yohannes Eshetu<sup>1</sup>, Fanta Nigusie<sup>1</sup>, Fetene Mihretu<sup>1</sup>, Kadu Meribo<sup>3</sup>, Fikre Seife<sup>1</sup>, Emily Griswold<sup>4</sup>, Anley Haile<sup>1</sup>, Jenna E. Coalson<sup>4</sup>, Gregory S. Noland<sup>4</sup>, Frank O. Richards<sup>4</sup>, Zerihun Tadesse<sup>1</sup>

<sup>1</sup>The Carter Center, Addis Ababa, Ethiopia, <sup>2</sup>University of Tübingen, Tübingen, Germany, <sup>3</sup>Federal Ministry of Health, Addis Ababa, Ethiopia, <sup>4</sup>The Carter Center, Atlanta, GA, United States

3:15 p.m.

7161

**RESULTS FROM AN ENHANCED TRACHOMA IMPACT SURVEY IN FOUR LOW PREVALENCE DISTRICTS OF MOZAMBIQUE, 2022**

Henis Siteo<sup>1</sup>, Felizmina Zita<sup>1</sup>, Mawo Fall<sup>2</sup>, Tamimo Momade<sup>3</sup>, Rebecca Flueckiger<sup>4</sup>, Will Oswald<sup>4</sup>, Mabula Kasubi<sup>5</sup>, Molly Adams<sup>4</sup>, Thuy Doan<sup>5</sup>, Thomas Lietman<sup>6</sup>, Ben Arnold<sup>6</sup>, Sarah E. Gwyn<sup>7</sup>, Diana Martin<sup>7</sup>, Jeremiah M. Ngondi<sup>4</sup>

<sup>1</sup>Ministry of Health, Maputo, Mozambique, <sup>2</sup>RTI International, Maputo, United Kingdom, <sup>3</sup>RTI International, Maputo, Mozambique, <sup>4</sup>RTI International, Washington DC, DC, United States, <sup>5</sup>Muhimbili University of Health and Allied Sciences, Dar es Salaam, United Republic of Tanzania, <sup>6</sup>Proctor Foundation, UCSF, San Francisco, CA, United States, <sup>7</sup>Centers for Disease Control and Prevention, Atlanta, GA, United States

3:30 p.m.

7162

**SOIL TRANSMITTED HELMINTH INFECTIONS FOLLOWING FOURTEEN YEARS OF MASS DRUG ADMINISTRATION IN SIERRA LEONE**

Ibrahim Kargbo-Labour<sup>1</sup>, Mohamed Bah<sup>2</sup>, Victoria Turay<sup>2</sup>, Abdulai Conteh<sup>1</sup>, Abdulai Koroma<sup>2</sup>, Elisabeth Chop<sup>3</sup>, Patricia Houck<sup>3</sup>, Anna Phillips<sup>4</sup>, Angela Weaver<sup>3</sup>, Yaobi Zhang<sup>5</sup>, Neglected Tropical Diseases Program, Ministry of Health and Sanitation, Freetown, Sierra Leone, <sup>2</sup>Helen Keller International, Freetown, Sierra Leone, <sup>3</sup>Helen Keller International, New York, NY, United States, <sup>4</sup>FHI 360, Washington, DC, United States

3:45 p.m.

7163

**PROGRESS IN THE ELIMINATION OF THE TRANSMISSION OF SOIL-TRANSMITTED HELMINTHS IN THE WOLAITA ZONE IN SOUTHERN ETHIOPIA. THE GESHIYARO PROJECT MID-TERM PROGRESS EVALUATION**

Birhan Abtew

Imperial College London, Addis Ababa, Ethiopia

4 p.m.

7164

**METHODS FOR TRACHOMA SURVEYS AMONG MOBILE AND MIGRANT POPULATIONS OF KWEEN AND BULAMBULI DISTRICTS, EASTERN UGANDA**Stephen Begumisa<sup>1</sup>, Rapheal Opon<sup>2</sup>, Joyce Achan<sup>1</sup>, Charles K. Kissa<sup>2</sup>, Alfred Mubangizi<sup>2</sup>, Sharone L. Backers<sup>1</sup>, Stella Agunyo<sup>1</sup>, Edwin Mayoki<sup>1</sup>, Philip Kwemboi<sup>3</sup>, Vincent Natega<sup>4</sup>, Clara Burgert<sup>5</sup>, Jeremiah M. Ngondi<sup>5</sup><sup>1</sup>RTI International, Kampala, Uganda, <sup>2</sup>Ministry of Health, NTD Programme, Kampala, Uganda, <sup>3</sup>Kween District Local Government, Kween, Uganda, <sup>4</sup>Bulambuli District Local Government, Bulambuli, Uganda, <sup>5</sup>RTI International, Washington DC, DC, United States

4:15 p.m.

7165

**USE OF INVERSE DISTANCE WEIGHTING INTERPOLATION MODELLING AND GIS-BASED SPATIAL MAPPING TO ESTIMATE THE RISKS OF HOOKWORM AND INTESTINAL SCHISTOSOMIASIS INFECTIONS IN GHANA**Jeffrey G. Sumboh<sup>1</sup>, Yvonne Ashong<sup>1</sup>, Sedzro K. Mensah<sup>1</sup>, Jewelna Akorli<sup>1</sup>, Irene O. Donkor<sup>1</sup>, Elias A. Bempong<sup>2</sup>, Rahmat Yusuf<sup>1</sup>, Bright Idun<sup>2</sup>, Freda Kwarteng<sup>2</sup>, Frank T. Aboagye<sup>2</sup>, Lisa Harrison<sup>3</sup>, Debbie Humphries<sup>4</sup>, Mike O. Atweneboana<sup>2</sup>, Michael Cappello<sup>3</sup>, Michael D. Wilson<sup>1</sup><sup>1</sup>Noguchi Memorial Institute for Medical Research, University of Ghana, Accra, Ghana, <sup>2</sup>Council for Scientific and Industrial Research, Accra, Ghana, <sup>3</sup>Yale School of Medicine, New Haven, CT, United States, <sup>4</sup>Yale School of Public Health, New Haven, CT, United States

4:30 p.m.

7166

**IMPROVED QUALITY OF NEGLECTED TROPICAL DISEASES MICRO PLANNING IN ROUTINE DEWORMING CAMPAIGNS THROUGH INNOVATIVE SOLUTIONS AND TOOLS IN KENYA**Anna Winters<sup>1</sup>, Elizabeth Jere<sup>2</sup>, Florence Wakesho<sup>3</sup>, Ivy Sempele<sup>4</sup>, Irene Chami<sup>4</sup>, Wycliff Omondi<sup>3</sup><sup>1</sup>Akros, Missoula, MT, United States, <sup>2</sup>Akros, Lusaka, Zambia, <sup>3</sup>Kenya Ministry of Health, Nairobi, Kenya, <sup>4</sup>EndFund, New York, NY, United States**Symposium 138****Drug Development in Filarial Infections: Current Achievements and Challenges**

Grand Hall L - Ballroom Level (East Tower)

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

The burden of helminth infections has been substantially reduced through mass drug administration programs, resembling a success story in combating infectious diseases. However, biological, political, and financial challenges are making it unlikely that MDA alone will be sufficient to eliminate helminth infections in the long run. Many factors can hinder the necessary coverage required for program success, such as primarily targeting specific populations (school-aged children) rather than the population as a whole (schistosomiasis, STH) or the suboptimal efficacy of MDA drugs (IVM, onchocerciasis). Alternative treatment options are limited, as less than a handful of drugs are registered for the treatment and control of helminth infections in humans, all of which have limitations. New drugs will be beneficial to make elimination efforts a true success story in the SDG agenda, in addition to increasing coverage of MDA and improving disease and MDA intake mapping. In this symposium, we will share the recent achievements and current challenges in the anthelmintic drug development landscape. The years- to decades-long process

for drug development is complex and costly, entrenched with a high degree of uncertainty that a drug will succeed in the next development phase. Successful implementation of a novel intervention strongly depends on the environment. For NTDs, these are resource-poor settings with structural inequalities in access to health services, infrastructure, education, political influence, and weak markets. The dominant strategy to ensure access to medicines for NTDs is drug donation from Western pharmaceutical companies. Such dependence upon profit-driven organizations is precarious, and a more sustainable approach would be beneficial in multiple ways. We want to discuss the challenges and benefits of investing in development of new chemical entities with superior efficacy against NTDs.

**CHAIR**Sabine Specht  
DNDi, Geneva, Switzerland

3 p.m.

**INTRODUCTION**

3:10 p.m.

**UPDATE ABBV-4083/FLUBENTYLOSIN DEVELOPMENT**Sabine Specht  
Drugs for Neglected Disease Initiative, Geneva, Switzerland

3:35 p.m.

**UPDATE EMODEPSIDE**Jennifer Keiser  
Swiss Tropical Institute, Basel, Switzerland

3:50 p.m.

**UPDATE MOXIDECTIN**Mark Sullivan  
Medicines Development for Global Health, Southbank, Australia

4:05 p.m.

**MODELLING TO HELP DECISION MAKING**Martin Walker  
Royal Veterinary College, North Mymms, United Kingdom

4:20 p.m.

**ELIMINATION PROGRAMS ONCHOCERCIASIS: CURRENT PROGRESS AND FUTURE NEEDS**Didier K. Bakajika  
WHO / ESPEN, Brazzaville, Republic of the CongoSaturday  
October 21

## Symposium 139

### Turning the Tide for Women with Schistosomiasis: Advancing the Clinical and Research Agenda

Plaza Ballroom - Lobby Level (East Tower)

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

There are substantial gaps in our understanding of the epidemiology, natural history, and treatment of schistosomiasis in women. The speakers in this symposium will address some of these data gaps by addressing relevant topics related to schistosomiasis in women including new data regarding schistosomiasis in pregnancy, FGS treatment, genital mucosal immune correlates in FGS and the intersection between FGS, HPV and cervical cancer.

#### CHAIR

Amy Sturt

Stanford University, Palo Alto, CA, United States

Amaya Lopez Bustinduy

London School of Hygiene & Tropical Medicine, London, United Kingdom

3 p.m.

#### INTRODUCTION

3:10 p.m.

#### SCHISTOSOMIASIS IN WOMEN - BACKGROUND AND DIAGNOSTIC MODALITIES

Amy Sturt

Stanford University, Palo Alto, CA, United States

3:20 p.m.

#### OPTIMIZING FEMALE GENITAL SCHISTOSOMIASIS TREATMENT

Peter Derek Christian Leutscher

Regional Hospital North Jutland, Hjørring, Denmark

3:40 p.m.

#### GENITAL MUCOSAL IMMUNE CORRELATES IN WOMEN WITH SCHISTOSOMIASIS

Jane Maganga

Mwanza Intervention Trials Unit, National Institute for Medical Research (NIMR) Campus, Mwanza, United Republic of Tanzania

4 p.m.

#### S. HAEMATOBIIUM INFECTION IN PREGNANCY

Josiane Honkpehedji

Centre de Recherche Medicales de Lambarene (Cermel), Lambarene, Gabon

4:20 p.m.

#### GENITAL SCHISTOSOMIASIS, HPV, AND CERVICAL CANCER

Amaya Lopez Bustinduy

London School of Hygiene & Tropical Medicine, London, United Kingdom

4:40 p.m.

#### PANEL MODERATOR

Jennifer A. Downs

Weill-Cornell Medical College, New York, NY, United States

## Scientific Session 140

### Malaria - Vaccine Development and Testing

Crystal Ballroom A - Lobby Level (West Tower)

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

#### CHAIR

Andrea Berry

University of Maryland School of Medicine, Baltimore, MD, United States

Mehreen Datoo

Jenner Institute, University of Oxford, Oxford, United Kingdom

3 p.m.

7167

#### NON-HUMAN PRIMATE AOTUS NANCYMAE MODEL FOR THE EVALUATION OF PLASMODIUM VIVAX BLOOD STAGE VACCINES

Julio A. Ventocilla<sup>1</sup>, L. Lorena Tapia<sup>1</sup>, Freddy E. Villena<sup>1</sup>, Diana C. Cedamano<sup>1</sup>, Jessica N. Buchta<sup>1</sup>, Melina Florez<sup>1</sup>, Hugo O. Valdivia<sup>1</sup>, Danielle L. Pannebaker<sup>1</sup>, Jürgen Bosch<sup>2</sup>, Christopher King<sup>3</sup>, Brandon K. Wilder<sup>3</sup>

<sup>1</sup>US Naval Medical Research Unit No 6, Callao, Peru, <sup>2</sup>Case Western Reserve University, Cleveland, OH, United States, <sup>3</sup>Oregon Health & Science University, Portland, OR, United States

3:15 p.m.

7168

#### A HUMAN ANTIBODY EPITOPE MAP OF PFS230D1 DERIVED FROM ANALYSIS OF INDIVIDUALS VACCINATED WITH A MALARIA TRANSMISSION-BLOCKING VACCINE

Wai Kwan Tang<sup>1</sup>, Camila H. Coelho<sup>1</sup>, Kazutoyo Miura<sup>1</sup>, Bergeline C. Nguemwo Tentokam<sup>1</sup>, Nichole D. Salinas<sup>1</sup>, David L. Narum<sup>1</sup>, Sara A. Healy<sup>1</sup>, Issaka Sagara<sup>2</sup>, Long A. Carol<sup>1</sup>, Patrick E. Duffy<sup>1</sup>, Niraj H. Tolia<sup>1</sup>

<sup>1</sup>National Institutes of Health, Bethesda, MD, United States, <sup>2</sup>University of Sciences, Techniques, and Technology, Bamako, Mali

3:30 p.m.

7169

#### TWO NOVEL PFS230 DOMAINS DISCOVERED AS TARGETS FOR MALARIA TRANSMISSION-BLOCKING ANTIBODIES

Matthijs M. Jore<sup>1</sup>, Maartje R. Inklaar<sup>1</sup>, Roos M. De Jong<sup>1</sup>, Ezra T. Bekkering<sup>1</sup>, Lisanne Hubregtse<sup>1</sup>, Maartje Meijer<sup>1</sup>, Hikaru Nagaoka<sup>2</sup>, Felix L. Fennemann<sup>3</sup>, Karina Teelen<sup>1</sup>, Rianne Stoter<sup>1</sup>, Marga van de Vegte-Bolmer<sup>1</sup>, Geert-Jan van Gemert<sup>1</sup>, C. Richter King<sup>4</sup>, Nicholas I. Proellochs<sup>1</sup>, Teun Bousema<sup>1</sup>, Eizo Takashima<sup>2</sup>, Takafumi Tsuboi<sup>5</sup>

<sup>1</sup>Department of Medical Microbiology, Radboudumc, Nijmegen, Netherlands, <sup>2</sup>Division of Malaria Research, Proteo-Science Center, Ehime University, Matsuyama, Japan, <sup>3</sup>Department of Tumor Immunology, Radboudumc, Nijmegen, Netherlands, <sup>4</sup>PATH's Center for Vaccine Innovation and Access, Washington DC, DC, United States, <sup>5</sup>Division of Cell-Free Sciences, Proteo-Science Center, Ehime University, Matsuyama, Japan

3:45 p.m.

7170

#### NOVEL BLOOD-STAGE VACCINE CANDIDATE RH5.1/AS01<sub>1</sub> ELICITS A MIX OF NEUTRALIZING AND NON-NEUTRALIZING PLASMA IGG LINEAGES IN MALARIA-NAÏVE UNITED KINGDOM ADULTS

Jeffrey Marchioni<sup>1</sup>, Allison Seeger<sup>1</sup>, Jordan R. Barrett<sup>2</sup>, Kirsty McHugh<sup>2</sup>, Jessica Kain<sup>3</sup>, Randall S. MacGill<sup>4</sup>, George Georgiou<sup>1</sup>, Simon J. Draper<sup>2</sup>, Jason J. Lavinder<sup>1</sup>, Gregory C. Ippolito<sup>1</sup>

<sup>1</sup>The University of Texas at Austin, Austin, TX, United States, <sup>2</sup>Oxford University, Oxford, United Kingdom, <sup>3</sup>University of Wisconsin, Madison, WI, United States, <sup>4</sup>Center for Vaccine Innovation and Access, PATH, Washington, DC, United States



4 p.m.

7171

**PROTECTIVE IMMUNE MECHANISMS INDUCED BY THE RTS,S MALARIA VACCINE IN A PEDIATRIC PHASE IIB CLINICAL TRIAL**Liriye Kurtovic<sup>1</sup>, Gaoqian Feng<sup>1</sup>, Alessia Hysa<sup>1</sup>, Ali Haghiri<sup>2</sup>, Katherine O'Flaherty<sup>1</sup>, Bruce D. Wines<sup>1</sup>, Rebeca Santano<sup>3</sup>, Heidi E. Drummer<sup>1</sup>, P. Mark Hogarth<sup>1</sup>, Jahit Sacarlal<sup>4</sup>, Freya J. I. Fowkes<sup>1</sup>, Julie A. Simpson<sup>2</sup>, Carlota Dobaño<sup>3</sup>, James G. Beeson<sup>1</sup><sup>1</sup>Burnet Institute, Melbourne, Australia, <sup>2</sup>The University of Melbourne, Melbourne, Australia, <sup>3</sup>ISGlobal, Hospital Clinic Universitat de Barcelona, Barcelona, Spain, <sup>4</sup>Centro de Investigação em Saúde de Manhiça, Maputo, Mozambique

4:15 p.m.

7172

**THE FINAL RESULTS OF A FIVE-YEAR, DOUBLE-BLIND, RANDOMISED CONTROLLED PHASE 3 TRIAL OF SEASONAL VACCINATION WITH RTS,S/AS01<sub>E</sub> VACCINE WITH OR WITHOUT SEASONAL MALARIA CHEMOPREVENTION IN YOUNG CHILDREN IN BURKINA FASO AND MALI**Alassane Dicko<sup>1</sup>, Jean-Bosco Ouedraogo<sup>2</sup>, Issaka Zongo<sup>2</sup>, Issaka Sagara<sup>1</sup>, Matthew Cairns<sup>3</sup>, Serge Rakiswende Yerbanga<sup>2</sup>, Djibrilla Issiaka<sup>2</sup>, Charles Zoungrana<sup>2</sup>, Youssoufa Sidibe<sup>1</sup>, Amadou Tapily<sup>1</sup>, Frederic Nikiema<sup>2</sup>, Frederic Sompougou<sup>2</sup>, Koualy Sanogo<sup>1</sup>, Mahamadou Kaya<sup>1</sup>, Hama Yalcouye<sup>1</sup>, Oumar M Dicko<sup>1</sup>, Modibo Diarra<sup>1</sup>, Kalifa Diarra<sup>1</sup>, Ismaila Thera<sup>1</sup>, Alassane Haro<sup>2</sup>, Abdoul Aziz Sienou<sup>2</sup>, Seydou Traore<sup>1</sup>, Almahamadou Mahamar<sup>1</sup>, Amagana Dolo<sup>1</sup>, Irene Kuepfer<sup>3</sup>, Paul Snell<sup>3</sup>, Jane Grant<sup>3</sup>, Jayne Webster<sup>3</sup>, Paul Milligan<sup>3</sup>, Cynthia Lee<sup>4</sup>, Christian Ockenhouse<sup>4</sup>, Opokua Ofori-Anyinam<sup>5</sup>, Halidou Tinto<sup>2</sup>, Abdoulaye Djimde<sup>1</sup>, Daniel Chandramohan<sup>3</sup>, **Brian Greenwood<sup>3</sup>**<sup>1</sup>MRTC, Bamako, Mali, <sup>2</sup>INS/Tech/IRSS, Bobo-Dioulasso, Burkina Faso, <sup>3</sup>LSH/TM, London, United Kingdom, <sup>4</sup>PATH, Seattle, WA, United States, <sup>5</sup>GSK, Wavre, Belgium

4:30 p.m.

7173

**RESULTS FROM A PHASE III TRIAL EVALUATING THE R21/MATRIX-M MALARIA VACCINE**Alassane Dicko<sup>1</sup>, Mainga Hamaluba<sup>2</sup>, Ally Olotu<sup>3</sup>, Jean Bosco Ouedraogo<sup>4</sup>, Halidou Tinto<sup>5</sup>, **Mehreen S. Datto<sup>6</sup>**, Emma Beaumont<sup>7</sup>, John Bradley<sup>7</sup>, Katie J. Ewer<sup>8</sup>, Umesh Shaligram<sup>8</sup>, Adrian V.S Hill<sup>9</sup>, R21/Matrix-M Vaccine Phase III Trial Group<sup>9</sup><sup>1</sup>Malaria Research and Training Centre, University of Bamako, Bamako, Mali, <sup>2</sup>Kenya Medical Research Institute-Wellcome Trust Research Programme, Kilifi, Kenya, <sup>3</sup>Ifakara Health Institute, Bagamoyo, United Republic of Tanzania, <sup>4</sup>Institut des Sciences et Techniques, Bobo-Dioulasso, Burkina Faso, <sup>5</sup>Unite de Recherche Clinique de Nanoro, Institut de Recherche en Sciences de la Sante, Nanoro, Burkina Faso, <sup>6</sup>University of Oxford, Oxford, United Kingdom, <sup>7</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>8</sup>Serum Institute of India Pvt. Ltd, Pune, India**Symposium 141****Clinical Tropical Medicine Debates: Lassa Fever and Leptospirosis***Crystal Ballroom B - Lobby Level (West Tower)*

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

There is more than one approach to many clinical issues in Tropical Medicine, particularly when there is conflicting information or a lack of evidence for best approaches to patient care. This symposium will explore the use of Ribavirin for the treatment of Lassa Fever and chemoprophylaxis for prevention of Leptospirosis in a debate style format. Presenters will articulate a pro or con position around each issue followed by a panel discussion of the merits of each argument.

**CHAIR**

Kyle Petersen

Uniformed Services University, Bethesda, MD, United States

John W. Sanders

Wake Forest University School of Medicine, Winston-Salem, NC, United States

3 p.m.

**INTRODUCTION**

3:10 p.m.

**RIBAVIRIN FOR TREATMENT OF LASSA FEVER: PRO**

Sylvanus Okogbenin

Irrua Specialist Teaching Hospital, Irrua, Nigeria

3:35 p.m.

**RIBAVIRIN FOR TREATMENT OF LASSA FEVER: CON**

Alex Salam

University of Oxford, Oxford, United Kingdom

3:50 p.m.

**CHEMOPROPHYLAXIS FOR PREVENTION OF LEPTOSPIROSIS: PRO**

Kyle Petersen

Uniformed Services University, Bethesda, MD, United States

4:05 p.m.

**CHEMOPROPHYLAXIS OF LEPTOSPIROSIS: CON**

Susan McLellan

University of Texas Medical Branch, Galveston, TX, United States

4:20 p.m.

**PANELIST-TROPICAL MEDICINE DEBATES**

Lin Chen

Mount Auburn Hospital, Cambridge, MA, United States

**Symposium 142****American Committee on Arthropod-Borne and Zoonotic Viruses (ACAV) Symposium II: The Dengue Endgame: Imagining a World with Dengue Control***Regency Ballroom A - Ballroom Level (West Tower)*

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

Recent advances in dengue vaccines, antivirals, therapeutics, biologics, and vector control have renewed hope that dengue control may be an achievable goal. However, these technological and medical advances are emerging into a world challenged by climate change, increasing urbanization, expanded regional and international travel, and viral evolution. In light of these challenges and opportunities the objectives of this symposium are to: 1) discuss the current state of dengue around the world, 2) discuss what dengue "control" might look like, and 3) discuss and identify potential routes towards dengue control. This symposium will start with two presentations on the current state of dengue around the world from the perspective of physician scientists from dengue-endemic areas. These talks will highlight lessons learned from decades of research in these areas, as well as new developments in dengue treatment and forecasting. The next presentation will review the current state of dengue vaccines and the implications of recent advances in vaccine technology. The next presentation will address advances in dengue antivirals, therapeutics, and biologics, followed by a presentation on the state of vector control as it pertains to dengue transmission. The symposium will end with a panel discussion.

Saturday  
October 21

## CHAIR

Saravanan Thangamani  
SUNY Upstate Medical University, Syracuse, NY, United States

Adam T. Waickman  
SUNY Upstate Medical University, Syracuse, NY, United States

## 3 p.m.

### INTRODUCTION

## 3:10 p.m.

### DENGUE IN THAILAND: LESSONS LEARNED AND PATH TO THE FUTURE

Darunee Buddhari  
Kamphaeng Phet-*AFRIMS* Virology Research Unit, Kamphaeng Phet, Thailand

## 3:30 p.m.

### FORECASTING DENGUE TRANSMISSION AND ADVANCES IN CLINICAL CARE

Sophie Yacoub  
Oxford University Clinical Research Unit, Ho Chi Minh city, Vietnam

## 3:50 p.m.

### DENGUE VACCINES: HISTORICAL PERSPECTIVES AND RECENT ADVANCES

Adam Waickman  
SUNY Upstate Medical University, Syracuse, NY, United States

## 4:10 p.m.

### ADVANCES IN DENGUE ANTIVIRALS AND THERAPEUTICS: IMPLICATIONS FOR DENGUE CONTROL

Timothy Endy  
Coalition for Epidemic Preparedness Innovations, Oslo, Norway

## 4:30 p.m.

### ADVANCES IN VECTOR CONTROL - TRIALS AND REAL WORLD EVIDENCE OF IMPACT ON DENGUE INCIDENCE

Cameron Simmons  
World Mosquito Program, Mulgrave, Australia

## Scientific Session 143

### Water, Sanitation, Hygiene and Environmental Health (WaSH-E): Outcomes

Regency Ballroom B - Ballroom Level (West Tower)  
Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

## CHAIR

Sarah Bick  
London School of Hygiene & Tropical Medicine, London, United Kingdom

Rehnuma Haque  
International Cholera and Diarrhoeal Disease Research Bangladesh, Dhaka, Bangladesh

## 3 p.m.

7174

### EXAMINING THE EFFECT OF NEIGHBORHOOD LATRINE COVERAGE ON CHILDHOOD DIARRHEAL RISK IN RURAL BANGLADESH

Hannah Van Wyk<sup>1</sup>, Andrew F. Brouwer<sup>1</sup>, Ayse Ercumen<sup>2</sup>, Jesse Contreras<sup>1</sup>, Matthew C. Freeman<sup>3</sup>, Joseph N. Eisenberg<sup>1</sup>  
<sup>1</sup>University of Michigan School of Public Health, Ann Arbor, MI, United States, <sup>2</sup>North Carolina State University Department of Forestry and Environmental Resources, Raleigh, NC, United States, <sup>3</sup>Rollins School of Public Health Emory University, Atlanta, GA, United States

## 3:15 p.m.

7175

### FIRST-EVER ENVIRONMENTAL SURVEILLANCE AT HUMANITARIAN SETTINGS IN COX'S BAZAR, BANGLADESH: DETECTION OF SARS-COV2 AND ENTERIC PATHOGENS

Md Rezaul Hasan<sup>1</sup>, Md Ziaur Rahman<sup>1</sup>, Nuhu Amin<sup>1</sup>, Rehnuma Haque<sup>1</sup>, Md Shariful Islam<sup>2</sup>, Afroza Jannat Suchana<sup>1</sup>, Mohammed Ziaur Rahman<sup>3</sup>, Mohammad Enayet Hossain<sup>3</sup>, Mojnu Miah<sup>3</sup>, Suraja Raj<sup>4</sup>, Pengbo Liu<sup>4</sup>, Yuke Wang<sup>4</sup>, Marlene Wolfe<sup>4</sup>, Stephen Patrick Hilton<sup>4</sup>, Chloe Svezia<sup>4</sup>, Mahbubur Rahman<sup>5</sup>, Ahmed Nawsher Alam<sup>5</sup>, Zakir Hossain Habib<sup>5</sup>, Aninda Rahman<sup>6</sup>, David Otieno<sup>7</sup>, Feroz Hayat Khan<sup>7</sup>, Mahbubur Rahman<sup>1</sup>, Megan B. Diamond<sup>8</sup>, Tahmina Shirin<sup>9</sup>, Christine L. Moe<sup>4</sup>  
<sup>1</sup>Environmental Interventions Unit, Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr), Dhaka 1212, Bangladesh, Dhaka, Bangladesh, <sup>2</sup>School of Public Health, University of Queensland, Brisbane, Australia, Brisbane, Australia, <sup>3</sup>One Health Laboratory, Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr), Dhaka 1212, Bangladesh, Dhaka, Bangladesh, <sup>4</sup>The Center for Global Safe Water, Sanitation, and Hygiene at Emory University, USA, Atlanta, GA, United States, <sup>5</sup>Institute of Epidemiology, Disease Control, and Research (IEDCR), Dhaka, Dhaka, Bangladesh, <sup>6</sup>Communicable Disease Control (CDC) Program, Directorate General of Health Services (DGHS), Dhaka, Bangladesh, Dhaka, Bangladesh, <sup>7</sup>World Health Organization (WHO) Sub-office, Cox's Bazar, Bangladesh, Cox's Bazar, Bangladesh, <sup>8</sup>The Rockefeller Foundation, New York, NY, United States

## 3:30 p.m.

7176

### ENTERIC PATHOGEN FLOWS AT CITYWIDE SCALES

Drew Capone<sup>1</sup>, Vanessa Monteiro<sup>2</sup>, Victoria Cumbane<sup>2</sup>, Edna Viegas<sup>3</sup>, Joe Brown<sup>3</sup>  
<sup>1</sup>Indiana University, Bloomington, IN, United States, <sup>2</sup>Centro de Investigação e Treino em Saúde da Polana Caniço, Maputo, Mozambique, <sup>3</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

## 3:45 p.m.

7177

### INEQUALITIES IN CHILD DIARRHEA AND EFFECT MODIFICATION OF WATER, SANITATION AND HANDWASHING INTERVENTIONS BY SOCIOECONOMIC POSITION AND MONSOON SEASON IN RURAL BANGLADESH: A SUBGROUP ANALYSIS OF A CLUSTER RANDOMIZED TRIAL

Pearl Anne Ante-Testard<sup>1</sup>, Francois Rerolle<sup>1</sup>, Anna Nguyen<sup>2</sup>, Sania Ashraf<sup>3</sup>, Sarker Masud Parvez<sup>3</sup>, Abu Mohammed Naser<sup>4</sup>, Tarik Benmarhnia<sup>5</sup>, Mahbubur Rahman<sup>6</sup>, Stephen P. Luby<sup>6</sup>, Jade Benjamin-Chung<sup>2</sup>, Benjamin F. Arnold<sup>1</sup>  
<sup>1</sup>Francis I. Proctor Foundation, Department of Ophthalmology, University of California San Francisco, San Francisco, CA, United States, <sup>2</sup>Department of Epidemiology and Population Health, Stanford University, Stanford, CA, United States, <sup>3</sup>Environmental Interventions Unit, Infectious Diseases Division, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh, <sup>4</sup>Division of Epidemiology, Biostatistics, and Environmental Health, School of Public Health, University of Memphis, Memphis, TN, United States, <sup>5</sup>Scripps Institution of Oceanography, University of California San Diego, San Diego, CA, United States, <sup>6</sup>Division of Infectious Diseases and Geographic Medicine, Stanford University, Stanford, CA, United States

4 p.m.

7178

**INTER-RATER AGREEMENT OF FACIAL CLEANLINESSE ASSESSMENTS IN RURAL COMMUNITIES OF THE PERUVIAN AMAZON BASIN**Evelyn R. Munayco<sup>1</sup>, John M. Neseemann<sup>2</sup>, Matthew C. Freeman<sup>3</sup>, Maryann G. Delea<sup>3</sup>, Jeremy D. Keenan<sup>2</sup>, Andres G. Lescano<sup>1</sup><sup>1</sup>Emerge, Emerging Diseases and Climate Change Research Unit, School of Public Health and Administration, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>University of California, San Francisco, CA, United States, <sup>3</sup>Emory University, Atlanta, GA, United States

4:15 p.m.

7179

**INFLUENCE OF TEMPERATURE AND PRECIPITATION ON THE EFFECTIVENESS OF WATER, SANITATION, AND HANDWASHING INTERVENTIONS ON CHILDHOOD DIARRHEAL DISEASE AND ENTERIC INFECTIONS IN BANGLADESH**Anna T. Nguyen<sup>1</sup>, Jessica A. Grembi<sup>1</sup>, Marie Riviere<sup>1</sup>, Gabriella Barratt Heitmann<sup>1</sup>, William D. Hutson<sup>2</sup>, Tejas S. Athni<sup>1</sup>, Arusha Patil<sup>1</sup>, Ayse Ercumen<sup>3</sup>, Audrie Lin<sup>4</sup>, Yoshika Crider<sup>1</sup>, Andrew Mertens<sup>4</sup>, Leanne Unicomb<sup>5</sup>, Mahbubur Rahman<sup>5</sup>, John M. Colford<sup>4</sup>, Stephen P. Luby<sup>1</sup>, Benjamin F. Arnold<sup>6</sup>, Jade Benjamin-Chung<sup>1</sup><sup>1</sup>Stanford University, Stanford, CA, United States, <sup>2</sup>Washington University in St. Louis, St. Louis, MO, United States, <sup>3</sup>North Carolina State University, Raleigh, NC, United States, <sup>4</sup>University of California, Berkeley, Berkeley, CA, United States, <sup>5</sup>International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh, <sup>6</sup>Francis I. Proctor Foundation, University of California, San Francisco, San Francisco, CA, United States

4:30 p.m.

7180

**HUMAN FECAL CONTAMINATION OF HOUSEHOLD WATER AND SOIL AND ENTERIC PATHOGENS IN CHILD STOOL**David A. Holcomb<sup>1</sup>, Jackie Knee<sup>2</sup>, Drew Capone<sup>3</sup>, Rassul Nalá<sup>4</sup>, Oliver Cumming<sup>2</sup>, Jill R. Stewart<sup>1</sup>, Joe Brown<sup>1</sup><sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Indiana University Bloomington, Bloomington, IN, United States, <sup>4</sup>Ministry of Health, Maputo, Mozambique**Scientific Session 144****Mosquitoes-Biology, Physiology and Immunity**

Regency Ballroom C - Ballroom Level (West Tower)

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

**CHAIR**Jun Li  
Florida International University, Miami, FL, United StatesVincent O. Nyasembe  
CDC, Atlanta, GA, United States

3 p.m.

7181

**TOWARDS ARTIFICIAL INSEMINATION AND *IN VITRO* FERTILIZATION OF THE MALARIA *ANOPHELES* GAMBIAE**

Vincent O. Nyasembe, Claire Schregardus, Priscila Bascunan, Mark Q. Benedict, Ellen M. Dotson

Center for Disease Control and Prevention, Atlanta, GA, United States

3:15 p.m.

7182

***Aedes aegypti* ARGONAUTE 2 CONTROLS ARBOVIRUS-INDUCED MOSQUITO DEATH**Shengzhang Dong, George Dimopoulos  
Johns Hopkins University, Baltimore, MD, United States

3:30 p.m.

7183

**INFLUENCE OF MOSQUITO IMMUNE CELLS IN ARBOVIRUS DISSEMINATION IN *Aedes aegypti***David R. Hall<sup>1</sup>, Hyeogsun Kwon<sup>2</sup>, Rebecca Johnson<sup>3</sup>, Zannatul Ferdous<sup>3</sup>, S. Viridiana Laredo LaredoTiscareño<sup>4</sup>, Bradley J. Blitvich<sup>4</sup>, Doug E. Brackney<sup>5</sup>, Ryan C. Smith<sup>6</sup><sup>1</sup>Interdepartmental Program in Genetics and Genomics, Iowa State University, Ames, IA, United States, <sup>2</sup>Department of Plant Pathology, Entomology and Microbiology, Iowa State University, Ames, IA, United States, <sup>3</sup>Center for Vector-Borne and Zoonotic Diseases, Department of Environmental Sciences, The Connecticut Agricultural Experiment Station, New Haven, CT, United States, <sup>4</sup>Department of Veterinary Microbiology and Preventative Medicine, Iowa State University, Ames, IA, United States, <sup>5</sup>Department of Plant Pathology, Entomology and Microbiology, Iowa State University, Ames, IA, United States

3:45 p.m.

7184

**CHARACTERIZATION OF SENSORY NEURONS IN *ANOPHELES* MOSQUITO APPENDAGES**Joanna Konopka<sup>1</sup>, Darya Task<sup>1</sup>, Danny Poinapen<sup>2</sup>, Christopher Potter<sup>1</sup><sup>1</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Western University, London, ON, Canada

4 p.m.

7185

**MOSQUITO RESISTANCE TO DENGUE VIRUS REVEALED BY SINGLE-CELL GENE EXPRESSION AND METABOLOMIC PROFILING OF MIDGUT AND FAT BODY**

Thomas Vial, Louis Lambrechts, Sarah Merklings

Institut Pasteur, Université Paris Cité, CNRS UMR2000, Insect-Virus Interactions Unit, Paris, France

4:15 p.m.

7186

***PLASMODIUM* PARASITOPHOUS VACUOLE MEMBRANE PROTEIN PFS16 PROMOTES MALARIA TRANSMISSION BY SILENCING MOSQUITO IMMUNITY**Julian Ramelow, Yacob Keleta, Guodong Niu, Xiaohong Wang, Jun Li  
Florida International University, Miami, FL, United States

4:30 p.m.

7187

**TEMEPHOS RESISTANCE IS ASSOCIATED WITH REDUCED VECTOR COMPETENCE FOR ZIKA VIRUS IN *Aedes aegypti***Grant A. Kay, Jennifer S. Lord, Grant L. Hughes, Lisa J. Reimer  
Liverpool School of Tropical Medicine, Liverpool, United KingdomSaturday  
October 21

## Symposium 145

### Surveillance for Malaria Elimination: What Does it Take to be Sure of Zero Infections?

Regency Ballroom D - Ballroom Level (West Tower)

Saturday, October 21, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

Surveillance data is the crucial evidence-base to inform targeting interventions, to measure progress in reducing transmission, and to determine whether malaria elimination has been achieved. Establishing a surveillance system to confirm the presence of infections is relatively straightforward, although structure and data quality do vary. However, as more malaria endemic countries are getting closer to malaria elimination, understanding the implications of transitioning the surveillance system to enable further integration of data sources and options to enable an elimination framework so the system is fit for purpose is paramount. This symposium will bring together experts to share experiences and novel surveillance tools to support decision-making for malaria elimination. First, we will provide an overview of the current expectations of malaria surveillance systems for being ready to apply for malaria elimination certification with a specific focus on the components that countries find most challenging to meet. Next, the specific malaria surveillance needs to confirm elimination of *P. vivax* malaria transmission given the risk of continued relapses from hypnozoite carriers will be discussed. The focus will be on the current approaches being applied in Peru and other *P. vivax* endemic settings, key challenges, and potential solutions for adapting surveillance systems to confirm elimination. Thirdly, results from the novel Freedom From Infection (FFI) tool to assess the sensitivity of the malaria surveillance system and the corresponding likelihood that elimination is supported by all available evidence will be presented. Results based on passive and active surveillance data collected in 6 countries identified specific factors that are associated with a high system sensitivity: for example, the probability of someone being more likely to seek care at a given facility was consistently associated with testing equipment availability (coefficient range: 0.1-11.9). The potential for FFI to be an important programmatic tool to support decision-making will be discussed. Subsequently, we will present examples from countries that are starting to think about incorporating new approaches to verify zero malaria from a surveillance perspective, how routine data quality audits have been adapted to look at zero reporting, how surveillance assessments incorporate elements of zero malaria verification and how community level digital tools are tailored in elimination areas to contribute to robust malaria data analyses in this context. Finally, the session will conclude with a presentation on the opportunities to leverage the multiple malaria diagnostics to maximize the information available to support programmatic decision-making for confirming elimination.

#### CHAIR

Gillian H. Stresman  
University of South Florida, Tampa, FL, United States

Gabriel Carrasco Escobar  
Universidad Peruana Cayetano Heredia, Lima, Peru

#### 3 p.m. INTRODUCTION

#### 3:10 p.m. COUNTRY EXPERIENCES WITH WHO CERTIFICATION REQUIREMENTS FOR MALARIA ELIMINATION CERTIFICATION

Hong Li  
World Health Organization, Geneva, Switzerland

#### 3:25 p.m. MALARIA SURVEILLANCE FOR ELIMINATION: CONFIRMING *P. VIVAX* ELIMINATION IN PERU

Gabriel Carrasco Escobar  
Universidad Peruana Cayetano Heredia, Lima, Peru

#### 3:40 p.m. FREEDOM FROM INFECTION: A NOVEL TOOL TO ESTIMATE THE SENSITIVITY OF THE MALARIA SURVEILLANCE SYSTEM, INCORPORATING ALL AVAILABLE DATA, AND THE CORRESPONDING CONFIDENCE THAT ELIMINATION IS LIKELY

Gillian Stresman  
University of South Florida, Tampa, FL, United States

#### 3:55 p.m. COUNTRY EFFORTS TO INCORPORATE NEW APPROACHES TO VERIFY ZERO MALARIA FROM A SURVEILLANCE PERSPECTIVE

Arantxa Roca-Feltrer  
PATH, Maputo, Mozambique

#### 4:10 p.m. OPPORTUNITIES TO LEVERAGE MULTIPLE MALARIA DIAGNOSTIC TOOLS TO SUPPORT MALARIA SURVEILLANCE AND PROGRAMMATIC DECISION-MAKING

Chris Drakeley  
London School of Hygiene & Tropical Medicine, London, United Kingdom

### Ben Kean Fellowship Reception - By Invitation Only

Michigan 1A - Concourse Level (East Tower)

Saturday, October 21, 5 p.m. - 7 p.m. U.S. Central Time Zone

## Special Session 146

### Clinical Pub Trivia Night

Michigan 1B/1C- Concourse Level (East Tower)

Saturday, October 21, 6:15 p.m. - 8 p.m. U.S. Central Time Zone

Come join us for a fun-filled collegial competition, sponsored by the ASTMH Clinical Group. This is a chance to meet others interested in clinical tropical medicine, show your knowledge, learn some new fun facts, and enjoy free snacks. Don't worry if you are new to TropMed. Teams will be a mix of people with different levels of experience, and you won't be asked to answer any question alone. The winning team takes home prizes and bragging rights.

#### EMCEE

Jill Weatherhead  
Baylor College of Medicine, Houston, TX, United States



## Sunday, October 22

### Registration

Grand Ballroom Foyer - Ballroom Level (East Tower)  
 Sunday, October 22, 7 a.m. - 10:30 a.m. U.S. Central Time Zone

### Speaker Ready Room

Grand Suite 2AB - Ballroom Level (East Tower)  
 Sunday, October 22, 7 a.m. - Noon U.S. Central Time Zone

### Meeting Sign-Up Room

Horner and Ogden - Third Floor (West Tower)  
 Sunday, October 22, 7 a.m. - 1 p.m. U.S. Central Time Zone

### Nursing Mothers Room

Grand Suite 1 and Grand Suite 4 - Ballroom Level (East Tower)  
 Sunday, October 22, 7 a.m. - 1 p.m. U.S. Central Time Zone

### Prayer Room

Hong Kong - Ballroom Level (West Tower) and Field - Third Floor (West Tower)  
 Sunday, October 22, 7 a.m. - 1 p.m. U.S. Central Time Zone

## Scientific Session 147

### Global Health: ICT Innovations for Improved Health Care Service Delivery

Grand Ballroom A - Ballroom Level (East Tower)  
 Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Laura Steinhardt  
 CDC, Atlanta, GA, United States

Rainer Tan  
 Unisanté, Lausanne, Switzerland

8 a.m. **7188**

#### ANTIBIOTIC STEWARDSHIP USING THE EPOCT+ DIGITAL CLINICAL DECISION SUPPORT ALGORITHM IN PRIMARY CARE FACILITIES IN TANZANIA: A CLUSTER RANDOMIZED CONTROLLED TRIAL

Rainer Tan<sup>1</sup>, Lameck B. Luwanda<sup>2</sup>, Godfrey Kavishe<sup>3</sup>, Alexandra V. Kulinkina<sup>4</sup>, Chacha Mangu<sup>5</sup>, Sabine Renggli<sup>6</sup>, Geoffrey Ashery<sup>7</sup>, Margreth Joram<sup>8</sup>, Ibrahim E. Mtebene<sup>9</sup>, Peter Agrea<sup>3</sup>, Alan Vonlanthen<sup>1</sup>, Vincent Faivre<sup>1</sup>, Julien Thabard<sup>1</sup>, Humphrey Mhagama<sup>3</sup>, Gillian Levine<sup>4</sup>, Marie-Annick Le Pogam<sup>1</sup>, Kristina Keitel<sup>6</sup>, Patrick Taffé<sup>1</sup>, Nyanda Ntinginya<sup>3</sup>, Honorati Masanja<sup>2</sup>, Valérie D'Acremont<sup>1</sup>  
<sup>1</sup>Unisanté, Lausanne, Switzerland, <sup>2</sup>Ifakara Health Institute, Dar es Salaam, United Republic of Tanzania, <sup>3</sup>National Institute of Medical Research - Mbeya Medical Research Centre, Mbeya, United Republic of Tanzania, <sup>4</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland, <sup>5</sup>University Hospital Bern, Bern, Switzerland

8:15 a.m. **7189**

#### EFFECTIVENESS OF A CLINICAL DECISION SUPPORT ALGORITHM (EPOCT+) IN IMPROVING QUALITY OF CARE FOR SICK CHILDREN IN PRIMARY HEALTH FACILITIES IN TANZANIA (DYNAMIC PROJECT): RESULTS FROM A CLUSTER RANDOMIZED TRIAL

Godfrey A. Kavishe<sup>1</sup>, Alexandra V. Kulinkina<sup>2</sup>, Sabine Renggli<sup>3</sup>, Chacha D. Mangu<sup>4</sup>, Lameck Luwanda<sup>5</sup>, Peter Agrea<sup>6</sup>, Humphrey Mhagama<sup>1</sup>, Margaret Joram<sup>7</sup>, Ibrahim Mtebene<sup>8</sup>, Geoffrey I. Ashery<sup>9</sup>, Marie-Annick Le Pogam<sup>10</sup>, Honorati Masanja<sup>11</sup>, Nyanda E. Ntinginya<sup>12</sup>, Valérie D'Acremont<sup>13</sup>, Rainer Tan<sup>14</sup>  
<sup>1</sup>National Institute of Medical Research-Mbeya Medical Research Centre, Mbeya, United Republic of Tanzania, <sup>2</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland, <sup>3</sup>Ifakara Health Institute, Dar es Salaam, United Republic of Tanzania, <sup>4</sup>Unisanté, Centre for Primary Care and Public Health, University of Lausanne, Lausanne, Switzerland

8:30 a.m. **7190**

#### MULTIMODAL VITAL SIGN DEVICES FOR RELIABILITY AND FEASIBILITY, USABILITY, AND ACCEPTABILITY IN A LOW-RESOURCE SETTING - A PRELIMINARY ANALYSIS

Lava Shrestha<sup>1</sup>, Debashish Das<sup>2</sup>, Philip Horgan<sup>3</sup>, Jyotshna Sapkota<sup>4</sup>, Aurélien Mace<sup>5</sup>, Thomas Keller<sup>6</sup>, Patrick Kantelhardt<sup>7</sup>, Sabita Kandel<sup>1</sup>, Lisa Soti<sup>8</sup>, Phyu Hnin Hlaing<sup>9</sup>, Santa Kumar Das<sup>1</sup>, Pradip Gyanwali<sup>1</sup>, George Korir<sup>2</sup>, Sabine Dittrich<sup>2</sup>, Cassandra Kelly-Cirino<sup>2</sup>, Marta Fernandez Suarez<sup>2</sup>, Sergio Carmona<sup>2</sup>, Kevin K.A. Tetteh<sup>2</sup>  
<sup>1</sup>Institute of Medicine, Kathmandu, Nepal, <sup>2</sup>FIND, Geneva, Switzerland, <sup>3</sup>ACOMED Statistik, Leipzig, Germany, <sup>4</sup>Department of Public Health, Om Health Campus Pvt. Ltd, Kathmandu, Nepal, <sup>5</sup>Evidence & Impact - Oxford, Oxford, United Kingdom

8:45 a.m. **7191**

#### DEVELOPMENT AND EVALUATION OF A CLINICAL GUIDELINE FOR A PEDIATRIC TELEMEDICINE AND MEDICATION DELIVERY SERVICE: A PROSPECTIVE COHORT STUDY IN HAITI

Molly Klarman<sup>1</sup>, Xiaofei Chi<sup>2</sup>, Youseline Cajusma<sup>1</sup>, Katelyn E. Flaherty<sup>2</sup>, Anne Carine Capois<sup>1</sup>, Michel Daryl Vladimir Dofiné<sup>1</sup>, Lerby Exantus<sup>3</sup>, Jason Friesen<sup>4</sup>, Valery M. Beau de Rochars<sup>5</sup>, Torben K. Becker<sup>6</sup>, Chantale Baril<sup>5</sup>, Matthew J. Gurka<sup>2</sup>, Eric J. Nelson<sup>2</sup>  
<sup>1</sup>University of Florida, Gressier, Haiti, <sup>2</sup>University of Florida, Gainesville, FL, United States, <sup>3</sup>Université d'État d'Haiti- Faculté de Médecine et de Pharmacie, Port au Prince, Haiti, <sup>4</sup>Trek Medics International, Charlotte, NC, United States, <sup>5</sup>Université d'État d'Haiti- Faculté de Médecine et de Pharmacie, Port au Prince, Haiti

9 a.m. **7192**

#### IMPACT OF A DIGITAL CLINICAL DECISION SUPPORT ALGORITHM ON ANTIBIOTIC PRESCRIPTION IN RWANDA: PRELIMINARY RESULTS FROM A CLUSTER NON-RANDOMIZED CONTROLLED TRIAL

Alexandra V. Kulinkina<sup>1</sup>, Victor Rwandarwacu<sup>2</sup>, Joseph Habakurama<sup>2</sup>, Angélique Ingabire<sup>2</sup>, Ludovico Cobuccio<sup>3</sup>, Emmanuel Kalisa<sup>2</sup>, Gilbert Rukundo<sup>2</sup>, Gillian Levine<sup>1</sup>, Martin Norris<sup>1</sup>, Rainer Tan<sup>1</sup>, Alan Vonlanthen<sup>3</sup>, Vincent Faivre<sup>3</sup>, Julien Thabard<sup>3</sup>, Marie-Annick Le Pogam<sup>3</sup>, Valerie D'Acremont<sup>3</sup>  
<sup>1</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland, <sup>2</sup>Swiss Tropical and Public Health Institute, Kigali, Rwanda, <sup>3</sup>Centre for Primary Care and Public Health, University of Lausanne (Unisanté), Lausanne, Switzerland

Sunday  
 October 22

9:15 a.m.

7193

**ENVIRONMENTAL IMPACT AND MINERAL AND ENERGY REQUIREMENTS OF THE USE OF AN ELECTRONIC CLINICAL DECISION SUPPORT ALGORITHM (CDSA) TO MANAGE SICK CHILDREN IN TANZANIA: A LIFE CYCLE ASSESSMENT**

**Nina Emery<sup>1</sup>**, Maxime Karlen<sup>1</sup>, Rainer Tan<sup>1</sup>, Godfrey Kavishe<sup>2</sup>, Peter Agrea<sup>2</sup>, Sabine Renggli<sup>3</sup>, Alexandra Kulinkina<sup>4</sup>, Lameck Luwanda<sup>3</sup>, Chacha Mangu<sup>2</sup>, Pascale Schwab<sup>5</sup>, Xavier Bengoa<sup>6</sup>, Valérie D'Acremont<sup>1</sup>

<sup>1</sup>Unisanté, Lausanne, Switzerland, <sup>2</sup>National Institute for Medical Research - Mbeya Medical Research Center, Mbeya, United Republic of Tanzania, <sup>3</sup>Ifakara Health Institute, Ifakara, United Republic of Tanzania, <sup>4</sup>Swiss Tropical and Public Health Institute, Basel, Switzerland, <sup>5</sup>University of Lausanne, Lausanne, Switzerland, <sup>6</sup>AdAstra Sustainability, Choulex, Switzerland

9:30 a.m.

7194

**LEVERAGING DIGITAL MOBILE TECHNOLOGY TO INCREASE KNOWLEDGE OF TUBERCULOSIS DISEASE AND BRIDGE THE GAP IN TB CASE FINDING IN NIGERIA: A CASE STUDY OF THE NATIONAL TUBERCULOSIS CALL CENTRE**

**Olatunde Toluwase<sup>1</sup>**, Joseph Edor<sup>1</sup>, Linda Osaji<sup>1</sup>, Cecilia Kafran<sup>1</sup>, Jennifer Orkis<sup>2</sup>, Ian Tweedie<sup>1</sup>, Emeka Okafor<sup>3</sup>, Debby Nongo<sup>4</sup>, Bolatito Aiyenigba<sup>1</sup>, Obioma Akaniro<sup>5</sup>, Chukwuma Anyaika<sup>6</sup>

<sup>1</sup>Johns Hopkins Center for Communication Programs - USAID Breakthrough ACTION, Abuja, Nigeria, <sup>2</sup>Johns Hopkins Center for Communication Programs - USAID Breakthrough ACTION, Baltimore, MD, United States, <sup>3</sup>Interra Networks Limited, Abuja, Nigeria, <sup>4</sup>United States Agency for International Development (USAID), Abuja, Nigeria, <sup>5</sup>National Tuberculosis and Buruli Ulcer Control Programme (NTBLCP), Abuja, Nigeria

**Scientific Session 148**

**Malaria - Prevention I**

Grand Ballroom B - Ballroom Level (East Tower)

Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

**CHAIR**

Nelli Westercamp  
U.S. Centers for Disease Control and Prevention, Atlanta, GA, United States

Keith Esch  
PSI, Washington, DC, United States

8 a.m.

7195

**REDUCING LOW BIRTH WEIGHT BY ADDING TWO DOSES OF AZITHROMYCIN TO THE INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY WITH SULFADOXINE PYRIMETHAMIN: A RANDOMIZED CONTROLLED TRIAL IN BURKINA FASO**

**Moussa Lingani<sup>1</sup>**, Serge Henri Zango<sup>1</sup>, Innocent Valéa<sup>1</sup>, Sékou Samadoulougou<sup>2</sup>, Michèle Dramaix<sup>3</sup>, Halidou Tinto<sup>1</sup>, Philippe Donnen<sup>3</sup>, Annie Robert<sup>4</sup>

<sup>1</sup>Institut de Recherche en Sciences de la Santé/Direction Régionale du Centre Ouest (IRSS/DRCO), Nanoro, Burkina Faso, <sup>2</sup>Evaluation Platform on Obesity Prevention, Quebec Heart and Lung Institute Research Center, Quebec City, QC G1V 4G5, Quebec, QC, Canada, <sup>3</sup>École de santé publique, Université Libre de Bruxelles. CP594, route de Lennik 808, 1070 Bruxelles, Bruxelles, Belgium, <sup>4</sup>Epidemiology and Biostatistics Research Division, Institut de recherche expérimentale et clinique, Université catholique de Louvain, Brussels B1.30.13, Clos Chapelle-aux-Champs 30, B-1200 Brussels, Bruxelles, Belgium

8:15 a.m.

7196

**THE UGANDA HOUSING MODIFICATION STUDY - A CLUSTER RANDOMIZED TRIAL EVALUATING THE IMPACT OF TWO TYPES OF HOUSING MODIFICATION ON MALARIA BURDEN IN UGANDA**

**Nelli Westercamp<sup>1</sup>**, Samuel Gonahasa<sup>2</sup>, Agaba Katureebe<sup>2</sup>, Catherine Maiteki-Sebuguzi<sup>3</sup>, Joaniter I. Nankabirwa<sup>2</sup>, Jimmy Opigo<sup>3</sup>, Henry Maweje<sup>2</sup>, John E. Gimnig<sup>1</sup>, Peter Mutungi<sup>2</sup>, Katherine Snyman<sup>4</sup>, Walter Ochieng<sup>1</sup>, Susan Nayiga<sup>2</sup>, Eleanor Hutchinson<sup>4</sup>, Seth R. Irish<sup>5</sup>, Jenny Carlson<sup>6</sup>, Mame Niang<sup>7</sup>, Kassahun A. Belay<sup>8</sup>, Sarah G. Staedke<sup>4</sup>, Moses R. Kanya<sup>2</sup>

<sup>1</sup>Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>2</sup>Infectious Diseases Research Collaboration, Kampala, Uganda, <sup>3</sup>Ministry of Health (MOH/NMCP), Kampala, Uganda, <sup>4</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>5</sup>U.S. President's Malaria Initiative, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>6</sup>U.S. President's Malaria Initiative, USAID, Washington, DC, United States, <sup>7</sup>U.S. President's Malaria Initiative, Centers for Disease Control and Prevention, Kampala, Uganda, <sup>8</sup>U.S. President's Malaria Initiative, USAID, Kampala, Uganda

8:30 a.m.

7197

**INSECTICIDE CHEMICAL CONTENT AND BIOEFFICACY OF INSECTICIDE-TREATED NETS CONTAINING CHLORFENAPYR OR PIPERONYL BUTOX-IDE OVER 24 MONTHS OF FIELD USE IN BURKINA FASO, RWANDA, SIERRA LEONE, AND BURUNDI**

**Keith Esch<sup>1</sup>**, Isabel Swamidoss<sup>2</sup>, Jacky Raharinjatovo<sup>3</sup>, Raymond Sudoi<sup>4</sup>, Carla Mapp<sup>2</sup>, Denis Sinzinkayo<sup>5</sup>, Pierre Sinar-inzi<sup>6</sup>, Mugisha Landrine<sup>7</sup>, Akililu Seyoum<sup>7</sup>, Beatus Cyubahiro<sup>8</sup>, Emmanuel Hakizimana<sup>9</sup>, Aimable Mbituyumuremy<sup>8</sup>, Elias Niyituma<sup>9</sup>, Dennis H. Marke<sup>10</sup>, Frederick Yamba<sup>10</sup>, Stephen Poyer<sup>1</sup>

<sup>1</sup>PMI VectorLink, Population Services International, Washington, DC, United States, <sup>2</sup>Entomology Branch, Division of Parasitic Diseases and Malaria, U.S. Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>3</sup>PMI VectorLink, Population Services International, Antananarivo, Madagas-car, <sup>4</sup>PMI VectorLink, Population Services International, Nairobi, Kenya, <sup>5</sup>PMI VectorLink, Abt Associates, Bujumbura, Burundi, <sup>6</sup>Programme National Intégré de Lutte contre le Paludisme, Bujumbura, Burundi, <sup>7</sup>PMI VectorLink, Abt Associates, Rockville, MD, United States, <sup>8</sup>Malaria and Other Parasitic Diseases Control Division, Rwanda Biomedical Center, Ministry of Health, Kigali, Rwanda, <sup>9</sup>PMI VectorLink, Abt Associates, Kigali, Rwanda, <sup>10</sup>National Malaria Control Programme, Ministry of Health and Sanitation, Freetown, Sierra Leone

8:45 a.m.

7198

**THE RIPPLE EFFECT OF QUALITY IMPROVEMENT IN STRENGTHENING UPTAKE OF INTERMITTENT PREVENTIVE TREATMENT FOR THE PREVENTION OF MALARIA IN PREGNANCY: A CASE STUDY OF KAKAMEGA COUNTY, KENYA**

**Agatha Kutoy Mandu<sup>1</sup>**, Francesca Nzuve<sup>1</sup>, Beth Barasa<sup>1</sup>, Faustinah Sakari<sup>2</sup>, Linet Ilemenyaa<sup>2</sup>, Ahmeddin Omar<sup>3</sup>, Elvis Oyugi<sup>3</sup>, Peter Njiru<sup>3</sup>

<sup>1</sup>U.S. President's Malaria Initiative, Impact Malaria Project, Nairobi, Kenya, <sup>2</sup>Ministry of Health, Kakamega County, Kakamega, Kenya, <sup>3</sup>Division of National Malaria Program, Ministry of Health, Nairobi, Kenya

9 a.m.

7199

**LLIN EVALUATION IN UGANDA PROJECT (LLINEUP2): IMPACT OF LONG-LASTING INSECTICIDAL NETS (LLINS) TREATED WITH PYRETHROID PLUS PYRIPROXYFEN VS LLINS TREATED WITH PYRETHROID PLUS PIPERONYL BUTOXIDE ON MALARIA INCIDENCE IN UGANDA: A CLUSTER-RANDOMIZED TRIAL**

**Samuel Gonahasa<sup>1</sup>**, Martha J. Nassali<sup>1</sup>, Jane F. Namuganga<sup>1</sup>, Catherine Maiteki-Sebuguzi<sup>2</sup>, Jimmy Opigo<sup>2</sup>, Daniel Kyabayinze<sup>3</sup>, Isaiah Nabende<sup>1</sup>, Jaffer Okiring<sup>1</sup>, Adrienne Epstein<sup>4</sup>, Katherine Snyman<sup>5</sup>, Joaniter I. Nankabirwa<sup>1</sup>, Moses R. Kanya<sup>6</sup>, Grant Dorsey<sup>7</sup>, Sarah G. Staedke<sup>4</sup>

<sup>1</sup>Infectious Diseases Research Collaboration, Kampala, Uganda, <sup>2</sup>National Malaria Control Division, Ministry of Health, Kampala, Uganda, <sup>3</sup>Directorate of Public Health, Ministry of Health, Kampala, Uganda, <sup>4</sup>Liverpool School of Tropical Medicine, Liverpool, United Kingdom, <sup>5</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>6</sup>Makerere University, Kampala, Uganda, <sup>7</sup>University of California San Francisco, San Francisco, CA, United States

9:15 a.m.

7200

**REDUCING MALARIA TRANSMISSION IN FOREST-GOING MOBILE AND MIGRANT POPULATIONS IN LAO PDR AND CAMBODIA: A STEPPED-WEDGE CLUSTER-RANDOMISED CONTROLLED TRIAL**Win Han Oo<sup>1</sup>, Win Htiike<sup>1</sup>, Thet Lynn<sup>2</sup>, Lun Sovanda<sup>3</sup>, Paul A. Agius<sup>4</sup>, May Chan Oo<sup>1</sup>, Galau Naw Hkawng<sup>1</sup>, Kaung Myat Thu<sup>1</sup>, Aung Khine Zaw<sup>1</sup>, Ei Phyu Htwe<sup>1</sup>, Julia Cutts<sup>1</sup>, Nick Scott<sup>1</sup>, Ellen Kearney<sup>1</sup>, Katherine O'Flatherty<sup>1</sup>, Wang Bangyuan<sup>5</sup>, Boualam Khamlome<sup>6</sup>, Phoutnalong Vilay<sup>6</sup>, Siv Sovannaroth<sup>1</sup>, **Freya JI Fowkes<sup>1</sup>**<sup>1</sup>Burnet Institute, Melbourne, Australia, <sup>2</sup>Health Poverty Action, Vientiane, Lao People's Democratic Republic, <sup>3</sup>Health Poverty Action, Phnom Penh, Cambodia, <sup>4</sup>Deakin University, Melbourne, Australia, <sup>5</sup>Health Poverty Action, London, United Kingdom, <sup>6</sup>Center of Malariology Parasitology and Entomology, Ministry of Health, Vientiane, Lao People's Democratic Republic, <sup>7</sup>National Center for Parasitology Entomology and Malaria Control, Ministry of Health, Phnom Penh, Cambodia

9:30 a.m.

7201

**DO ATTRACTIVE TARGETED SUGAR BAIT (ATSB) STATIONS REDUCE MALARIA BURDEN IN ZAMBIA? FIRST RESULTS FROM A PHASE III COMMUNITY-RANDOMIZED EFFICACY TRIAL OF ATSB IN WESTERN PROVINCE, ZAMBIA**Ruth Ashton<sup>1</sup>, Kochelani Saili<sup>2</sup>, Chama Chishya<sup>2</sup>, Handrinah Banda<sup>2</sup>, Annie Amzen<sup>2</sup>, Chanda Chitoshi<sup>2</sup>, John Chulu<sup>2</sup>, Frank Ndalama<sup>2</sup>, Titus Tobolo<sup>2</sup>, Josh Yukich<sup>1</sup>, Irene Kyomuhangi<sup>1</sup>, Erica Orange<sup>3</sup>, Kafula Silumbe<sup>4</sup>, Busiku Hamainza<sup>5</sup>, John Miller<sup>4</sup>, Thom Eisele<sup>1</sup>, Megan Littrell<sup>6</sup><sup>1</sup>Tulane School of Public Health and Tropical Medicine, New Orleans, LA, United States, <sup>2</sup>PATH, Kaoma, Zambia, <sup>3</sup>PATH, Seattle, WA, United States, <sup>4</sup>PATH, Lusaka, Zambia, <sup>5</sup>National Malaria Elimination Centre, Lusaka, Zambia, <sup>6</sup>PATH, Washington, DC, United States**Symposium 149****Diseases, Conflict and Health Security: Accessing Conflict-Affected Populations for Disease Eradication and Elimination Through Peace and Health Approaches**

Grand Hall J - Ballroom Level (East Tower)

Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

The COVID-19 and Ebola pandemics exposed the fragility of many health systems around the world and exposed the need for improved global health security. Global health security is critical for the protection of populations from disease threats. However, without access to conflict-affected populations, improving global health security is not possible, resulting in already vulnerable populations being at greater risk for exposure to disease and death. The growing number and increasingly protracted and complex nature of conflicts has necessitated the development of equally complex solutions, even while resources to tackle these issues are limited. In certain conflicts, humanitarian, economic, and public health challenges may be shared concerns of civilians, governments, and armed actors, thereby allowing for groups that would not normally interact to find common ground. This symposium will focus on the importance of multisectoral collaboration between peace and health in the context of global health security, and how lessons learned can be applied to similar regional contexts. Examples of public health interventions to explore practical approaches, academic methodologies, and policy recommendations to address challenges in conflict-affected populations and strengthen global health security will be

presented. In Libya, health systems functions and financing have been negatively impacted by civil unrest. The ability and success of working at the subnational level for a whole-of-country approach to strengthen zoonotic detection and response capacities will be discussed. In Iraq, a multi-year engagement focused on building consensus and formalizing networks and policies for implementation of the International Health Regulations has proven a successful mechanism. In Liberia, while most of the population was still attempting to manage the emotional and psychological consequences of war in the context of post-conflict vulnerability, they were faced with the Ebola Virus Disease outbreak from 2014-2016 and the COVID-19 pandemic in 2020. The prominent psychosocial impacts of these diseases underscored Liberia's need for strengthened mental health services for young people. In Sudan, conflict in Blue Nile state along Sudan's southern border has made it challenging to provide health services to the region. Mediation efforts are currently on-going to discuss ways of providing health services through a cross-border partnership between Sudan and South Sudan. In Mali, results from a 2022 baseline survey conducted before conflict mitigation activities were initiated as part of a "Peace through Health" initiative will be shared along with recommendations on how to monitor and evaluate conflict resolution initiatives that include health components.

**CHAIR**Angelia M. Sanders  
The Carter Center, Atlanta, GA, United States

8 a.m.

**INTRODUCTION**

8:05 a.m.

**CAN GLOBAL HEALTH SECURITY BE ACHIEVED WITHOUT ACCESS TO CONFLICT-AFFECTED POPULATIONS?**Erin Sorrell  
Johns Hopkins: Center for Health Security and Bloomberg School of Public Health, Baltimore, MD, United States

8:20 a.m.

**AN INTEGRATED APPROACH TO PEACEBUILDING AND GLOBAL HEALTH: A MODEL IN CENTRAL MALI**Frederic Deycard  
The Carter Center, Atlanta, GA, United States

8:35 a.m.

**ACCESSING THE "INACCESSIBLE" IN SUDAN**Sara Lavinia Brair  
The Carter Center, Khartoum, Sudan

8:50 a.m.

**THE ROLE OF MENTAL HEALTH AND PSYCHOSOCIAL SUPPORT IN BOOSTING PANDEMIC PREPAREDNESS AND RESPONSE**Samhita Kumar  
The Carter Center, Atlanta, GA, United StatesSunday  
October 22

9:05 a.m.

## GLOBAL HEALTH SECURITY AND HEALTH SYSTEMS- THE IMPORTANCE OF MULTISECTORAL APPROACHES IN STRENGTHENING NATIONAL HEALTH EMERGENCY PREPAREDNESS CAPACITIES

Stella Chungong  
World Health Organization, Geneva, Switzerland

## Scientific Session 150



### Malaria - Insights into Malaria Pathogenesis

Grand Ballroom CDEF - Ballroom Level (East Tower)  
Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Miranda Oakley  
FDA, Silver Spring, MD, United States

Sukai Ceesay  
Max Planck Institute for Infection Biology, Berlin, Germany

8 a.m.

7202

### MULTIPLE *PLASMODIUM FALCIPARUM* EARLY TRANSCRIBED MEMBRANE PROTEIN FAMILY MEMBERS ARE DIFFERENTIALLY EXPRESSED IN PEDIATRIC PATIENTS WITH SEVERE MALARIAL ANEMIA

Perez K. Olewe<sup>1</sup>, Qiuying Cheng<sup>2</sup>, Clinton O. Onyango<sup>3</sup>, Samuel B. Anyona<sup>3</sup>, Ivy J. Hurwitz<sup>2</sup>, Sarah Kituyi<sup>4</sup>, Evans Raballah<sup>5</sup>, Beauty Kolade<sup>6</sup>, Philip D. Seidenberg<sup>7</sup>, Kristan A. Schneider<sup>8</sup>, Christophe G. Lamber<sup>2</sup>, Ananias A. Escalante<sup>9</sup>, Collins Ouma<sup>2</sup>, Benjamin H. McMahon<sup>10</sup>, Douglas J. Perkins<sup>2</sup>

<sup>1</sup>Jaramogi Oginga Odinga University of Science and Technology, Bondo, Kenya, Bondo, Kenya, <sup>2</sup>University of New Mexico, Center for Global Health, Department of Internal Medicine, Albuquerque, NM, United States, <sup>3</sup>Maseno University, Kisumu, Kenya, <sup>4</sup>University of Embu, Embu, Kenya, <sup>5</sup>Masinde Muliro University of Science and Technology, Kakamega, Kenya, <sup>6</sup>Theoretical Biology and Biophysics Group, Theoretical Division, Los Alamos National Laboratory, Los Alamos, NM, USA, Los Alamos, NM, United States, <sup>7</sup>University of New Mexico, Department of Emergency Medicine, Albuquerque, NM, United States, <sup>8</sup>Department of Applied Computer and Biosciences, University of Applied Sciences Mittweida, Technikumplatz, Mittweida, Germany, <sup>9</sup>Biology Department/Institute of Genomics and Evolutionary Medicine (iGEM), Temple University, Philadelphia, PA, USA, Philadelphia, PA, United States, <sup>10</sup>Theoretical Biology and Biophysics Group, Theoretical Division, Los Alamos National Laboratory, Los Alamos, NM, USA., Los Alamos, NM, United States

8:15 a.m.

7203

### PROTEOMICS ANALYSIS REVEALS ALTERED HOST PATHWAYS SPECIFIC TO SEVERE MALARIA IN BENINESE CHILDREN.

Jérémy Fraering<sup>1</sup>, Virginie Salnot<sup>2</sup>, Sem Ezinmegnon<sup>1</sup>, Nadine Fievet<sup>1</sup>, Jules Alao<sup>3</sup>, Katell Peoc'h<sup>4</sup>, Florence Migot-Nabias<sup>1</sup>, Nicolas Argy<sup>1</sup>, Emilie-Fleur Gautier<sup>5</sup>, Gwladys Bertin<sup>1</sup>, Claire Kamaliddin<sup>6</sup>

<sup>1</sup>IRD - UMR 261 - MERIT, Paris, France, <sup>2</sup>Proteom'IC platform, Paris, France, <sup>3</sup>Service de Pédiatrie Chumel Hospital, Cotonou, Benin, <sup>4</sup>Bichat Hospital - Biochemistry department, Paris, France, <sup>5</sup>Proteom'IC Platform, Paris, France, <sup>6</sup>Cumming School of Medicine - University of Calgary, Calgary, AB, Canada

8:30 a.m.

7204

### ROLE OF *P. FALCIPARUM* HEMOZOIN-ASSOCIATED BIOMOLECULES IN THE PATHOGENESIS OF CEREBRAL MALARIA

Kelly A. Crotty, Ana Rodriguez  
NYU School of Medicine, New York, NY, United States

8:45 a.m.

7205

### EXPRESSION PROFILES OF DBLA DOMAINS OF VAR GENES FROM *PLASMODIUM FALCIPARUM* PARASITES CAUSING CLINICAL MALARIA OR PROMOTING ASYMPTOMATIC INFECTIONS

Sukai Ceesay<sup>1</sup>, Martin Kampmann<sup>1</sup>, Helle Smedegaard Hansson<sup>2</sup>, Rasmus Weisel Jensen<sup>2</sup>, Manuela Carrasquilla<sup>1</sup>, Safiatou Doumbo<sup>3</sup>, Usama Dabbas<sup>1</sup>, Hamidou Cisse<sup>3</sup>, Didier Doumtable<sup>3</sup>, Aissata Ongoiba<sup>3</sup>, Kassoum Kayentao<sup>3</sup>, Boubacar Traore<sup>3</sup>, Peter D Crompton<sup>4</sup>, Thomas Lavstsen<sup>2</sup>, Silvia Portugal<sup>1</sup>

<sup>1</sup>Max Planck Institute for Infection Biology, Berlin, Germany, <sup>2</sup>Centre for Medical Parasitology, University of Copenhagen, Copenhagen, Denmark, <sup>3</sup>Mali International Center of Excellence in Research, University of Sciences, Techniques and Technologies of Bamako, Bamako, Mali, <sup>4</sup>Laboratory of Immunogenetics, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Rockville, MD, United States

9 a.m.

7206

### ELEVATED URIC ACID PREDICTS MORTALITY AND COGNITIVE IMPAIRMENT IN UGANDAN CHILDREN WITH SEVERE MALARIA

Caitlin A. Bond<sup>1</sup>, Dibiyaduti Datta<sup>1</sup>, Ruth Namazzi<sup>2</sup>, Robert O. Opoka<sup>2</sup>, Anthony Batte<sup>2</sup>, Kavitha M. Udumula<sup>1</sup>, Deepali Balasubramani<sup>1</sup>, Ana Rodriguez<sup>3</sup>, Tarek M. El-Achkar<sup>1</sup>, Chandy C. John<sup>1</sup>, Andrea L. Conroy<sup>1</sup>

<sup>1</sup>Indiana University School of Medicine, Indianapolis, IN, United States, <sup>2</sup>Makerere University College of Health Sciences, Kampala, Uganda, <sup>3</sup>New York University School of Medicine, New York, NY, United States

9:15 a.m.

7207

### CONSERVED SUBGROUPS OF *PLASMODIUM FALCIPARUM* RIFIN ANTIGENS PREDOMINATE IN CEREBRAL MALARIA CASES FROM MALI AND MALAWI

Jonathan Lawton<sup>1</sup>, Albert E. Zhou<sup>1</sup>, Drissa Coulibaly<sup>2</sup>, Emily M. Stucke<sup>1</sup>, Rafal Sobota<sup>1</sup>, Savy M. Sebastian<sup>1</sup>, Bryan Cummings<sup>1</sup>, Ankit Dwivedi<sup>1</sup>, Antoine Dara<sup>1</sup>, James B. Munro<sup>1</sup>, Abdoulaye K. Koné<sup>1</sup>, Karim Traoré<sup>1</sup>, Bouréima Guindo<sup>2</sup>, Bourama Tangara<sup>2</sup>, Amadou Niangaly<sup>2</sup>, Modibo Daou<sup>2</sup>, Issa Diarra<sup>2</sup>, Youssouf Tolo<sup>2</sup>, Mody Sissoko<sup>2</sup>, Matthew B. Laurens<sup>1</sup>, Amed Ouattara<sup>1</sup>, Bourema Kouriba<sup>2</sup>, Ogobara K. Doumbo<sup>2</sup>, Shannon Takala-Harrison<sup>1</sup>, Christopher V. Plowe<sup>1</sup>, Don P. Mathanga<sup>3</sup>, Terrie E. Taylor<sup>4</sup>, Joana C. Silva<sup>1</sup>, Mahamadou A. Thera<sup>2</sup>, Karl B. Seydel<sup>4</sup>, Mark A. Travassos<sup>1</sup>

<sup>1</sup>University of Maryland School of Medicine, Baltimore, MD, United States, <sup>2</sup>University of Sciences, Techniques and Technologies, Bamako, Mali, <sup>3</sup>Kamuzu University of Health Sciences, Blantyre, Malawi, <sup>4</sup>Michigan State University, East Lansing, MI, United States

9:30 a.m.

7208

### STOOL MICROBIOME IN UGANDAN CHILDREN IS ASSOCIATED WITH DIFFERENTIAL MALARIA OUTCOMES

Olivia J. Bednarski  
IUSM, Indianapolis, IN, United States

## Symposium 151

### Overcoming the Challenges of PC-NTD Hotspots

Grand Hall K - Ballroom Level (East Tower)  
Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

Mass drug administration (MDA) is the main approach for neglected tropical diseases (NTDs) control. In some locations, however, prevalence does not decline as expected, termed "hotspots". The initial question is whether this is due to programmatic issues, such as poor treatment coverage, or underlying epidemiological factors driving the force of infection. Treatment coverage (target population who receive MDA) is a common evaluation metric, but few examine individual compliance



(swallowing of drugs) over multiple rounds of MDA. Systematic non-compliers, who persistently refuse or do not ingest medication over multiple years of MDA, can serve as a continued source of infection. Individual anthelmintic compliance patterns were recorded over five rounds of community-wide MDA targeting soil-transmitted helminths in southern Ethiopia using unique biometric identifiers (fingerprint) to determine if compliance is random or systematic over time. Following at least ten years of effective schistosomiasis (SCH) MDA, impact assessments have been conducted across West Africa. An analysis was conducted to understand which factors were associated with persistent hotspots including baseline prevalence/intensity, MDA coverage (reported and validated), and attitudes toward SCH transmission and treatment. Bayesian geostatistical models were fitted to identify SCH hotspots at fine spatial scales. Elimination of lymphatic filariasis as a public health problem requires a minimum of five effective rounds of MDA, after which a pre-transmission assessment survey (pre-TAS) is conducted. Once a pre-TAS is passed (1% microfilaremia or <2% antigenemia), a TAS is then carried out to determine whether MDA can cease. TAS are conducted another two times with two years between each survey before an elimination is considered. If the pre-TAS threshold is not achieved, these areas are labelled as "hotspots". Here we present analysis of epidemiological and programmatic (MDA coverage) factors associated with failed pre-TAS across five West African countries to identify determinants associated with hotspots compared with districts that met the stop-MDA criterion. In trachoma elimination programs, there is a need to identify areas at high risk of persistent and/or recrudescence active trachoma within and between endemic Evaluation Units (EUs) to ensure countries reach and maintain elimination targets. Geospatial techniques can identify areas of an EU that may still have high trachoma prevalence (hotspot) even if, on average, the EU is below the elimination threshold of <5% trachomatous inflammation—follicular in children aged 1–9 years (TF1–9). This presentation will illustrate geospatial analysis tools to identify persistent trachoma hotspots in Tanzania and Uganda.

#### CHAIR

Anna E. Phillips  
FHI360, Washington, DC, United States

Upendo J. Mwingira  
RTI, Washington, DC, United States

#### 8 a.m. INTRODUCTION

#### 8:10 a.m. PATTERNS OF INDIVIDUAL COMPLIANCE TO ANTHELMINTIC TREATMENT FOR SOIL- TRANSMITTED HELMINTHS IN SOUTHERN ETHIOPIA OVER MANY ROUNDS OF MASS DRUG ADMINISTRATION

Rosie Maddren  
Imperial College, London, United Kingdom

#### 8:35 a.m. SCHISTOSOMIASIS HOTSPOTS: DEFINING AREAS OF HIGH-RISK THROUGH MICRO-MAPPING IN WEST AFRICA

Anna Elizabeth Phillips  
FHI360, Washington, DC, United States

#### 9 a.m. OVERCOMING HOTSPOTS FOR LYMPHATIC FILARIASIS IN GHANA AND POTENTIAL STRATEGIES FOR STRENGTHENING SURVEILLANCE

Ernest K O. Mensah  
FHI 360, Accra, Ghana

#### 9:25 a.m. TRACHOMA IMPACT & SURVEILLANCE— LESSONS LEARNED FROM SURVEY FAILURES

Clara Burgert  
RTI, Washington, DC, United States

### Symposium 152

#### Regulatory Principles for Vaccine Development Against Global Infectious Diseases: U.S. FDA Perspective

Grand Hall L - Ballroom Level (East Tower)

Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

The development of safe and effective vaccines for global infectious diseases is of critical public health importance. The United States Food and Drug Administration (U.S. FDA) can license vaccines to protect against infectious diseases or conditions that are not endemic in the U.S., and clinical data obtained outside the U.S. may potentially be used to support an investigational new drug application or application for marketing approval in the U.S. Additionally, the U.S. FDA has incentive programs to encourage development of qualifying products for prevention and treatment of certain tropical diseases. Biomarkers can potentially support vaccine development for these tropical diseases by facilitating the evaluation of vaccines in clinical trials. Irrespective of whether a disease is endemic in the U.S. or not, the regulatory pathways to U.S. licensure for vaccine development to protect against infectious diseases are the same. This Symposium will help participants understand how to navigate regulatory pathways for the development of vaccines. Specifically, speakers will reference key U.S. FDA guidance to help participants learn about the following: 1. Regulatory review processes for vaccines intended for global infectious diseases; 2. Various expedited program designations available to encourage development of qualifying products; 3. The biomarker detection assay qualification process and differences from assay validation; and 4. Regulatory approach to enhancing diversity in clinical trial populations. Participants will have the opportunity to pose questions directly to individuals involved in day-to-day regulatory work in global infectious diseases at the U.S. FDA.

#### CHAIR

Sheral S. Patel  
U.S. Food & Drug Administration, Silver Spring, MD, United States

Heather J. Painter  
U.S. Food & Drug Administration, Silver Spring, MD, United States

**8 a.m.**  
**INTRODUCTION**

**8:10 a.m.**  
**REGULATORY REVIEW PROCESS FOR VACCINES INTENDED FOR GLOBAL INFECTIOUS DISEASES**

Sudhakar Agnihothram  
U.S. Food & Drug Administration, Silver Spring, MD, United States

**8:30 a.m.**  
**VARIOUS EXPEDITED PROGRAM DESIGNATIONS AVAILABLE TO ENCOURAGE DEVELOPMENT OF QUALIFYING PRODUCTS**

Kirk Prutzman  
U.S. Food & Drug Administration, Silver Spring, MD, United States

**8:50 a.m.**  
**REGULATORY APPROACHES TO ENHANCING DIVERSITY IN CLINICAL TRIAL POPULATIONS**

Ihid Carneiro Leao  
U.S. Food & Drug Administration, Silver Spring, MD, United States

**9:10 a.m.**  
**BIOMARKER QUALIFICATION PROCESS AND DIFFERENCES FROM ASSAY VALIDATION**

Heather J. Painter  
U.S. Food & Drug Administration, Silver Spring, MD, United States

## Scientific Session 153

**Mosquitoes- Molecular Biology, Population Genetics and Genomics**

Plaza Ballroom - Lobby Level (East Tower)  
Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

### CHAIR

Renee Ali  
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States  
Maria V. Sharakhova  
Virginia Tech, Blacksburg, VA, United States

**8 a.m.** **7209**

**PROJECT "HEMOGLOW": THE DEVELOPMENT OF GENETIC TOOLS FOR THE STUDY OF MOSQUITO HEMOCYTES**

George-Rafael Samantsidis, Ryan C. Smith  
Iowa State University, Ames, IA, United States

**8:15 a.m.** **7210**

**SCALED PRODUCTION OF A FEMALE-SPECIFIC LARVICIDAL YEAST DIET TO FACILITATE MASS-REARING OF MALE MOSQUITOES**

Teresia Njoroge<sup>1</sup>, Corey Brizzee<sup>2</sup>, Jack Crawford<sup>2</sup>, Keshava Mysore<sup>1</sup>, Molly Duman-Scheel<sup>1</sup>  
<sup>1</sup>Indiana University School of Medicine, South Bend, IN, United States, <sup>2</sup>DeMeetra AgBio, Lexington, KY, United States

**8:30 a.m.** **7211**

**CHARACTERIZATION OF THE MOSQUITO SPOROZOITE-ASSOCIATED SALIVA PROTEINS, TWO POTENTIAL MALARIA PARASITE TRANSMISSION-BLOCKING TARGETS**

Yuemei Dong<sup>1</sup>, Emilia C. Cuccurullo<sup>1</sup>, Caire Barreto<sup>1</sup>, Yu-Min Chuang<sup>2</sup>, Erol Fikrig<sup>2</sup>, George Dimopoulos<sup>1</sup>  
<sup>1</sup>Johns Hopkins School of Public Health, Baltimore, MD, United States, <sup>2</sup>Yale University School of Medicine, New Haven, CT, United States

**8:45 a.m.** **7212**

**CHROMOSOMAL INVERSIONS IN AEADES AEGYPTIARE ASSOCIATED WITH GEOGRAPHICAL ORIGIN, BEHAVIOR, AND RESISTANCE TO PATHOGENS**

Jiangtao Liang<sup>1</sup>, Ilya I. Brusentsov<sup>1</sup>, Varvara Lukyanchikova<sup>1</sup>, Noah Rose<sup>2</sup>, Dmitry A. Karagodin<sup>3</sup>, Zhijian Tu<sup>1</sup>, Carolyn McBride<sup>4</sup>, Maria V. Sharakhova<sup>1</sup>  
<sup>1</sup>Virginia Tech, Blacksburg, VA, United States, <sup>2</sup>University of California, San Diego, CA, United States, <sup>3</sup>Institute of Cytology and Genetics, Novosibirsk, Russian Federation, <sup>4</sup>Princeton University, Princeton, NJ, United States

**9 a.m.** **7213**

**TARGETING PLASMODIUM IN THE MOSQUITO VECTOR: VULNERABILITIES AND OPPORTUNITIES FOR MALARIA CONTROL**

George Dimopoulos  
Johns Hopkins University, Baltimore, MD, United States

**9:15 a.m.** **7214**

**FUNCTIONAL GENOMIC ANALYSIS OF TRANSCRIPTIONAL ENHANCERS IN THE MALARIA VECTOR ANOPHELES COLUZZII**

Natalia M. Zmarlak<sup>1</sup>, Karin Eiglmeier<sup>1</sup>, Inge Holm<sup>1</sup>, Kimani Njoya<sup>2</sup>, Cameron Anderson<sup>2</sup>, Michelle M. Riehle<sup>3</sup>, Kenneth D. Vernick<sup>1</sup>  
<sup>1</sup>Institut Pasteur, Paris, France, <sup>2</sup>Medical College of Wisconsin, Milwaukee, WI, United States

**9:30 a.m.** **7215**

**PREMONITION BARCODE: USING THE MITOGENOME FOR MOSQUITO SPECIES IDENTIFICATION AND SURVEILLANCE**

Renee Ali<sup>1</sup>, Christian H. Gauthier<sup>2</sup>, Kevin Pritts<sup>3</sup>, Bret Nash<sup>3</sup>, Jeremy Verde<sup>3</sup>, Hengameh Rezaei<sup>3</sup>, Miguel A. Saldaña<sup>3</sup>, James Pipas<sup>3</sup>, Ethan Jackson<sup>4</sup>, Mike Reddy<sup>4</sup>, Douglas E. Norris<sup>1</sup>  
<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>2</sup>University of Pittsburgh, Pittsburgh, PA, United States, <sup>3</sup>Harris County Public Health, Houston, TX, United States, <sup>4</sup>Microsoft, Redmond, WA, United States

## Scientific Session 154

**Malaria - Genomics: Sharpening Tools to Guide Interventions and Uncover Biology**

Crystal Ballroom A - Lobby Level (West Tower)  
Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

### CHAIR

Shannon Takala Harrison  
University of Maryland School of Medicine, Baltimore, MD, United States  
William Hamilton  
Wellcome Sanger Institute, Cambridge, United Kingdom

8 a.m.

7216

**AGE AND PARASITEMIA EXPLAIN MOST OF THE VARIATION IN HOST AND PARASITE GENE EXPRESSION AMONG MALIAN CHILDREN INFECTED WITH *P. FALCIPARUM***Kieran Tebben<sup>1</sup>, Salif Yirampo<sup>2</sup>, Drissa Coulibaly<sup>2</sup>, Abdoulaye K. Koné<sup>2</sup>, Matthew B. Laurens<sup>1</sup>, Emily M. Stucke<sup>1</sup>, Ahmadou Dembélé<sup>3</sup>, Youssouf Tolo<sup>2</sup>, Karim Traoré<sup>2</sup>, Amadou Niangaly<sup>2</sup>, Andrea A. Berry<sup>1</sup>, Bourema Kouriba<sup>2</sup>, Christopher V. Plowe<sup>1</sup>, Ogobara K. Doumbo<sup>2</sup>, Kirsten E. Lyke<sup>1</sup>, Shannon Takala-Harrison<sup>1</sup>, Mahamadou A. Thera<sup>2</sup>, Mark A. Travassos<sup>1</sup>, David Serre<sup>1</sup><sup>1</sup>University of Maryland, Baltimore, Baltimore, MD, United States, <sup>2</sup>Malaria Research and Training Center (MRTC), Université des Sciences, des Techniques et des Technologies de Bamako, Bamako, Mali, <sup>3</sup>Malaria Research and Training Center (MRTC), Université des Sciences, des Techniques et des Technologies de Bamako, Bamako, Mali, Bamako, Mali

8:15 a.m.

7217

**A FOURTH LOCUS IN THE *PLASMODIUM FALCIPARUM* GENOME ASSOCIATED WITH SICKLE HEMOGLOBIN**William L. Hamilton<sup>1</sup>, Gavin Band<sup>2</sup>, Eleanor Drury<sup>1</sup>, Christen Smith<sup>1</sup>, Sónia Gonçalves<sup>1</sup>, Kirk Rockett<sup>2</sup>, Dominic P. Kwiatkowski<sup>1</sup>, Lucas N. Amenga-Etego<sup>3</sup><sup>1</sup>Wellcome Sanger Institute, Cambridge, United Kingdom, <sup>2</sup>Wellcome Centre for Human Genetics, Oxford, United Kingdom, <sup>3</sup>West African Centre for Cell Biology of Infectious Pathogens (WACCBI), Accra, Ghana

8:30 a.m.

7218

**MALARIA PARASITE RELATEDNESS IS UNDERESTIMATED WHEN USING SPARSE MARKER DATA FROM INBRED POPULATIONS**Somya Mehra<sup>1</sup>, Daniel E. Neafsey<sup>2</sup>, Aimee R. Taylor<sup>3</sup><sup>1</sup>University of Melbourne, Parkville, Australia, <sup>2</sup>Harvard T.H. Chan School of Public Health, Boston, MA, United States, <sup>3</sup>Institut Pasteur, Paris, France

8:45 a.m.

7219

**MODELING THE EFFECTIVENESS OF GENOMIC SURVEILLANCE AT DETECTING GENETICALLY DISTINCT MALARIA PARASITES POPULATIONS**Alex Ferris, Jessica Ribado, Albert Lee, Joshua Proctor  
Institute for Disease Modeling, Seattle, WA, United States

9 a.m.

7220

**MEASURING CHANGES IN *PLASMODIUM FALCIPARUM* POPULATION SIZE AND STRUCTURE IN RESPONSE TO SEQUENTIAL MALARIA CONTROL INTERVENTIONS**Kathryn E. Tiedje<sup>1</sup>, Qi Zhan<sup>2</sup>, Shazia Ruybal-Pésantez<sup>1</sup>, Gerry Tonkin-Hill<sup>1</sup>, Qixin He<sup>2</sup>, Mun Hua Tan<sup>1</sup>, Dionne C. Argyropoulos<sup>1</sup>, Samantha L. Deed<sup>1</sup>, Anita Ghansah<sup>3</sup>, Abraham R. Oduro<sup>4</sup>, Kwadwo A. Koram<sup>3</sup>, Mercedes Pascual<sup>2</sup>, Karen P. Day<sup>1</sup><sup>1</sup>The University of Melbourne, Melbourne, Australia, <sup>2</sup>The University of Chicago, Chicago, IL, United States, <sup>3</sup>Noguchi Memorial Institute for Medical Research, Legon, Ghana, <sup>4</sup>Navrongo Health Research Centre, Ghana Health Service, Navrongo, Ghana

9:15 a.m.

7221

**UNRAVELLING *PLASMODIUM FALCIPARUM* GENETIC DIVERSITY USING TARGETED AMPLICON DEEP SEQUENCING TO GUIDE ELIMINATION INTERVENTIONS IN SOUTH AFRICA**Hazel Beverly Gwarinda<sup>1</sup>, Andres Aranda-Díaz<sup>2</sup>, Bryan Greenhouse<sup>2</sup>, Jaishree Raman<sup>1</sup><sup>1</sup>National Institute for Communicable Diseases, Johannesburg, South Africa, <sup>2</sup>University of California San Francisco, San Francisco, CA, United States

9:30 a.m.

**Lightning Talks**

(Lightning Talks are two-minute talks to highlight abstracts assigned to poster presentations.)

5438

**GENETIC DIVERSITY OF *PLASMODIUM FALCIPARUM* AND TRANSMISSION PATTERNS IN FOREST-GOING POPULATIONS IN SOUTHERN LAO PDR**Ying-An Angie Chen<sup>1</sup>, Francois Rerolle<sup>2</sup>, Eric Vickers<sup>3</sup>, Emily Dantzer<sup>2</sup>, Bouasy Hongvanthong<sup>4</sup>, Andrew Lover<sup>5</sup>, Hsiao-Han Chang<sup>1</sup>, Adam Bennett<sup>6</sup>, Bryan Greenhouse<sup>4</sup><sup>1</sup>Institute of Bioinformatics and Structural Biology, College of Life Sciences and Medicine, National Tsing Hua University, Hsinchu, Taiwan, <sup>2</sup>Malaria Elimination Initiative, The Global Health Group, University of California, San Francisco, San Francisco, CA, United States, <sup>3</sup>EPPIcenter Research Program, Division of HIV, Infectious Diseases and Global Medicine, Department of Medicine, University of California, San Francisco, San Francisco, CA, United States, <sup>4</sup>Center for Malariaology, Parasitology and Entomology, Ministry of Health, Vientiane, Lao People's Democratic Republic, <sup>5</sup>Department of Biostatistics and Epidemiology, School of Public Health and Health Sciences, University of Massachusetts Amherst, Amherst, MA, United States, <sup>6</sup>PATH, Seattle, WA, United States

5448

**INCREASED FREQUENCY OF PFHRP2-DELETED *PLASMODIUM FALCIPARUM* IN THE PERUVIAN AMAZON IS NOT EXPLAINED BY SELECTION OF THE GENE DELETION**Erick Figueroa-Ildelfonso<sup>1</sup>, Hugo Valdivia<sup>2</sup>, Eline Kattenberg<sup>3</sup>, Christopher Delgado-Ratto<sup>4</sup>, Anna Rosanas-Urgell<sup>5</sup>, Dionicia Gamboa<sup>5</sup><sup>1</sup>Laboratorio de Malaria: Parasitos y Vectores, Facultad de Ciencias y Filosofía, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>U.S. Naval Medical Research Unit No. 6 (NAMRU-6), Lima, Peru, <sup>3</sup>Department of Biomedical Sciences, Institute of Tropical Medicine Antwerp, Antwerp, Belgium, <sup>4</sup>Global Health Institute, University of Antwerp, Antwerp, Belgium, <sup>5</sup>Laboratorio de Malaria: Parasitos y Vectores, Facultad de Ciencias y Filosofía, Universidad Peruana Cayetano Heredia and Instituto de Medicina Tropical "Alexander von Humboldt", Universidad Peruana Cayetano Heredia, Lima, Peru, Lima, Peru

6864

**RECURRENT DE NOVO MUTATION CONTRIBUTES TO DRUG RESISTANCE EVOLUTION IN *PLASMODIUM FALCIPARUM***Angela M. Early<sup>1</sup>, Horace Cox<sup>2</sup>, Reza Niles-Robin<sup>2</sup>, Stéphane Pelleau<sup>3</sup>, Célia Florimond<sup>3</sup>, Margaret A. Laws<sup>4</sup>, Benoît de Thoisy<sup>5</sup>, Lise Musset<sup>3</sup>, Daniel E. Neafsey<sup>4</sup><sup>1</sup>Broad Institute of MIT and Harvard, Cambridge, MA, United States, <sup>2</sup>Ministry of Health, Georgetown, Guyana, <sup>3</sup>Institut Pasteur de la Guyane, Cayenne, French Guiana, <sup>4</sup>Harvard T.H. Chan School of Public Health, Boston, MA, United States

6155

**BENCHMARKING IDENTITY-BY-DESCENT CALLERS FOR *PLASMODIUM FALCIPARUM***Bing Guo<sup>1</sup>, Michele Spring<sup>2</sup>, Mariusz Wojnarski<sup>2</sup>, Brian A. Vesely<sup>2</sup>, Joana Carneiro Da Silva<sup>1</sup>, Norman C. Waters<sup>2</sup>, Shannon Takala-Harrison<sup>3</sup>, Timothy D. O'Connor<sup>1</sup><sup>1</sup>Institute for Genome Sciences, University of Maryland School of Medicine, Baltimore, MD, United States, <sup>2</sup>Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, <sup>3</sup>Center for Vaccine Development and Global Health, University of Maryland School of Medicine, Baltimore, MD, United States

6879

**BUZZWORTHY: NOVEL HIVE SEQUENCING TECHNOLOGY MAKES SINGLE-CELL SEQUENCING POSSIBLE FOR MALARIA FIELD ISOLATES**

Erin Sauve, Pieter Guetens, Pieter Monsieurs, Johanna Helena Kattenberg, Anna Rosanas-Urgell

Institute of Tropical Medicine Antwerp, Antwerp, Belgium

## Symposium 155

### Countering the Wicked Problem of Bad Quality Medicines

*Crystal Ballroom B - Lobby Level (West Tower)*

**Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

This symposium brings together researchers who study the recalcitrant problem of bad quality medicines. The quality of medicines and medical products is a key determinant of clinical care outcomes, yet in 2017, the World Health Organization estimated [WHO 2017] that about one in ten pharmaceuticals sold in low- and middle-income countries failed to meet quality standards. These problems impact every therapeutic category of pharmaceuticals and extend to medical products such as vaccines and rapid diagnostic tests. Regulatory agencies, medical practitioners, donors, and principled manufacturers share a common interest in detecting bad quality products and removing them from markets in LMICs. Six years and a global pandemic later, how many bad quality products are still present in LMIC markets, what is their impact on health, and how can they be discovered and removed? Because the problem of bad quality medicines is concentrated in LMICs and global enforcement activities are relatively weak, regulatory agencies in LMICs are the front line organizations responsible for exposing and controlling bad quality medical products, and LMIC researchers play vital roles in testing medicines and medical products. A series of talks will introduce methods for modeling the impacts of substandard and falsified medicines, recent data about the prevalence of poor quality antimicrobials and chemotherapy products, and new tools for facilitating medicine quality surveys and testing the quality of vaccines. Field screening technologies are an important part of the post-market surveillance strategy in many LMICs. Regulatory agency respondents in 9 out of 10 countries surveyed by Roth et al. [Roth 2018] agreed with the cost-saving arguments for field screening of pharmaceuticals. However, most of the respondents misunderstood the capabilities of current chemical and spectroscopic screening technologies. These technologies are developing rapidly and have great potential as weapons against SFPs, but there are still many evidence gaps and it is difficult for regulators to compare the effectiveness, usability, and costs of different technologies. The Chairs will sponsor a booth at the Exhibit Hall for participants to try out a variety of field screening instruments, such as portable spectrophotometers, that are used to detect low-quality pharmaceuticals in field settings. This booth is not sponsored or supported by instrument manufacturers.

#### CHAIR

Marya Lieberman  
*University of Notre Dame, Notre Dame, IN, United States*

Paul Newton  
*Medicine Quality Research Group, Centre for Tropical Medicine & Global Health, University of Oxford, UK, Oxford, United Kingdom*

**8 a.m.**  
**INTRODUCTION**

**8:10 a.m.**  
**MODELING THE ECONOMIC AND CLINICAL IMPACT OF SUBSTANDARD AND FALSIFIED DRUGS**

Sachiko Ozawa  
*University of North Carolina Eshelman School of Pharmacy, Chapel Hill, NC, United States*

**8:30 a.m.**  
**AN APP (EPIONE) FOR FACILITATING MEDICINE QUALITY SURVEYS**

Céline Caillet  
*University of Oxford-MORU Tropical Health Network/Infectious Diseases Data Observatory, Vientiane, Lao People's Democratic Republic*

**8:50 a.m.**  
**ABACUS2-MQ SURVEY OF THE QUALITY OF ANTIBIOTICS IN FOUR COUNTRIES**

Noudy Sengxeu  
*University of Limoges, Limoges, France*

**9:10 a.m.**  
**QUALITY OF CHEMOTHERAPY DRUGS IN ETHIOPIA**

Ayene Ashenef  
*Addis Ababa University--Department of Pharmaceutical Chemistry and Pharmacognosy, Addis Ababa, Ethiopia*

**9:30 a.m.**  
**EVALUATION OF DEVICES FOR DETECTING SUBSTANDARD AND FALSIFIED VACCINES IN SUPPLY CHAINS**

Paul Newton  
*Mahosot Hospital, Vientiane, Lao People's Democratic Republic*

## Symposium 156

### Challenges and Solutions to Meet Sporadic Outbreaks of Deadly Pathogens in Resource - Limited Settings

*Regency Ballroom A - Ballroom Level (West Tower)*

**Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

*This session does not carry CME credit.*

Deadly pathogens, such as Ebola viruses, leading to devastating outbreaks with high mortality, have a serious impact on the affected communities and further weaken health care systems in resource-limited settings. In case of Ebola virus disease (EVD), the next outbreak location and timing remains uncertain. It is therefore crucial to prepare the regulatory environment of at risk countries and ensure epidemic preparedness. Within EBOVAC3 the regulatory preparedness of Guinea, Sierra Leone and the Democratic Republic of the Congo (DRC) were assessed. As well as the community's understanding, expectations, acceptance of various vaccine strategies and community impressions and preparedness for the next outbreak. In the context of epidemic preparedness, the importance of prophylactic vaccination in at risk populations is highly crucial in periods when there is no outbreak. One vaccine trial within the EBOVAC3 consortium therefore combined epidemic preparedness with the assessment of vaccine durability through the vaccination of healthcare providers and



frontliners (an at risk population) in an Ebola endemic region within the DRC. This was achieved by administering booster doses one or two years after initial vaccination and assessing the anamnestic response as a surrogate response to an actual virus infection. While vaccinating at risk populations is crucial, identifying the vaccine response in the most vulnerable populations (e.g. infants) is equally important. Therefore, a second trial in Guinea and In Sierra Leone assessed the safety and immunogenicity in this population. Finally, in order to be prepared for the next outbreak, it is important to assess the durability of the administered vaccines. Therefore, the third trial in Sierra Leone within EBOVAC3 looked into the long-term durability of the vaccine regimen in children, adolescents and adults. The vaccine responses collected during past and current EBOVAC projects, have been combined into within-host models to further assess their durability and potential. How this information was combined into these models and how it can be used to help guide vaccine development will be explained. For EVD, a prophylactic vaccine (regimen) could play a crucial role in epidemic preparedness. Therefore, the final speaker will present the development path of the Janssen vaccine up to licensure and WHO prequalification, just before the symposium will be broadened again through an expert panel discussion that will address questions on challenges, solutions and lessons learned and how to meet sporadic outbreaks of deadly pathogens in resource-limited settings.

#### CHAIR

Jean-Pierre Van geertruyden  
*University of Antwerp, Antwerp, Belgium*

#### 8 a.m. INTRODUCTION

#### 8:05 a.m. REGULATORY PREPAREDNESS FOR THE NEXT OUTBREAK IN LMICS AND THE COMMUNITY'S UNDERSTANDING, EXPECTATIONS AND ACCEPTANCE

Shelley Lees  
*London School of Hygiene & Tropical Medicine, London, United Kingdom*

#### 8:20 a.m. EPIDEMIC PREPAREDNESS THROUGH THE ASSESSMENT OF VACCINE DURABILITY IN AN ENDEMIC REGION AND AN AT RISK POPULATION (E.G. HEALTH CARE PROVIDERS AND FRONTLINERS) IN THE DRC

Hypolite Mavoko-Muhindo  
*University of Kinshasa, Kinshasa, Democratic Republic of the Congo*

#### 8:35 a.m. VACCINE RESPONSE IN THE MOST VULNERABLE POPULATIONS (E.G. INFANTS) IN SIERRA LEONE AND GUINEA AND ITS DURABILITY IN CHILDREN, ADOLESCENTS AND ADULTS IN SIERRA LEONE

Bailah M.A. Leigh  
*College of Medicine & Allied Health Sciences, Freetown, Sierra Leone*

#### 8:50 a.m. THE USE OF MATHEMATICAL MODELLING FOR VACCINE DEVELOPMENT: THE EXAMPLE OF EBOLA

Edouard Lhomme  
*ISPED - University of Bordeaux, Bordeaux, France*

#### 9:05 a.m. DEVELOPMENT PATH OF THE JANSSEN VACCINE UP TO LICENSURE AND WHO PREQUALIFICATION

Cynthia B. Robinson  
*Janssen Vaccines & Prevention, B. V., Leiden, Netherlands*

#### 9:20 a.m. PANELIST

Gerald Voss  
*CEPI, Oslo, Norway*

#### 9:35 a.m. MODERATOR, PANEL DISCUSSION

Jean-Pierre Van geertruyden  
*University of Antwerp, Antwerp, Belgium*

## Symposium 157

### Hot Topics in Clinical Mycobacteriology: New Strategies for Old Foes

*Regency Ballroom B - Ballroom Level (West Tower)*  
**Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

Mycobacterial infections are ubiquitous globally but are a challenging group of infections to diagnose and treat. In addition to the most famous Mycobacterium tuberculosis (MTB) other mycobacterial infections such as *M. ulcerans* (Buruli ulcer), *M. leprae* (lepromatosis), and the non-tuberculous mycobacteria (NTM) infections continue to cause a great deal of morbidity worldwide, particularly in tropical and subtropical regions. Significant challenges remain in the diagnosis of these infections in part due to their unique biology. Further, there remain gaps in knowledge about basic things like how *M. leprae* and *M. ulcerans* are transmitted to humans. As NTDs, leprosy and Buruli ulcer also suffer from lack of research funding and resources for control programs. Even for MTB, research in pediatric populations lags far behind that in adult populations despite high mortality and morbidity among children and adolescents with TB. However, despite these challenges, there have been exciting developments in the area of mycobacterial research, some that have already impacted the care of these infectious diseases, like new treatment regimens for NTM and advances in diagnosing MTB in non-respiratory specimens. Other advances, such as new tools for leprosy diagnosis, are on the horizon and hold promise to make significant impacts on both individuals and public health. If you are a clinician that treats infectious diseases, you won't want to miss this session!

#### CHAIR

Pranay Sinha  
*Boston University, Boston, MA, United States*

Jessica K. Fairley  
*Emory University School of Medicine, Atlanta, GA, United States*

8 a.m.

## INTRODUCTION

Pranay Sinha  
Boston Medical Center, Boston, MA, United States

8:15 a.m.

## ADVANCES IN NON-RESPIRATORY DIAGNOSTICS FOR TUBERCULOSIS

Tania Thomas  
University of Virginia, Charlottesville, VA, United States

8:35 a.m.

## UPDATES IN THE DIAGNOSIS AND TREATMENT OF BURULI ULCER

Richard Odame Phillips  
Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

8:55 a.m.

## FRONTIERS IN LEPROSY RESEARCH: THE QUEST FOR NEW DIAGNOSTIC TOOLS FOR LATENT AND CLINICAL INFECTION

Jessica K. Fairley  
Emory University School of Medicine, Atlanta, GA, United States

9:15 a.m.

## IMPROVING TREATMENT FOR NON-TUBERCULOUS MYCOBACTERIAL LUNG DISEASE

Scott K. Heysell  
University of Virginia, Charlottesville, VA, United States

## Scientific Session 158

### Mosquitoes- Epidemiology and Vector Control I

Regency Ballroom C - Ballroom Level (West Tower)  
Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Katherine L. Anders  
Monash University, Melbourne, Australia  
Alexander Dolnick Meyer  
University of Notre Dame, Notre Dame, IN, United States

8 a.m.

7222

## RISK AND SIZE OF AEDES-BORNE DISEASE OUTBREAKS ARE POORLY PREDICTED BY CLIMATE-BASED SUITABILITY INDICES

Alexander Dolnick Meyer<sup>1</sup>, Sandra Mendoza Guerrero<sup>2</sup>, Natalie E. Dean<sup>3</sup>, Kathryn B. Anderson<sup>4</sup>, Steven T. Stoddard<sup>2</sup>, T. Alex Perkins<sup>1</sup>  
<sup>1</sup>University of Notre Dame, Notre Dame, IN, United States, <sup>2</sup>Emergent BioSolutions, Gaithersburg, MD, United States, <sup>3</sup>Emory University, Atlanta, GA, United States, <sup>4</sup>SUNY Upstate Medical University, Syracuse, NY, United States

8:15 a.m.

7223

## REDUCED DENGUE INCIDENCE FOLLOWING LARGE-SCALE RELEASES AND ESTABLISHMENT OF WMEL WOLBACHIA IN AEDES AEGYPTI MOSQUITOES IN THREE COLOMBIAN CITIES

Ivan D. Velez<sup>1</sup>, Maria Patricia Arbelaez<sup>1</sup>, Simon C. Kutcher<sup>2</sup>, Alexander Uribe<sup>1</sup>, Luis Martinez<sup>1</sup>, Jai A. Denton<sup>2</sup>, Cameron P. Simmons<sup>2</sup>, Katherine L. Anders<sup>2</sup>, Peter A. Ryan<sup>2</sup>, Scott L. O'Neill<sup>2</sup>  
<sup>1</sup>World Mosquito Program, Universidad de Antioquia, Medellin, Colombia, <sup>2</sup>World Mosquito Program, Monash University, Melbourne, Australia

8:30 a.m.

7224

## THE IMPACT OF INTEGRATED VECTOR MANAGEMENT ON THE INCIDENCE OF DENGUE IN URBAN MALAYSIA: THE IDEM CLUSTER-RANDOMIZED CONTROLLED TRIAL

Nurulhusna Ab Hamid<sup>1</sup>, Neal Alexander<sup>2</sup>, Tim Mölmann<sup>3</sup>, Carole s Langlois-Jacque<sup>4</sup>, Farah Diana Ariffin<sup>1</sup>, Mad-Hélénie Elsensohn<sup>4</sup>, Frederic Schmitt<sup>5</sup>, Jason H. Richardson<sup>6</sup>, Frederic Baur<sup>7</sup>, Maxime Leduc<sup>8</sup>, Norazman Bin Mohd Rosli<sup>9</sup>, Nazni Wasi Ahmed<sup>1</sup>, Muriel Rabilloud<sup>4</sup>, Mitra Saadatian-Elahi<sup>4</sup>  
<sup>1</sup>Medical Entomology Unit, Institute for Medical Research, WHO Collaborating Centre, Institute for Medical Research, Ministry of Health Malaysia, Kuala Lumpur, Malaysia, <sup>2</sup>MRC Tropical Epidemiology Group, Department of Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, United Kingdom, <sup>3</sup>In2Care, Wageningen, Netherlands, <sup>4</sup>Hospices Civils de Lyon, Lyon, France, <sup>5</sup>Environmental Science France - Envu, Lyon, France, <sup>6</sup>Innovative Vector Control Consortium (IVCC), Liverpool, United Kingdom, <sup>7</sup>Bayer, Lyon, France, <sup>8</sup>Vector Borne Disease Sector, Disease Control Division, Ministry of Health Malaysia, Kuala Lumpur, Malaysia

8:45 a.m.

7225

## ASSESSING AUTO-DISSEMINATION STATIONS AS A CONTROL TOOL FOR AEDES AEGYPTI IN THE RIO GRANDE VALLEY, TEXAS, USA

Nicole Scavo<sup>1</sup>, Jose Juarez<sup>1</sup>, Nadia Fernandez-Santos<sup>1</sup>, Ester Carbajal<sup>1</sup>, Luis Chaves<sup>2</sup>, Berlin Londono-Renteria<sup>3</sup>, Alyssa Branca<sup>4</sup>, John Borden<sup>5</sup>, Mike Banfield<sup>6</sup>, Gabriel Hamer<sup>7</sup>  
<sup>1</sup>Texas A&M University, College Station, TX, United States, <sup>2</sup>Indiana University Bloomington, Bloomington, IN, United States, <sup>3</sup>Tulane University, New Orleans, LA, United States, <sup>4</sup>Banfield Bio, Woodinville, WA, United States, <sup>5</sup>JHB Consulting, Burnaby, BC, Canada

9 a.m.

7226

## POOLING THE POOLS: REDUCING COSTS OF MOLECULAR ARBOVIRAL SURVEILLANCE WITHOUT LOSS OF SENSITIVITY IN DENGUE ENDEMIC AREAS

Joanelis Medina, Grayson Brown, Marla García, Julianne Miranda  
Puerto Rico Vector Control Unit, San Juan, Puerto Rico

9:15 a.m.

7227

## USE OF MACHINE LEARNING TO IDENTIFY NOVEL MOSQUITO AND TICK REPELLENTS

Marnix Vlot<sup>1</sup>, Jennifer N. Wei<sup>2</sup>, Martijn Vos<sup>1</sup>, Rob Henderson<sup>1</sup>, Benjamin Sanchez-Lengeling<sup>3</sup>, Luuk Berning<sup>1</sup>, Jessica Konijnenburg<sup>1</sup>, Brian K. Lee<sup>2</sup>, Wesley W. Qian<sup>2</sup>, Richard C. Gerkin<sup>2</sup>, Alexander B. Wiltschko<sup>2</sup>, Koen Dechering<sup>1</sup>  
<sup>1</sup>TropiQ Health Sciences, NIJMEGEN, Netherlands, <sup>2</sup>Google Research, Brain Team, Cambridge, MA, United States

9:30 a.m.

7228

## CHROMOBACTERIUM SPECIES PANAMA (CSP\_P) PELLETT FORMULATIONS: A NOVEL BIO-LARVICIDE FOR MOSQUITO VECTOR CONTROL

Vandana Vandana, George Dimopoulos  
John Hopkins University, Baltimore, MD, United States

## Symposium 159

### Emerging Data on How Best to Use Primaquine and Tafenoquine for the Radical Cure of *P. vivax*

Regency Ballroom D - Ballroom Level (West Tower)  
Sunday, October 22, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

*Plasmodium vivax* causes more than 4 million cases of malaria annually and represents an increasing proportion of malaria in many countries co-endemic with *P. falciparum*. Unlike *P. falciparum*,

radical cure of *P. vivax*, requires treatment of both the blood stage, which causes acute symptoms, and the dormant liver stage (hypnozoites), which reactivate and cause relapses weeks to months later. Relapsing vivax malaria results in a cumulative risk of anemia and is associated with direct and indirect morbidity and the potential for further transmission. For the last 60-70 years, *P. vivax* radical cure has generally included chloroquine (for the blood stage) and primaquine (for the liver stage). Primaquine has historically been given over 14 days, however, poor adherence and reduced effectiveness with this regimen have led to shorter courses being considered. Tafenoquine, is a primaquine analogue, which can be given as a single dose. Primaquine and tafenoquine are both 8-aminoquinolines and can cause severe hemolysis in patients with glucose-6-phosphate dehydrogenase (G6PD) deficiency. However, malaria also causes hemolysis and it is difficult to disentangle the hemolytic risk attributable to 8-aminoquinolines compared with malaria alone. Furthermore, the potential longer term hematological benefits of radical cure in preventing relapses remains unknown. Single - dose tafenoquine was registered by the US FDA and the Australian TGA in 2018 and has subsequently been registered in several endemic countries with further registrations pending. As this new tool emerges, it is fundamental to understand how best to roll it out in different health system contexts. This symposium will quantify the hematological risk-benefit trade-off of 8-aminoquinoline use, examine the use of methemoglobin to predict 8-aminoquinoline treatment efficacy and subsequent risk of relapse and release results of *in vitro* and *in vivo* work with primaquine and tafenoquine to better understand the results of a clinical trial where the efficacy of both primaquine and tafenoquine given together with dihydroartemisinin-piperaquine was sub-optimal. The final presentation of this symposium will be focused on the results of a real-world study carried out in Brazil (the Tafenoquine Roll-out Study: TRuST) to assess the operational feasibility of providing appropriate *P. vivax* radical cure with either standard primaquine dosage or single dose tafenoquine after G6PD testing with a point-of-care quantitative G6PD test. The presentation will show the feasibility of implementing those new tools in different levels of health facilities.

**CHAIR**

Robert J. Commons  
 Menzies School of Health Research, Darwin, Australia  
 Stephan Duparc  
 Medicines for Malaria Venture, Geneva, Switzerland

**8 a.m.**  
**INTRODUCTION**

**8:10 a.m.**  
**TRADE-OFF BETWEEN SHORT TERM HEMOLYTIC RISK AND LONG-TERM BENEFIT OF 8-AMINOQUINOLINE TREATMENT**

Megha Rajasekhar  
 The University of Melbourne, Carlton, Australia

**8:25 a.m.**  
**IS THERE A WAY TO INDIVIDUALIZE P. VIVAX RADICAL CURE REGIMENS? METHEMOGLOBIN AS A MARKER OF ANTIRELAPSE EFFICACY**

Ihsan Fadilah  
 Oxford University Clinical Research Unit Indonesia, Jakarta, Indonesia

**8:40 a.m.**  
**HOW IN VITRO AND IN VIVO VIVAX MALARIA MODELS CAN HELP US UNDERSTAND THE OUTCOME OF PAST CLINICAL STUDIES WITH TAFENOQUINE AND DESIGN THE NEXT SET OF STUDIES**

Brice Campo  
 Medicines for Malaria Venture, Geneva, Switzerland

**8:55 a.m.**  
**THE TAFENOQUINE ROLL-OUT STUDY (TRUST): REAL-WORLD EVIDENCE ON FEASIBILITY OF PROVIDING APPROPRIATE P. VIVAX RADICAL CURE WITH TAFENOQUINE OR PRIMAQUINE AFTER G6PD TESTING IN THE BRAZILIAN AMAZON – FINAL RESULTS FROM A STUDY OF OVER 6000 PATIENTS**

Marcus VG Lacerda  
 Fundação de Medicina Tropical Dr. Heitor Vieira Dourado, Manaus, Brazil

**9:10 a.m.**  
**MODERATOR, PANEL DISCUSSION**

Robert J Commons  
 Menzies School of Health Research, Darwin, Australia

**Coffee Break**

Grand Ballroom Foyer - Ballroom Level (East Tower)  
 Sunday, October 22, 9:45 a.m. - 10:15 a.m. U.S. Central Time Zone

**Plenary Session 160**



**Plenary Session V: Waging Peace, Fighting Disease, and Building Hope: A Tribute to President and Mrs. Carter**

Grand Ballroom CDEF - Ballroom Level (East)  
 Sunday, October 22, 10:15 a.m. - 11:15 a.m. United States Central Time Zone

*This session does not carry CME credit.*

This session will be a tribute to President and Mrs. Carter and their work and contributions to Global Health and Development. Through this session you will learn more about the impact of the dedication, advocacy, and diplomacy that the Carters have undertaken as they have waged peace, fought disease, and built hope. In addition, you will learn more about both as people, from friends, family, and colleagues. We hope you will leave inspired and ready for action to support the health and well-being of all people around the world.

The session will open with comments from Kashef Ijaz of The Carter Center. This will be followed by a panel discussion on the life and works of President and Mrs. Carter facilitated by Julie Jacobson with Don Hopkins, Sarah Carter, Frank Richards, and two video tributes from Bill Foege and Tedros Ghebreyesus.

**CHAIR**

Julie Jacobson  
 Bridges to Development, Seattle, WA, United States  
 Kashef Ijaz  
 The Carter Center, Atlanta, GA, United States

Sunday  
 October 22

**10:15 a.m.**  
**OPENING REMARKS**

Kashef Ijaz  
The Carter Center, Atlanta, GA, United States

**10:25 a.m.**  
**PANELISTS**

Julie Jacobson  
*Bridges to Development, Seattle, WA, United States*

Don Hopkins  
*The Carter Center, Atlanta, GA, United States*

Sarah Carter  
*Science Policy Consulting LLC, Arlington, VA, United States*

Frank Richards  
*The Carter Center, Atlanta, GA, United States*

**11:05 a.m.**  
**VIDEO TRIBUTE**

Tedros Adhanom Ghebreyesus  
*World Health Organization, Geneva, Switzerland*

**11:10 a.m.**  
**VIDEO TRIBUTE**

Bill Foege  
*Emory University, Atlanta, GA, United States*

**Break**

**Sunday, October 22, 11:15 a.m. - 11:30 a.m. U.S. Central Time Zone**

**Scientific Session 161**

**Global Health: Malaria and Neglected Tropical Diseases**

*Grand Ballroom A - Ballroom Level (East Tower)*

**Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone**

**CHAIR**

Richard Reithinger  
*RTI International, Washington, DC, United States*

Joelle Rosser  
*Stanford University, Stanford, CA, United States*

**11:30 a.m.**  
**PRESENTATION BY BURROUGHS WELLCOME FUND-ASTMH FELLOWSHIP RECIPIENT**

**7229**

**DRONES AND DENGUE: PILOTING THE USE OF UNMANNED AERIAL VEHICLES TO MAP TRASH DISTRIBUTION AND DENGUE VIRUS RISK IN RURAL AND URBAN KENYA**

Joelle I. Rosser<sup>1</sup>, Juliet T. Bramante<sup>2</sup>, Andrew Chamberlin<sup>1</sup>, Paul Sillah<sup>3</sup>, Bryson Ndenga<sup>4</sup>, Donal Bisanzio<sup>5</sup>, Giulio DeLeo<sup>1</sup>, Francis Mutuku<sup>3</sup>, A. Desiree LaBeaud<sup>1</sup>  
<sup>1</sup>Stanford University, Stanford, CA, United States, <sup>2</sup>University of Washington, Seattle, WA, United States, <sup>3</sup>Technical University of Mombasa, Mombasa, Kenya, <sup>4</sup>Kenya Medical Research Institute, Nairobi, Kenya, <sup>5</sup>RTI International, Washington, DC, United States

**11:45 p.m.** **7230**

**DENGUE, CHIKUNGUNYA, AND MALARIA IN KENYA; CO-EXPOSURE AND CO-INFECTION STATUS**

Amna Tariq<sup>1</sup>, Donal Bisanzio<sup>2</sup>, Francis Mutuku<sup>3</sup>, Bryson Ndenga<sup>4</sup>, A. Desiree LaBeaud<sup>1</sup>  
<sup>1</sup>Department of Pediatrics, Division of Infectious Diseases, Stanford University, Palo Alto, CA, United States, <sup>2</sup>RTI International, Washington, DC, United States, <sup>3</sup>Department of Environment and Health Sciences, Technical University of Mombasa, Mombasa, Kenya, <sup>4</sup>Centre for Global Health Research, Medical Research Institute, Kisumu, Kenya

**Noon** **7231**

**INCREASING MALARIA CASES IN THAILAND'S WESTERN BORDER PROVINCES**

Prayuth Sudathip<sup>1</sup>, Sathapana Naowarat<sup>2</sup>, Suravadee Kitchakarn<sup>1</sup>, Deyer Gopinath<sup>3</sup>, Rungrawee Tipmontree<sup>1</sup>, Chantana Padungtod<sup>1</sup>, Niparueradee Pinyajeerapat<sup>4</sup>, David Sintasath<sup>4</sup>, Jui A. Shah<sup>2</sup>  
<sup>1</sup>Division of Vector Borne Diseases, Department of Disease Control, Ministry of Public Health, Nonthaburi, Thailand, <sup>2</sup>Inform Asia: USAID's Health Research Program, RTI International, Bangkok, Thailand, <sup>3</sup>World Health Organization, Nonthaburi, Thailand, <sup>4</sup>U.S. President's Malaria Initiative, United States Agency for International Development (USAID), Regional Development Mission for Asia, Bangkok, Thailand

**12:15 p.m.** **7232**

**TRANSLATING CONTINUOUSLY COLLECTED ANTENATAL CARE MALARIA PREVALENCE INTO TRENDS OF COMMUNITY TRANSMISSION AND CLINICAL INCIDENCE – BURKINA FASO, MOZAMBIQUE, AND NIGERIA, 2020-2022**

Joseph T. Hicks<sup>1</sup>, Anna Munsey<sup>2</sup>, Alexandra Hill<sup>1</sup>, Dele Babarinde<sup>3</sup>, Baltazar Candrinho<sup>4</sup>, Siaka Debe<sup>5</sup>, Peder Digre<sup>6</sup>, Adama Gansane<sup>6</sup>, Christelle Gogue<sup>7</sup>, Chabu Kangale<sup>8</sup>, Hannah Koenker<sup>9</sup>, Julia Mwesigwa<sup>10</sup>, John Miller<sup>9</sup>, Okefu Oyale Okoko<sup>11</sup>, Ali Onoja<sup>3</sup>, Travis Porter<sup>6</sup>, Eleanore Sternberg<sup>9</sup>, Perpetua Uhomoi<sup>11</sup>, Molly Robertson<sup>12</sup>, Joseph Wagman<sup>1</sup>, Richard G. FitzJohn<sup>1</sup>, Julie R. Gutman<sup>2</sup>, Patrick GT Walker<sup>1</sup>  
<sup>1</sup>Imperial College London, London, United Kingdom, <sup>2</sup>Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>3</sup>Iboda Health International, Abuja, Nigeria, <sup>4</sup>National Malaria Control Program, Ministry of Health, Maputo, Mozambique, <sup>5</sup>Centre National de Recherche et Formation sur le Paludisme, Ouagadougou, Burkina Faso, <sup>6</sup>PATH, Seattle, WA, United States, <sup>7</sup>PATH, Washington, DC, United States, <sup>8</sup>PATH, Lusaka, Zambia, <sup>9</sup>Tropical Health LLP, Baltimore, MD, United States, <sup>10</sup>PATH, Kampala, Uganda, <sup>11</sup>National Malaria Elimination Programme, Abuja, Nigeria, <sup>12</sup>The Global Fund to Fight AIDS, Tuberculosis and Malaria, Geneva, Switzerland

**12:30 p.m.** **7233**

**ASSESSING HISTORY OF ACCEPTABILITY AND COVERAGE WITH MASS DRUG ADMINISTRATION (MDA) FOR LYMPHATIC FILARIASIS TO INFORM RE-START OF MDA 6 YEARS POST-ELIMINATION**

Alison Krentel<sup>1</sup>, Cut Novianti Rachmi<sup>2</sup>, Hafizah Jusril<sup>2</sup>, Gusta Trisna Pratama<sup>2</sup>, Zahra Izza Arifa<sup>2</sup>, Esther N. Tambunan<sup>2</sup>, Wiji Wahyuningsih<sup>2</sup>, Azka Aulia Fitri<sup>2</sup>, Suci Trisnasari<sup>2</sup>, Peter U. Fischer<sup>3</sup>, Taniawati Supali<sup>4</sup>, Iwan Ariawan<sup>5</sup>  
<sup>1</sup>University of Ottawa, Ottawa, ON, Canada, <sup>2</sup>Reconstra, Jakarta, Indonesia, <sup>3</sup>Washington University at St. Louis, St. Louis, MO, United States, <sup>4</sup>Universitas Indonesia, Jakarta, Indonesia, <sup>5</sup>Reconstra Utama Integra, Jakarta, Indonesia

**12:45 p.m.** **7234**

**BUILDING THE CAPACITY OF COMMUNITY INFLUENCERS TO INCREASE THE EQUITY AND IMPACT OF UGANDA'S TRACHOMA RESPONSE**

Hilda Kyarisiima<sup>1</sup>, Alfred Mubangizi<sup>1</sup>, Emmanuel Ssegawa<sup>2</sup>, Palma Marwas<sup>2</sup>, Claire Karlsson<sup>2</sup>, Andrew Kyambadde<sup>3</sup>  
<sup>1</sup>Uganda Ministry of Health, Kampala, Uganda, <sup>2</sup>WI-HER, Vienna, VA, United States, <sup>3</sup>RTI International, Washington, DC, United States



1 p.m.

7235

**CITIZENS CAN HELP TO MAP PUTATIVE TRANSMISSION SITES FOR SNAIL-BORNE DISEASES**Noelia del Carmen Valderrama Bhraunx<sup>1</sup>, Julius Tumusiime<sup>2</sup>, Grace Kagoro Rugunda<sup>2</sup>, Daisy Namirembe<sup>2</sup>, Ronald Twongyirwe<sup>2</sup>, Christian Albrecht<sup>3</sup>, Casim Umba Tolo<sup>2</sup>, Liesbet Jacobs<sup>4</sup>, Tine Huyse<sup>5</sup><sup>1</sup>KU Leuven, Leuven, Belgium, <sup>2</sup>Mbarara University of Science and Technology, Mbarara, Uganda, <sup>3</sup>Justus Liebig University Giessen, Giessen, Germany, <sup>4</sup>Institute for Biodiversity and Ecosystem Dynamics - University of Amsterdam, Amsterdam, Netherlands, <sup>5</sup>Royal Museum for Central Africa, Tervuren, Belgium**Scientific Session 162****Malaria - Prevention II**

Grand Ballroom B - Ballroom Level (East Tower)

Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone

**CHAIR**Ivan Alejandro Pulido Tarquino  
Malaria Consortium, Maputo, MozambiqueThom Eisele  
Tulane University, New Orleans, LA, United States

11:30 a.m.

7236

**PATTERNS OF HEALTH SEEKING BEHAVIOUR AND TREATMENT PRACTICES FOR FEBRILE CHILDREN FOLLOWING THE INTRODUCTION OF RTS,S/AS01 MALARIA VACCINE IN GHANA**Thomas Kwasi Gyan<sup>1</sup>, Paul Welaga<sup>2</sup>, Edwin Afari<sup>3</sup>, Kwaku Poku Asante<sup>1</sup>  
<sup>1</sup>Kintampo Health Research Centre, Ghana Health Service, Kintampo, Ghana, <sup>2</sup>C. K. Tedam University of Technology and Applied Science, Navrongo, Ghana, <sup>3</sup>School of Public Health, University of Ghana, Accra, Ghana, Accra, Ghana

11:45 a.m.

7237

**OPERATIONAL PERFORMANCE AND ACCEPTABILITY OF A PROGRAMMATIC MASS DRUG ADMINISTRATION CAMPAIGN FOR MALARIA IN SOUTHERN MOZAMBIQUE: A CROSS-SECTIONAL SURVEY**Maria Tusell<sup>1</sup>, Laura Fuente-Soro<sup>1</sup>, Jacopo Vecchio<sup>1</sup>, Amancio Nhangave<sup>2</sup>, Khalid Bapu<sup>3</sup>, Christina Riley<sup>4</sup>, Mercia Dimene<sup>5</sup>, Samira Sibindy<sup>6</sup>, Baltazar Candrinho<sup>5</sup>, Pedro Aide<sup>7</sup>, Caterina Guinovart<sup>1</sup><sup>1</sup>Barcelona Institute for Global Health, Barcelona, Spain, <sup>2</sup>Gaza Provincial Directorate of Health, Xai-Xai, Mozambique, <sup>3</sup>Manhiça Health Research Centre, Manhiça, Mozambique, <sup>4</sup>Akros, Lusaka, Zambia, <sup>5</sup>National Malaria Control Program, Ministry of Health, Maputo, Mozambique

Noon

7238

**WILL A LACK OF FABRIC DURABILITY BE THEIR DOWNFALL? IMPACT OF TEXTILE DURABILITY ON THE EFFICACY OF NEXT-GENERATION LONG-LASTING INSECTICIDAL NETS AGAINST MALARIA PREVALENCE AND INCIDENCE: A SECONDARY ANALYSIS FROM A CLUSTER-RANDOMIZED TRIAL IN TANZANIA**Eliud A. Lukole<sup>1</sup>, Jackie Cook<sup>2</sup>, Manisha A. Kulkarni<sup>3</sup>, Jacklin F. Mosh<sup>1</sup>, Elizabeth Mallya<sup>4</sup>, Tatu Aziz<sup>1</sup>, Nancy S. Matowo<sup>2</sup>, Alphaxard Manjurano<sup>1</sup>, Jacklin Martin<sup>4</sup>, Franklin W. Mosh<sup>4</sup>, Mark Rowland<sup>2</sup>, Immo Kleinschmidt<sup>2</sup>, Natacha Protopopoff<sup>2</sup><sup>1</sup>National Institute for Medical Research (NIMR), Mwanza, United Republic of Tanzania, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>University of Ottawa, Ottawa, ON, Canada, <sup>4</sup>Kilimanjaro Christian Medical University College, Moshi, United Republic of Tanzania

12:15 p.m.

7239

**TRENDS IN ANTENATAL CARE VISITS AND INTERMITTENT PRESUMPTIVE TREATMENT IN PREGNANCY IN SUB-SAHARAN AFRICA. IMPLICATIONS OF WHO POLICY**Bolale Olapeju  
Uniformed Services University of the Health Sciences, Bethesda, MD, United States

12:30 p.m.

7240

**SEASONAL MALARIA CHEMOPREVENTION EFFECTIVENESS IN NORTHERN MOZAMBIQUE, RESULTS FROM A CLUSTER RANDOMISED CONTROL TRIAL**Ivan Alejandro Pulido Tarquino<sup>1</sup>, Kevin Baker<sup>2</sup>, Sonia Maria Enosse<sup>1</sup>, Chuks Nnaji<sup>3</sup>, Albertino Zunza<sup>1</sup>, Mercia Siteo<sup>1</sup>, Baltazar Candrinho<sup>3</sup>, Maria Rodrigues<sup>1</sup>, Sol Richardson<sup>4</sup><sup>1</sup>Malaria Consortium, Maputo, Mozambique, <sup>2</sup>Malaria Consortium, London, United Kingdom, <sup>3</sup>National Malaria Control Programme, Maputo, Mozambique, <sup>4</sup>Vanke School of Public Health, Tsinghua University, Beijing, China

12:45 p.m.

7241

**ADAPTING THE MASS ACTION AGAINST MALARIA APPROACH FOR MALARIA PREVENTION AND MANAGEMENT AT THE HOUSEHOLD LEVEL: IMPLEMENTATION LESSONS FROM FIVE HIGH BURDEN REGIONS IN UGANDA**Disan Ndaula Sempa<sup>1</sup>, Irene Ochola<sup>1</sup>, Dorah Anita Talanta<sup>1</sup>, Edward Mugwanya<sup>1</sup>, Amanda Nagadya<sup>1</sup>, Rebecca Babirye<sup>2</sup>, Ambrose Okite<sup>3</sup>, Aaron Musimenta<sup>1</sup>, Amy Casella<sup>4</sup>, Aliza Hasham<sup>5</sup>, Benjamin Binagwa<sup>1</sup>, Natalia Whitley<sup>4</sup><sup>1</sup>John Snow Inc, Kampala, Uganda, <sup>2</sup>Program for Accessible Health Communication and Education, Kampala, Uganda, <sup>3</sup>Another Option LLC, Kampala, Uganda, <sup>4</sup>John Snow Inc, Boston, VA, United States, <sup>5</sup>John Snow Inc, Dar es Salam, United Republic of Tanzania

1 p.m.

7242

**EVALUATION OF NEW, INSECTICIDE-TREATED NET PRODUCTS, META-ANALYSIS OF OBSERVATIONAL STUDIES, AND ECONOMIC EVALUATIONS FROM FIVE SUB-SAHARAN AFRICAN SETTINGS**Joshua Yukich<sup>1</sup>, Riley E. Santiago<sup>1</sup>, Maya Schane<sup>1</sup>, Peder Digre<sup>2</sup>, Okefu Oyale Okoko<sup>3</sup>, Perpetua Uhomoibhi<sup>3</sup>, Emmanuel Obi<sup>4</sup>, Christelle Gogue<sup>5</sup>, Marcy Erskine<sup>6</sup>, Giovanni Dusabe<sup>7</sup>, Zainab Baba Mai Ali<sup>8</sup>, Idrissa Cisse<sup>7</sup>, David Masiko<sup>8</sup>, Jimmy Opigo<sup>9</sup>, Medard Rukaari<sup>9</sup>, Olivier Lemba Palata<sup>10</sup>, Albert Tuyishime<sup>11</sup>, Ines Juleca Antonio<sup>12</sup>, Guira Matilibou<sup>13</sup>, Joseph Wagman<sup>5</sup>, Molly Robertson<sup>14</sup>, Christen Fornadel<sup>15</sup><sup>1</sup>Center for Applied Malaria Research and Evaluation, Department of Tropical Medicine, Tulane University School of Public Health and Tropical Medicine, New Orleans, LA, United States, <sup>2</sup>PATH, Seattle, WA, United States, <sup>3</sup>National Malaria Elimination Programme, Federal Ministry of Health, Abuja, Nigeria, <sup>4</sup>Tropical Health LLP, Lagos, Nigeria, <sup>5</sup>PATH, Washington, DC, United States, <sup>6</sup>International Federation of the Red Cross and Red Crescent, Geneva, Switzerland, <sup>7</sup>Programme National de Lutte Contre le Paludisme, Bamako, Mali, <sup>8</sup>Butali Consulting and Advisory Services Ltd, Kampala, Uganda, <sup>9</sup>National Malaria Control Division, Ministry of Health, Kampala, Uganda, <sup>10</sup>Population Services International, Bamako, Mali, <sup>11</sup>Rwanda Biomedical Centre, Kigali, Rwanda, <sup>12</sup>Programa Nacional de Controle da Malária, Maputo, Mozambique, <sup>13</sup>Programme d'Appui au Développement Sanitaire du Burkina Faso, Ouagadougou, Burkina Faso, <sup>14</sup>The Global Fund to Fight AIDS, Tuberculosis and Malaria, Geneva, Switzerland, <sup>15</sup>IVCC, Liverpool, United Kingdom

## Symposium 163

### Making Surveillance as an Intervention Work - Innovations to Improve Data Collection and Utilization

*Grand Hall J - Ballroom Level (East Tower)*

**Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone**

While the World Health Organization has long recognized the need for strong surveillance systems, highlighting these as a key component of malaria control in both the Global Technical Strategy for Malaria and the High Burden High Impact approach, malaria case surveillance remains suboptimal in most endemic areas. While 34 countries in sub-Saharan Africa (SSA) utilize the District Health Information Software 2 (DHIS2) system to collect routine data, facility level data is collected on paper and aggregated monthly. The process of tallying cases across multiple pages to generate the summary is error prone. To save time, facilities may report only certain indicators, and data are often reported late, making it less utilitarian for response. Novel systems are needed. While routine digital data collection is a goal in many SSA countries, it may not be immediately attainable due to poor infrastructure (network connectivity, electricity, etc.). Alternative systems that can operate offline are needed. Additionally, efforts are needed to simplify and automate tallying and reporting to minimize the reporting burden. This symposium will present innovations being implemented in all levels of the health system in Siaya County, Western Kenya, to improve surveillance and data utilization. An overview of scannable paper registers being used in health facilities and communities will focus on implementation challenges and successes, strategies for monitoring data quality, and opportunities for routine data use. In addition, recognizing that the private sector plays a critical role in treating nearly 30% of patients, capturing private facility data not typically reflected in DHIS2 can provide a more robust overview of true malaria burden throughout the health system. Maisha Meds has developed an innovative pharmaceutical management tool to capture private facility diagnosis and treatment data, while simultaneously serving as a point-of-sale stock management system for the pharmacies, incentivizing the provider to use the system. This platform, which has been adapted to have offline availability, is currently in use in >1600 facilities in six SSA countries, supporting over 6 million patient encounters yearly. The final talk will discuss the use of spatially indexed routine data collected at the health facility to gain a more nuanced understanding of community malaria dynamics. This work will assess how reflective antenatal care malaria burden is to the wider population burden, the ability to isolate drivers of observed patterns in care-seeking behavior, and the capacity to assess effectiveness of intervention strategies using the data. The session will conclude with a panel discussion on how these innovations can be translated to additional settings.

#### **CHAIR**

Julie R. Gutman

*Centers for Disease Control and Prevention, Atlanta, GA, United States*

**11:30 a.m.**

#### **INTRODUCTION**

**11:35 a.m.**

#### **USING SCANFORM, A NOVEL SYSTEM HARNESSING OPTICAL CHARACTER RECOGNITION TO COLLECT HIGH QUALITY DATA FROM HEALTH FACILITIES IN WESTERN KENYA**

Victoria Seffren

*Centers for Disease Control and Prevention, Atlanta, GA, United States*

**11:50 a.m.**

#### **IMPLEMENTING HIGH QUALITY DATA REPORTING IN THE COMMUNITY USING SCANFORM: LESSONS FROM THE FIELD**

Kizito Obiet

*KEMRI/CGHR, Kisumu, Kenya*

**12:05 p.m.**

#### **WHAT IS THE CONTRIBUTION OF COMMUNITY HEALTH WORKERS TO MALARIA CASE SURVEILLANCE?**

Wycliffe Odongo

*Centers for Disease Control and Prevention, Atlanta, GA, United States*

**12:20 p.m.**

#### **THE ROLE OF PRIVATE FACILITIES IN MALARIA CASE MANAGEMENT AND USE OF INVENTORY MANAGEMENT TOOLS TO IMPROVE QUALITY OF CASE MANAGEMENT AND REPORTING**

Veronica Njeri

*Maisha Meds, Kisumu, Kenya*

**12:35 p.m.**

#### **MODELLING OF ROUTINE SURVEILLANCE DATA DERIVED FROM OUTPATIENT AND ANTENATAL CLINICS TO INFORM DECISION MAKING**

Daniel McDermott

*Liverpool School of Tropical Medicine, Liverpool, United Kingdom*

## Symposium 164



### Building Malaria Modelling Capacity: Training a New Generation of Mathematical Modellers in Sub-Saharan Africa

*Grand Ballroom CDEF - Ballroom Level (East Tower)*

**Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone**

National Malaria Control Programs (NMCPs) across sub-Saharan Africa are showing a growing interest in using evidence generated with the help of mathematical modelling to shape their National Strategic Plans and to support resource mobilization efforts, as well as to routinely evaluate the impact of interventions implemented by the program. For modelling to have a sustainable positive impact, it must be embedded in a multidisciplinary, participatory process, with local scientists and Ministries of Health staff leading this process. Ensuring the skills exist at a local level enables the development of locally relevant models to accelerate disease control and elimination, led by in-country researchers working closely with local decision-makers. Developing this malaria modelling capacity itself requires local leadership and

customized training tailored to local needs, culture, and existing capacity. This symposium takes the opportunity to present five African awardees of the Bill & Melinda Gates Foundation 2022 Grand Challenges Award in Building Malaria Modelling Capacity in Sub-Saharan Africa. These awardees, all based in Africa, have designed individual capacity building programs adapted to national and regional settings. Despite differences in foci and methodology, all five programs seek to develop a critical mass of African malaria modellers to meet the need for tailored quantitative malaria decision support in a sustainable way. The five malaria modelling capacity building programs include a West African Anglo-Franco-Lusophone partnership, a modelling fellowship program for field epidemiologists in Nigeria, a multi-country consortium to implement transdisciplinary training based in Rwanda, a nexus of training and career development of malaria modellers in Southern Africa, and an African consortium in mathematical modelling for effective vector control on the continent. Along with presenting the structure of the programs, each speaker will focus on the role of context, culture, and indigenous knowledge in establishing a highly efficient pathway from training to impact on the continent. The symposium will be moderated by Dr Jennifer Gardy from the Bill & Melinda Gates Foundation.

#### CHAIR

Sheetal P. Silal  
Modelling and Simulation Hub, Africa, University of Cape Town, Cape Town, South Africa

**11:30 a.m.**

#### INTRODUCTION

**11:35 a.m.**

#### WEST AFRICA MATHEMATICAL MODELING CAPACITY DEVELOPMENT (WAMCAD): ANGLOPHONE- FRANCOPHONE- LUSOPHONE PARTNERSHIP

Yaw Asare Afrane  
University of Ghana, Accra, Ghana

**11:50 a.m.**

#### NIGERIA MATHEMATICAL MODELLING FELLOWSHIP (MMF)

Chijioko Kaduru  
Mathematical Modelling Working Group (Nigeria) Secretariat, Corona Management Systems, Abuja, Nigeria

**12:05 p.m.**

#### BUILDING THE NEXT GENERATION OF MALARIA MODELERS IN AFRICA FOR SUSTAINABLE PUBLIC HEALTH POLICIES (MAMODAFRICA)

Wilfred Ndifon  
African Institute for Mathematical Sciences - Next Einstein Initiative (AIMS NEI), Kigali, Rwanda

**12:20 p.m.**

#### MALARIA MODELLING AND ANALYTICS: LEADERS IN AFRICA (MMALA) – A NEXUS OF TRAINING IN SOUTHERN AFRICA

Sheetal P. Silal  
Modelling and Simulation Hub, Africa (MASHA), University of Cape Town, Cape Town, South Africa

**12:35 p.m.**

#### ACOMVEC: AN AFRICAN CONSORTIUM IN MODELLING FOR EFFECTIVE VECTOR CONTROL

Charles S. Wondji  
Centre of Research in Infectious Diseases (CRID) and Liverpool School of Tropical Medicine (LSTM, UK), Yaounde, Cameroon

**12:50 p.m.**

#### MODERATOR, PANEL DISCUSSION

Jennifer Gardy  
Bill & Melinda Gates Foundation, Seattle, WA, United States

## Symposium 165

### Vector Control and Surveillance: The Role of Entomology in Onchocerciasis and Its Implication for Verification of Lymphatic Filariasis Elimination

Grand Hall K - Ballroom Level (East Tower)

Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone

Vector borne diseases require a causative pathogen, a human host, and a vector. Human filarial nematodes share a complex life cycle involving a definitive human host and an intermediate insect vector. Adult worms mate and reproduce in humans producing early stage larvae known as microfilariae (MF). When the vectors take a blood meal from an infected human, the MF are ingested. Once inside the vector, the MF develop into infective larvae which are passed on to another person through the same channel. Public health interventions targeting these diseases often attempt to break at least one stage in this cycle as a means of reducing or interrupting transmission. Of the eight filarial infections affecting humans, onchocerciasis and lymphatic filariasis cause significant morbidity and are targeted by WHO as part of the 2030 NTD Roadmap. Both diseases using mass treatment with medicines which target the MF within the human host. Similarly, interventions rely heavily on antigen tests to assess exposure in a population at-risk in order to measure success. Vector control is to reduce the number of MF taken up by the vectors (black flies for onchocerciasis or mosquitoes for LF) and restrict the number of infective larvae produced that infect (or expose) humans. The 2030 NTD Roadmap targets onchocerciasis for interruption of transmission, defined as zero incidence of infection, and elimination as a public health problem for LF, defined as, "achieving measurable targets set by WHO...where continued actions are required to maintain the targets or advance to interruption of transmission". In both cases, the interventions primarily target the pathogen in the human host. The major difference in the monitoring and evaluation (M&E) and surveillance of the two diseases is that the interventions for onchocerciasis have included entomological monitoring and vector control as part of the process toward achieving the roadmap goals. Understanding how, when and where to use vector control and surveillance, and the importance of the entomological criteria for the verification of elimination is a critical step towards achieving the roadmap targets.

Sunday  
October 22

## CHAIR

Upendo Mwingira  
*RTI International, Washington, DC, United States*  
Darin Evans  
*USAID, Washington, DC, United States*

### **11:30 a.m.** **INTRODUCTION**

### **11:40 a.m.** **VECTOR CONTROL AND SURVEILLANCE OF ONCHOCERCIASIS IN UGANDA: WHY THERE AND NOT EVERYWHERE?**

David Oguttu  
*Ministry of Health, Uganda, Kampala, Uganda*

### **11:55 a.m.** **RECRUDESCENCE OF ONCHOCERCIASIS IN METEMA SUB FOCUS, ETHIOPIA: WHY VECTOR MONITORING WAS CRITICAL**

Kadu Meribo  
*Ministry of Health, Ethiopia, Addis Ababa, Ethiopia*

### **12:10 p.m.** **MODELING INTERVENTIONS FOR INTERRUPTION OF TRANSMISSION: ONCHO VS LF**

Edwin Micheal  
*University of South Florida, Tampa, FL, United States*

### **12:30 p.m.** **XENOMONITORING FOR LF: PRACTICAL EXPERIENCE**

Sammy Njenga  
*KEMRI, Nairobi, Kenya*

### **12:45 p.m.** **OVERCOMING END GAME CHALLENGES: WHEN IS VECTOR CONTROL APPROPRIATE FOR ONCHO AND LF AND HOW DO COUNTRIES IMPLEMENT THOSE EFFORTS**

Moses N. Katarbarwa  
*RTI International, Atlanta, GA, United States*

### **1 p.m.** **MODERATOR, PANEL DISCUSSION**

Upendo Mwingira  
*RTI International, Washington, DC, United States*

## **Symposium 166**

### **Cryptosporidiosis: New Science to Combat a Leading Cause of Early Childhood Diarrhea**

*Grand Hall L - Ballroom Level (East Tower)*  
**Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone**

*This session does not carry CME credit.*

The apicomplexan parasite *Cryptosporidium* is a leading cause of diarrheal diseases with a particularly grave impact on young children. *Cryptosporidium* has a profound yet poorly understood relationship with malnutrition, both as a cause and consequence. Recently, fueled by the appreciation of its public health impact, and a series of technical breakthroughs, research on this pathogen has made significant advances. This symposium will bring together experts along the full spectrum of research on this important

disease: studies in children on pathogenesis and immunity, fundamental laboratory studies using novel genetic tools and organoid and animal models, and translational studies towards the development of urgently needed drugs and vaccines.

## CHAIR

Boris Striepen  
*University of Pennsylvania, Philadelphia, PA, United States*  
Carol Gilchrist  
*University of Virginia, Charlottesville, VA, United States*

### **11:30 a.m.** **INTRODUCTION**

### **11:40 a.m.** **PEDIATRIC CRYPTOSPORIDIOSIS, DIARRHEA, ENTEROPATHY AND MALNUTRITION**

Paul Kelly  
*Barts & The London School of Medicine, London, UK and University of Zambia School of Medicine, Lusaka, Zambia., Lusaka, Zambia*

### **Noon** **INFLUENCE OF GUT MICROBIAL METABOLITES ON CRYPTOSPORIDIUM GROWTH**

David Sibley  
*Washington University, St. Louis, MO, United States*

### **12:20 p.m.** **DEVELOPING MODE OF ACTION TOOLS TO AID CRYPTOSPORIDIOSIS DRUG DISCOVERY**

Mattie Pawlowic  
*Wellcome Centre for Anti-Infectives Research, University of Dundee, Dundee, United Kingdom*

### **12:40 p.m.** **NATURAL IMMUNITY TO CRYPTOSPORIDIUM IN YOUNG CHILDREN**

Carol A. Gilchrist  
*University of Virginia HSC, Charlottesville, VA, United States*

### **1 p.m.** **RATIONAL DESIGN OF GI TARGETED CPPI4K INHIBITOR TO TREAT PEDIATRIC ENTERIC CRYPTOSPORIDIOSIS**

Ujjini H. Manjunatha  
*Global Health at Novartis Institutes for BioMedical Research, Inc., Emeryville, CA, United States*

## **Symposium 167**

### **Development, Implementation and Evaluation of IMCI-Based Clinical Decision Support Algorithms with Pulse Oximetry to Improve the Assessment and Management of Sick Children in India, Kenya, Senegal and Tanzania**

*Plaza Ballroom - Lobby Level (East Tower)*  
**Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone**

Healthcare providers in low and middle-income countries (LMICs) face many challenges in managing sick children in primary care. With an estimated 5 million children under 5 years of age dying each year from preventable causes, strategies to improve



the detection and management of children with severe illness, whilst supporting the rational use of resources, are critical. The Integrated Management of Childhood Illness (IMCI) guidelines provide a simple, structured approach to consultations with sick children for healthcare providers in resource-constrained settings. However, many studies have demonstrated poor identification and management of severely ill children due to both non-adherence by health workers and intrinsic problems of guidelines based on clinical signs alone. Clinical decision support algorithms (CDSAs) can improve adherence to evidence-based practice by guiding healthcare providers through consultations and providing patient-specific recommendations on assessment, diagnosis, treatment and counseling. By providing step-by-step support, they also offer the possibility of integrating relevant child health guidelines beyond IMCI, particularly to support the appropriate management of non-malarial fever. Combined with pulse oximetry to detect hypoxaemia, a strong predictor of mortality, CDSAs have the potential to improve the identification and management of children with severe illness, and support diagnostic and antimicrobial stewardship. Evidence on impact, and implementation approaches to facilitate uptake in different contexts, is needed to inform decision-making about scale-up. This symposium will present new evidence from the large-scale multi-method research conducted in India, Kenya, Senegal, and Tanzania as part of the Tools for Integrated Management of Childhood Illness (TIMCI) project. The session will 1) describe the approach to clinical decision support algorithm development, reflecting the similarities and differences in content based on national guidelines, priorities and epidemiology, and present insights on clinical presentations, and acceptability of diagnosis and treatment recommendations from CDSA consultation data; 2) present key learnings on CDSA and pulse oximetry implementation from pilots studies used to refine clinical algorithm content and implementation approach; and 3) highlight acceptability, feasibility and impact of CDSA and pulse oximetry implementation findings from pragmatic cluster randomized controlled trials, quasi-experimental studies and mixed-method sub-studies carried out in 4 countries.

#### CHAIR

Michael A. Ruffo  
*PATH, Geneva, Switzerland*

#### 11:30 a.m. INTRODUCTION

#### 11:35 a.m. ADAPTING CLINICAL DECISION SUPPORT ALGORITHMS TO ALIGN WITH NATIONAL GUIDELINES AND PRIORITIES: LEARNINGS FROM INDIA, KENYA, SENEGAL, AND TANZANIA

Fenella Beynon  
*Swiss Tropical & Public Health Institute, Allschwil, Switzerland*

#### 11:55 a.m. ALIGNING GUIDELINE-BASED CDSA WITH THE REALITIES OF PRIMARY CARE PROVISION: LEARNINGS FROM PILOT TO IMPLEMENTATION IN SENEGAL

Papa Moctar Faye  
*University Cheikh Anta Diop, Dakar, Senegal*

#### 12:15 p.m. IMPLEMENTATION OF CDSA AND PULSE OXIMETRY: LEARNINGS FROM THE KENYA EXPERIENCE

Andolo Miheso  
*PATH, Nairobi, Kenya*

#### 12:35 p.m. ACCEPTABILITY, FEASIBILITY AND IMPACT OF CDSA AND PULSE OXIMETRY IMPLEMENTATION: FINDINGS FROM THE PRAGMATIC CLUSTER RANDOMIZED CONTROLLED TRIAL IN TANZANIA

Grace Mhalu  
*Ifakara Health Institute, Dar es Salaam, United Republic of Tanzania*

#### 12:55 p.m. HEALTH SYSTEM CONTEXT FOR USABILITY AND ACCEPTABILITY OF CDSA AND PULSE OXIMETRY: LEARNINGS FROM THE INDIA PILOT

Shally Awasthi  
*King George's Medical University, Lucknow, India*

## Symposium 168

### Innovations in Diagnostics Supporting Improved Pneumonia Case Management in Children under Five Years

*Crystal Ballroom A - Lobby Level (West Tower)*

**Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone**

Pneumonia remains the leading infectious killer of children under five years in the world and therefore improving case management of pneumonia is a key component in achieving Sustainable Development Goal (SDG) 3.2, requiring all countries to reduce their Child Mortality Rates to, "at least 25 deaths per 1,000 live births" by 2030. Success in achieving Universal Health Coverage for children will also depend on whether countries provide quality services and care for children with pneumonia. Access to accurate, usable and affordable diagnostics for effective management of pneumonia in resource poor settings continues to be a major barrier to improved pneumonia control. Every Breath Counts (EBC), the world's first public-private partnership to support national governments to end preventable child pneumonia deaths by 2030, recognizes the need for innovative diagnostics to improve pneumonia case management in children under five in primary health care settings. In this symposium, the EBC research group will present primary research from five partners, highlighting recent innovation and potential for improved pneumonia diagnostic aids and potential opportunities to scale. Firstly, cutting-edge formative results showing the potential for artificial Intelligence to support automated respiratory rate counting using a mobile phone. Secondly, results from a large-scale evaluation of multimodal pneumonia diagnostic aids in four countries – Kenya, Senegal, Malawi, and India. Thirdly, we will also examine trial results from Bangladesh showing the utility of digital auscultation for pneumonia diagnosis in children under five. Fourthly, Save the Children will present recent results from Kenya on the potential support to pneumonia diagnosis, a decision support technology can provide. Finally, results from a large-scale trial in the US will be

discussed, evaluating cough sound technology as a pneumonia diagnosis tool. The session will conclude with a moderated discussion which will tie together the presentations and facilitate a structured interaction between the presenters and the audience.

#### CHAIR

Kevin Baker  
Malaria Consortium, London, United Kingdom

Helen Storey  
PATH, Seattle, WA, United States

#### 11:30 a.m. INTRODUCTION

#### 11:40 a.m. RESULTS FROM THE AIRR STUDY – SHOWING HOW ARTIFICIAL INTELLIGENCE CAN SUPPORT AUTOMATED RESPIRATORY RATE COUNTING ON MOBILE PHONES

Carina King  
Karolinska Institute, Stockholm, Sweden

#### Noon

#### ADVANCING MULTIMODAL PULSE OXIMETRY: LEARNINGS FROM TIMCI INITIATIVE, INCLUDING SMARTPHONE-BASED TOOLS AND DATA REPOSITORY

Helen Storey  
PATH, Seattle, WA, United States

#### 12:20 p.m. RESULTS FROM A TRIAL FOCUSED ON THE COMMUNITY USE OF DIGITAL AUSCULTATION TO IMPROVE DIAGNOSIS OF CHILDHOOD PNEUMONIA IN SYLHET, BANGLADESH

Salahuddin Ahmed  
Projahnmo Research Foundation, Dhaka, Bangladesh

#### 12:40 p.m. RESULTS FROM A STUDY IN KENYA USING DECISION SUPPORT TECHNOLOGY FOR IMPROVING AND ENSURING HEALTH CARE PROVIDERS' COMPLIANCE/ADHERENCE TO IMCI GUIDELINE FOR ASSESSING, DIAGNOSING, AND MANAGING UNDER FIVE SICK CHILDREN

Rashed Shah  
Save the Children US, Washington, DC, United States

#### 1 p.m. RESULTS FROM SMART COUGH TRIAL EVALUATING THE UTILITY OF COUGH SOUNDS AS A DIAGNOSTIC TOOL FOR PNEUMONIA

Peter Moschovis  
Massachusetts General Hospital, Boston, United States

## Scientific Session 169

### Clinical Tropical Medicine: Neglected Diseases and Fevers

Crystal Ballroom B - Lobby Level (West Tower)  
Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone

#### CHAIR

Elizabeth Gulleen  
Fred Hutchinson Cancer Research Center, Seattle, WA, United States

Wendemagegn E. Yeshanh  
Bahir Dar University, Bahir Dar, Ethiopia

11:30 a.m.

7243

#### PODOCONIOSIS; CLINICAL SPECTRUM AND MICROSCOPIC PRESENTATIONS

Wendemagegn Enbiale Yeshanh<sup>1</sup>, Almut Enbiale Boer Auer<sup>2</sup>, Bereket Amare<sup>1</sup>, Kristien Verdonck<sup>3</sup>, Gail Davey<sup>4</sup>, Johan Griensven<sup>3</sup>, Henry de Vries<sup>5</sup>  
<sup>1</sup>Bahir Dar University, Bahir Dar, Ethiopia, <sup>2</sup>Dermatologikum, Hamburg, Germany, <sup>3</sup>Institute of tropical Medicine, Antwerp, Belgium, <sup>4</sup>Brighton and Sussex Medical School, Falmer, Brighton, United Kingdom, <sup>5</sup>University of Amsterdam, Department of Dermatology, Amsterdam, Netherlands

11:45 a.m.

7244

#### THROMBOSIS AND ORGAN DYSFUNCTION IN SNAKEBITE ENVENOMING: TIME TO REDEFINE VENOM INDUCED CONSUMPTION COAGULOPATHY?

Maya Gopalakrishnan, Akhilesh Kumar, Pamkaj Sukhadiya, Divya Tanwar, Poonam Elhence, Mahendra K. Garg  
All India Institute of Medical Sciences, Jodhpur, Jodhpur, India

Noon

7245

#### THE RELEVANCE OF REPORTING LEPROSY RELATED DISABILITY AT THE COMPLETION OF MULTI DRUG THERAPY: A 5-YEAR RETROSPECTIVE ANALYSIS OF DISABILITY IN PERSONS AFFECTED BY LEPROSY AT ALERT HOSPITAL ETHIOPIA

Bereket A. Tegene<sup>1</sup>, Thomas A. Atnafu<sup>2</sup>, Saba M. Lambert<sup>1</sup>, Stephen L. Walker<sup>1</sup>  
<sup>1</sup>London School of Hygiene and Tropical Medicine, London, United Kingdom, <sup>2</sup>All Africa Leprosy TB Rehabilitation Training Center, Addis Ababa, Ethiopia

12:15 p.m.

7246

#### PATHOGENESIS OF ACUTE KIDNEY INJURY IN LASSA FEVER

Matin Kohsar<sup>1</sup>, Osas Edeawe<sup>2</sup>, Christian Erohubie<sup>3</sup>, Benno Kreuels<sup>1</sup>, Sylvanus Okogbenin<sup>2</sup>, Stephan Günther<sup>4</sup>, Michael Ramharter<sup>1</sup>, Lisa Österreich<sup>4</sup>, Till Frederick Omansen<sup>1</sup>, Cyril Erameh<sup>2</sup>  
<sup>1</sup>Department of Tropical Medicine, Bernhard Nocht Institute for Tropical Medicine & I. Dep. of Medicine, University Medical Center Hamburg-Eppendorf, Hamburg, Germany, <sup>2</sup>Institute for Lassa Fever Research and Control, Irrua Specialist Teaching Hospital, Irrua, Nigeria, <sup>3</sup>Department of Medicine, Irrua Specialist Teaching Hospital, Irrua, Nigeria, <sup>4</sup>Department of Virology, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany

12:30 p.m.

7247

#### TRYING TO UNMASK THE HIDDEN CAUSES OF IMPORTED FEVER WITH NEW GENOME SEQUENCING: A MULTICENTER PROSPECTIVE COHORT STUDY

Daniel Camprubi Ferrer<sup>1</sup>, Leire Balerdi-Sarasole<sup>1</sup>, Alex Tomazatos<sup>2</sup>, Ludovico Cobuccio<sup>3</sup>, Steven Van Den Broucke<sup>4</sup>, Blaise Genton<sup>3</sup>, Emmanuel Bottieau<sup>4</sup>, Natalia Rodriguez-Valero<sup>1</sup>, Alex Almuedo-Riera<sup>1</sup>, Valerie d'Acremont<sup>3</sup>, Javier Gandasegui<sup>1</sup>, Carme Subirà<sup>1</sup>, Angeline Cruz<sup>1</sup>, Daniel Cadar<sup>2</sup>, Jose Muñoz<sup>1</sup>  
<sup>1</sup>ISGlobal / Hospital Clínic Barcelona, Barcelona, Spain, <sup>2</sup>Bernhard-Nocht-Institut für Tropenmedizin, Hamburg, Germany, <sup>3</sup>Center for Primary Care and Public Health, University of Lausanne, Lausanne, Switzerland, <sup>4</sup>Institute of Tropical Medicine, Antwerp, Belgium

12:45 p.m.

7248

**MALSCORE: AN INNOVATIVE TOOL TO PREDICT MALARIA IN PATIENTS WITH IMPORTED FEVER TO START EARLY TREATMENT.**

Leire Balerdi-Sarasola<sup>1</sup>, Pedro Fleitas<sup>1</sup>, Ludovico Cobuccio<sup>2</sup>, Steven Van Den Broucke<sup>3</sup>, Blaise Genton<sup>2</sup>, Emmanuel Bottieau<sup>2</sup>, Valérie d'Acremont<sup>2</sup>, Natalia Rodriguez-Valero<sup>1</sup>, Alex Almuedo-Riera<sup>1</sup>, Carme Subirà<sup>1</sup>, Montserrat Roldan<sup>1</sup>, Claudio Parolo<sup>1</sup>, Jose Muñoz<sup>1</sup>, Daniel Camprubi-Ferrer<sup>1</sup>

<sup>1</sup>ISGlobal, Hospital Clínic - Universitat de Barcelona, Barcelona, Spain, <sup>2</sup>Swiss Tropical and Public Health Institute, Basel, Switzerland, <sup>3</sup>Department of Clinical Sciences, Institute of Tropical Medicine, Antwerp, Belgium

1 p.m.

7249

**DIAGNOSTIC TOOLS AND ALGORITHMS AT THE POINT OF CARE TO SAFELY REDUCE ANTIBIOTIC PRESCRIPTIONS FOR ACUTE FEBRILE ILLNESS MANAGEMENT**

Juvenal Nkeramahame<sup>1</sup>, Ana Belen-Ibarz<sup>1</sup>, Philip Horgan<sup>1</sup>, Anjana Tomar<sup>2</sup>, Sarabjit Singh Chadha<sup>2</sup>, Kamini Walia<sup>3</sup>, James Kapisi<sup>4</sup>, Halidou Tinto<sup>5</sup>, Francois Kiemde<sup>6</sup>, Shanta Dutta<sup>6</sup>, Ashish Pathak<sup>7</sup>, Neelam Taneja<sup>8</sup>, Gajanan Phutke<sup>9</sup>, Olita Shilpakar<sup>10</sup>, Heidi Hopkins<sup>11</sup>, Basnyat Buddha<sup>10</sup>, Piero Olliaro<sup>12</sup>, Sabine Dittrich<sup>13</sup>, Cecilia Ferreira<sup>1</sup>

<sup>1</sup>FIND, Geneva, Switzerland, <sup>2</sup>FIND, New Delhi, India, <sup>3</sup>Indian Council Of Medical Research, New Delhi, India, <sup>4</sup>Infectious Diseases Research Collaboration, Kampala, Uganda, <sup>5</sup>Clinical Research Unit Of Nanoro, Nanoro, Burkina Faso, <sup>6</sup>ICMR-National Institute Of Cholera And Enteric Diseases, West Bengal, India, <sup>7</sup>RD Gardi Medical College, Madhya Pradesh, India, <sup>8</sup>Postgraduate Institute Of Medical Education And Research, Punjab, India, <sup>9</sup>Jan Swasthya Sahyog, Chhattisgarh, India, <sup>10</sup>Oxford University Clinical Research Unit-Nepal, Kathmandu, Nepal, <sup>11</sup>London School Of Hygiene & Tropical Medicine, London, United Kingdom, <sup>12</sup>Pandemic Sciences Institute, Nuffield Department Of Medicine, University Of Oxford, Oxford, United Kingdom, <sup>13</sup>Deggendorf Institute Of Technology, Deggendorf, Germany

**Symposium 170****Preparing for the Next Zika Outbreak: Lessons Learned from Large Birth Cohorts Regarding Developmental Abnormalities and Adverse Pregnancy Outcomes**

Regency Ballroom A - Ballroom Level (West Tower)

Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone

When Zika virus (ZIKV) caused outbreaks in the Western Pacific and the Americas from 2013-2017, a causal link was established to thousands of cases of microcephaly and other developmental abnormalities in fetuses/infants when mothers acquired infection during pregnancy. Large birth cohorts and prospective surveillance studies were quickly initiated to quantify the risk and analyze the range of adverse clinical phenotypes associated with ZIKV infection, for example by the NIH, the US CDC, the European Commission, the French National Research Institute INSERM, and by Brazilian institutions (eg. FIOCRUZ; Microcephaly Epidemiology Research Group - MERG). This resulted in the description of the 'Congenital Zika Syndrome' (CZS), but questions regarding the discrepant frequency of adverse outcomes (eg. between regions and over time) as well as regarding the mix of clinical phenotypes remain. In addition, it became clear that only through long term follow up of ZIKV-exposed children after birth the full picture of abnormalities and disease burden could be assessed. Since the outbreak quickly dropped, the number of confirmed cases collected in each of the cohorts turned out to be limited.

In response to this, the WHO has initiated an Individual Patient Data Meta-Analysis, inviting ZIKV studies to share and harmonize their data towards a common goal. However, when the COVID-19 pandemic hit, the work on the harmonization of the ZIKV cohorts was often delayed by logistic bottlenecks like barriers in shipping of samples or conducting diagnostic laboratory work outside of prioritized COVID-19 research. In this symposium, we will convene the larger ZIKV birth cohort studies and evaluate the current state of play regarding risk and relative frequency of adverse pregnancy outcomes at birth and developmental abnormalities after birth associated to ZIKV infection *in utero*. In the light of the fact that vaccines and monoclonal antibodies are under development, we want to consolidate the knowledge gained by natural history cohorts and map out concrete steps for the remaining gaps. The key question is if we are ready for potential re-emergence and if we have been able to use the existing data to the full extent, establishing solid evidence regarding the association between maternal ZIKV infection during pregnancy and each of the adverse outcomes.

**CHAIR**

Thomas Jaenisch  
Colorado School of Public Health, Aurora, CO, United States

Edwin J. Asturias  
Childrens Hospital Colorado, Aurora, CO, United States

11:30 a.m.

**INTRODUCTION**

11:40 a.m.

**RESULTS FROM THE ZIKALLIANCE MULTICENTRIC BIRTH COHORTS - LESSONS LEARNED FOR FREQUENCY OF ADVERSE PREGNANCY OUTCOMES RELATED TO ZIKV**

Kirsten Fong  
Heidelberg University Hospital, Heidelberg, Germany

Noon

**THE NIH ZIKA IN INFANTS AND PREGNANCY (ZIP) STUDY - FREQUENCY AND RISK FACTORS FOR CONGENITAL ABNORMALITIES AFTER ZIKV INFECTION DURING PREGNANCY**

Walla Dempsey  
National Institutes of Health, Bethesda, MD, United States

12:15 p.m.

**RESULTS FROM THE CDC PROSPECTIVE SURVEILLANCE STUDIES**

Nicki Roth  
Centers for Disease Control and Prevention, Atlanta, GA, United States

12:30 p.m.

**RESULTS FROM THE BRAZILIAN ZIKA COHORTS - FREQUENCY OF ADVERSE PREGNANCY OUTCOMES AND MIX OF CLINICAL PHENOTYPES**

Ricardo Ximenes  
Federal University of Pernambuco, Recife, Brazil

12:50 p.m.

## CHALLENGES REGARDING FOLLOW-UP OF DEVELOPMENTAL MILESTONES AND COGNITIVE OUTCOMES IN CHILDREN IN LMICS?

Edwin Asturias

Colorado School of Public Health, Aurora, CO, United States

## Scientific Session 171

### Malaria - Immunology: Covering the Spectrum of Naturally-Acquired and Vaccine-Induced Immune Responses

Regency Ballroom B - Ballroom Level (West Tower)

Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone

#### CHAIR

Katherine Dobbs

Case Western Reserve University, Cleveland, OH, United States

Felistas Namirimu Nankya

Infectious Diseases Research Collaboration, Kampala, Uganda

11:30 a.m.

7250

### IDENTIFICATION OF TARGETS OF PROTECTIVE ANTIBODY RESPONSES AGAINST *PLASMODIUM VIVAX* MALARIA USING A MULTIFUNCTIONAL ANTIBODY PROFILING APPROACH

D. Herbert Opi<sup>1</sup>, Rhea Longley<sup>2</sup>, Linda Reiling<sup>1</sup>, Kael Schoffer<sup>2</sup>, Yanie Tayipto<sup>2</sup>, Ali Haghiri<sup>3</sup>, Jessica Brewster<sup>2</sup>, Damien Drew<sup>1</sup>, Gaoqian Feng<sup>1</sup>, Bruce Wines<sup>1</sup>, Danielle Staniscic<sup>4</sup>, Mathias Harbers<sup>5</sup>, Takafumi Tsuboi<sup>6</sup>, Eizo Takashima<sup>6</sup>, P. Mark Hogarth<sup>1</sup>, Benson Kinoboro<sup>7</sup>, Leanne Robinson<sup>1</sup>, Julie Simpson<sup>3</sup>, Ivo Mueller<sup>2</sup>, James G. Beeson<sup>1</sup>

<sup>1</sup>Burnet Institute, Melbourne, Australia, <sup>2</sup>Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia, <sup>3</sup>University of Melbourne, Melbourne, Australia, <sup>4</sup>Griffith University, Gold Coast, Australia, <sup>5</sup>Cell Free Sciences Co Ltd, Yokohama, Japan, <sup>6</sup>Ehime University, Matsuyama, Japan, <sup>7</sup>Papua New Guinea Institute of Medical Research, Goroka, Papua New Guinea

11:45 a.m.

7251

### ANTIBODY AND CELLULAR RESPONSES TO *IN UTERO* MALARIA EXPOSURE IN INFANTS

Felistas Namirimu Nankya<sup>1</sup>, Florian Bach<sup>2</sup>, Kathleen Press<sup>2</sup>, Odorizzi Pamela<sup>3</sup>, Kenneth Musinguzi<sup>1</sup>, Kate Naluwu<sup>1</sup>, Isaac Ssewanyana<sup>1</sup>, Abel Kakuru<sup>1</sup>, Moses Kanya<sup>1</sup>, Grant Dorsey<sup>4</sup>, Feeney Margaret<sup>4</sup>, Prasanna Jagannathan<sup>2</sup>

<sup>1</sup>Infectious Diseases Research Collaboration, Kampala, Uganda, <sup>2</sup>Stanford University, Stanford, CA, United States, <sup>3</sup>Gilead Sciences, California, CA, United States, <sup>4</sup>University of California San Francisco, San Francisco, CA, United States

Noon

7252

### SEX HORMONES, CD8<sup>+</sup>T CELLS, AND THE LIVER: HOW THE ENDOCRINE-IMMUNE INTERFACE ALTERS MALARIA LIVER-STAGE VACCINE OUTCOMES

Caroline J. Duncombe, Felicia Watson, Kenneth Boey, Anya Kalata, Melanie Shears, Mariko Seilie, Shruthi Raman, Sean C. Murphy  
University of Washington, Seattle, WA, United States

12:15 p.m.

7253

### INDUCTION OF LIVER-RESIDENT MEMORY CD8<sup>+</sup> T CELLS AND PROTECTION AGAINST MALARIA AT EXOERYTHROCYTIC STAGE BY MRNA-CONTAINING LIPID NANOPARTICLES

Sayuri Nakamae<sup>1</sup>, Satoshi Miyagawa<sup>1</sup>, Koki Ogawa<sup>2</sup>, Jiun-Yu Jian<sup>1</sup>, Mayumi Taniguchi<sup>1</sup>, Takeshi Annoura<sup>2</sup>, Katsuyuki Yui<sup>1</sup>, Kenji Hirayama<sup>4</sup>, Shigeru Kawakami<sup>5</sup>, Shusaku Mizukami<sup>1</sup>

<sup>1</sup>Institute of Tropical Medicine, Nagasaki university, Nagasaki, Japan, <sup>2</sup>Graduate School of Biomedical Sciences, Nagasaki University, Nagasaki, Japan, <sup>3</sup>National Institute of Infectious Diseases, Tokyo, Japan, <sup>4</sup>School of Tropical Medicine and Global Health, Nagasaki university, Nagasaki, Japan, <sup>5</sup>Graduate School of Biomedical Sciences, Nagasaki university, Nagasaki, Japan

12:30 p.m.

7254

### ONCE YOU'VE HAD MALARIA YOU'LL NEVER FORGET (OR WILL YOU?): THE MEMORY B CELL AND PLASMA CELL RESPONSE TO *PLASMODIUM* REINFECTION

Elizabeth M. Fusco, Nathan W. Schmidt

Indiana University School of Medicine, Indianapolis, IN, United States

12:45 p.m.

7255

### NEUTRALIZING AND INTERFERING HUMAN ANTIBODIES DEFINE THE STRUCTURAL AND MECHANISTIC BASIS FOR ANTIGENIC DIVERSION

Palak N. Patel, Thayne H. Dickey, Christine S. Hopp, Ababacar Diouf, Wai Kwan Tang, Carole A. Long, Kazutoyo Miura, Peter D. Crompton, Niraj H. Tolia  
National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States

1 p.m.

7256

### STRUCTURE GUIDED MIMICRY OF AN ESSENTIAL *P. FALCIPARUM* RECEPTOR-LIGAND COMPLEX ENHANCES CROSS NEUTRALIZING ANTIBODIES

Sean Yanik<sup>1</sup>, Varsha Venkatesh<sup>1</sup>, Bianca Loveless<sup>2</sup>, Deepti Sarkar<sup>1</sup>, Kazutoyo Miura<sup>3</sup>, Carole Long<sup>3</sup>, Martin Boulanger<sup>2</sup>, Prakash Srinivasan<sup>1</sup>

<sup>1</sup>Johns Hopkins, Baltimore, MD, United States, <sup>2</sup>University of Victoria, Saanich, BC, Canada, <sup>3</sup>NIAID, Rockville, MD, United States

## Scientific Session 172

### Mosquitoes- Epidemiology and Vector Control II

Regency Ballroom C - Ballroom Level (West Tower)

Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone

#### CHAIR

Zinsou Come Koukpo

Centre de Recherche Entomologique de Cotonou, Cotonou, Benin

Kristan Schneider

University of Applied Sciences Mittweida, Mittweida, Germany



11:30 a.m.

7257

**VERTICAL AND HORIZONTAL TRANSMISSION OF MICROSPORIDIA MB IN ANOPHELES ARABIENSIS: EFFECT ON LIFE HISTORY TRAITS**

Syeda Tullu Bukhari, Tracy Maina, Aclaine Shisia, Godfred Yaw Boanyah, Jeremy K. Herren  
International Center of Insect Physiology and Ecology, Nairobi, Kenya

11:45 a.m.

7258

**CHARACTERIZING ANTIBODY RESPONSES TO MOSQUITO SALIVARY ANTIGENS OF THE SOUTHEAST ASIAN MALARIA VECTORS WITH A HUMAN CHALLENGE MODEL OF CONTROLLED EXPOSURE**

Victor Chaumeau<sup>1</sup>, Ellen Kearney<sup>2</sup>, Paul A. Agius<sup>3</sup>, Sunisa Sawasdichai<sup>1</sup>, Katherine O'Flaherty<sup>2</sup>, Praphan Wasiskasun<sup>1</sup>, Daniela Da Silva Goncalves<sup>2</sup>, Laaongsri Niwetphongprai<sup>1</sup>, Thaw Htwe Min<sup>1</sup>, James Beeson<sup>2</sup>, Julie A. Simpson<sup>4</sup>, François Nosten<sup>1</sup>, Freya Fowkes<sup>2</sup>  
<sup>1</sup>Shoklo Malaria Research Unit, Mae Ramat, Thailand, <sup>2</sup>Burnet Institute, Melbourne, Australia, <sup>3</sup>Deakin University, Melbourne, Australia, <sup>4</sup>University of Melbourne, Melbourne, Australia

Noon

7259

**ANOPHELES SALIVARY ANTIBODY BIOMARKERS ASSESS THE EFFECTIVENESS OF PERSONAL INSECT REPELLENT AND IDENTIFY FOCI OF MALARIA TRANSMISSION IN SOUTHEAST MYANMAR**

Ellen A. Kearney<sup>1</sup>, Paul A. Agius<sup>2</sup>, Punam Amratia<sup>3</sup>, Su Yun Kang<sup>3</sup>, Katherine O'Flaherty<sup>1</sup>, Win Han Oo<sup>4</sup>, Julia C. Cutts<sup>1</sup>, Daniela Da Silva Goncalves<sup>1</sup>, Kefyalew A. Alene<sup>5</sup>, Aung Thi<sup>6</sup>, Htin Kyaw Thu<sup>4</sup>, Myat Mon Thein<sup>4</sup>, Nyi Nyi Zaw<sup>4</sup>, Wai Yan Min Htay<sup>4</sup>, Aung Paing Soe<sup>4</sup>, Naanki Pasricha<sup>1</sup>, Brendan Crabb<sup>1</sup>, James Beeson<sup>1</sup>, Victor Chaumeau<sup>6</sup>, Julie A. Simpson<sup>7</sup>, Peter Gething<sup>3</sup>, Ewan Cameron<sup>3</sup>, Freya JI Fowkes<sup>1</sup>  
<sup>1</sup>Burnet Institute, Melbourne, Australia, <sup>2</sup>Biostatistics Unit, Faculty of Health, Deakin University, Melbourne, Australia, <sup>3</sup>Malaria Atlas Project, Telethon Kids Institute, Perth, Australia, <sup>4</sup>Burnet Institute, Yangon, Myanmar, <sup>5</sup>Department of Public Health, Myanmar Ministry of Health and Sports, Yangon, Myanmar, <sup>6</sup>Shoklo Malaria Research Unit, Mahidol University, Mae Sot, Thailand, <sup>7</sup>Centre for Epidemiology and Biostatistics, The University of Melbourne, Melbourne, Australia

12:15 p.m.

7260

**WIDE AND SUSTAINED LONG-TERM TARGET EFFICACY OF AN INJECTABLE LONG-ACTING IVERMECTIN FORMULATION AGAINST PLASMODIUM VECTORS IN THE FIGHT AGAINST MALARIA**

Cheick O. Ouedraogo<sup>1</sup>, Lamidi Zela<sup>2</sup>, Angélique Porciani<sup>3</sup>, Dieudonné D. Soma<sup>4</sup>, Sié H. Pooda<sup>5</sup>, Fabrice A. Somé<sup>1</sup>, Joel Tarning<sup>6</sup>, Kevin Kobylinski<sup>6</sup>, Malik A. Bandaogo<sup>7</sup>, Ali Ouari<sup>8</sup>, Thibaut Deramoudt<sup>9</sup>, André B. Sagna<sup>10</sup>, Sophie Le Lamer-Déchamps<sup>11</sup>, Christophe Roberge<sup>11</sup>, Cédric Penetier<sup>12</sup>, Nicolas Moiroux<sup>3</sup>, Guiguigbaza-Kossignan Dayo<sup>13</sup>, Roch K. Dabiré<sup>1</sup>, Karine Mouline<sup>3</sup>  
<sup>1</sup>Institut de Recherche en Sciences de la Santé - IRSS-DR0, Bobo Dioulasso, Burkina Faso, <sup>2</sup>Centre International de Recherche Développement pour l'Elevage en zones Sub-humides - CIRDES, Bobo Dioulasso, Burkina Faso, <sup>3</sup>Institut de Recherche pour le Développement - IRD, Montpellier, France, <sup>4</sup>Université Nazi Boni, Bobo Dioulasso, Burkina Faso, <sup>5</sup>Université de Dédougou, Dédougou, Burkina Faso, <sup>6</sup>Mahidol Oxford Tropical Medicine Research Unit, Mahidol, Thailand, <sup>7</sup>Centre de Recherche Développement pour l'élevage en zones Sub-humides - CIRDES, Bobo Dioulasso, Burkina Faso, <sup>8</sup>Institut de Recherche en Sciences de la Santé - IRSS-DR0, Bobo Dioulasso, Burkina Faso, <sup>9</sup>MedinCell, Jacou, France, <sup>10</sup>Institut de Recherche pour le Développement - IRD, Bobo-Dioulasso, Burkina Faso, <sup>11</sup>MedinCell, Jacou, France, <sup>12</sup>Institut de Recherche pour le Développement - IRD, Bobo Dioulasso, Burkina Faso, <sup>13</sup>Centre International de Recherche Elevage en zones Sub-humides - CIRDES, Bobo Dioulasso, Burkina Faso

12:30 p.m.

7261

**INFLUENCE OF ANOPHELINE BITING PREFERENCES ON THE PLASMODIUM FALCIPARUM HUMAN INFECTIOUS RESERVOIR IN WESTERN KENYA**

Christine Markwalter<sup>1</sup>, Zena Lapp<sup>1</sup>, Lucy Abel<sup>2</sup>, Emmah Kimachas<sup>2</sup>, Evans Omondi<sup>1</sup>, Betsy Freedman<sup>1</sup>, Tabitha Chepkwony<sup>2</sup>, Mark Amunga<sup>2</sup>, Judith N. Mangeni<sup>3</sup>, Steve Taylor<sup>1</sup>, Andrew A. Obala<sup>4</sup>, Wendy P. O'Meara<sup>1</sup>  
<sup>1</sup>Duke University, Durham, NC, United States, <sup>2</sup>Academic Model Providing Access to Healthcare (AMPATH), Eldoret, Kenya, <sup>3</sup>School of Public Health, Moi University, Eldoret, Kenya, <sup>4</sup>School of Medicine, Moi University, Eldoret, Kenya

12:45 p.m.

7262

**ASSESSING THE STATISTICAL POWER OF A SEMI-FIELD EXPERIMENT: TESTING SINGLE AND COMBINED INTERVENTIONS AGAINST MALARIA VECTORAN. ARABIENSIS**

Andrea M. Kippingu<sup>1</sup>, Dickson W. Lwatojera<sup>2</sup>, Samson S. Kiware<sup>2</sup>, Mafalda Viana<sup>1</sup>, Paul C.D. Johnson<sup>1</sup>  
<sup>1</sup>University of Glasgow, Glasgow, United Kingdom, <sup>2</sup>Ifakara Health Institute, Dar Es Salaam, United Republic of Tanzania

1 p.m.

7263

**SEMI-FIELD EVALUATIONS OF THE IMPACT OF NOVEL BITE PREVENTION INTERVENTIONS ON ANOPHELES MINIMUS LANDING AND KEY LIFE HISTORY TRAITS IN THAILAND**

Elodie Vajda<sup>1</sup>, Amanda Ross<sup>2</sup>, Manop Saeung<sup>3</sup>, Arissara Pongsiri<sup>4</sup>, David McIver<sup>5</sup>, Allison Tatarsky<sup>6</sup>, Nakul Chitnis<sup>7</sup>, Jeffrey Hii<sup>8</sup>, Jason Richardson<sup>9</sup>, Michael Macdonald<sup>6</sup>, Sarah J. Moore<sup>1</sup>, Neil F. Lobo<sup>1</sup>, Theeraphap Chareonviriyaphap<sup>3</sup>, Alongkot Ponlawat<sup>4</sup>  
<sup>1</sup>University of California, San Francisco/University of Basel/Swiss Tropical and Public Health Institute, San Francisco, CA, United States, <sup>2</sup>University of Basel/Swiss Tropical and Public Health Institute, Basel, Switzerland, <sup>3</sup>Kasetsart University, Bangkok, Thailand, <sup>4</sup>Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, <sup>5</sup>University of California, San Francisco, San Francisco, CA, United States, <sup>6</sup>Innovative Vector Control Consortium, Liverpool, United Kingdom, <sup>7</sup>Ifakara Health Institute, Bagamoyo, United Republic of Tanzania, <sup>8</sup>University of Notre Dame/University of California, San Francisco, Notre Dame, IN, United States

**Symposium 173**

**Plasmepsin Inhibitors: Novel Mechanisms Leading to an Antimalarial Development Candidate**

Regency Ballroom D - Ballroom Level (West Tower)  
Sunday, October 22, 11:30 a.m. - 1:15 p.m. U.S. Central Time Zone

This session does not carry CME credit.

Phenotypic screens of an aspartyl protease inhibitor library identified potent plasmepsin X (an aspartic protease) hits. Potency, pharmacokinetics and pharmacodynamics properties were optimized by a medicinal chemistry program that yielded clinical candidate MK-7602, a potent dual plasmepsin IX (an aspartic protease related to plasmepsin X but having distinct protein substrates) and X inhibitor with robust *in vivo* efficacy against liver, blood, and transmission stages of the malaria parasite life cycle. This compound has an excellent resistance profile with a very high barrier to the selection of resistance by *P. falciparum* and has advanced into a first in human phase 1 clinical trial. Speakers will convey the biological advantages of targeting highly conserved plasmepsin enzymes that culminate in the discovery

Sunday  
October 22

of antimalarial drug candidate MK-7602. More specifically, data will be presented on: 1) the essential highly conserved molecular targets plasmepsin IX and X; 2) drug resistance in malaria and data describing the high barrier for the development of resistance in *P. falciparum* for dual targeting plasmepsin inhibitors; 3) data demonstrating robust long-lasting immunity in mice for liver-stage plasmepsin treated animals (ChemoVaccination), and how this sporozoite derived immunity could confer long lasting immunity against malaria clinically; 4) the breadth of spectrum of dual targeting plasmepsin inhibitors including activity against *P. falciparum*, *P. vivax* and *P. knowlesi*; 5) a detailed understanding of the in vivo pharmacokinetic and pharmacodynamic properties of plasmepsin inhibition, and; 6) how these parameters culminate in the discovery of and early clinical data for MK-7602.

#### **CHAIR**

Alan F. Cowman  
*The Walter and Eliza Hall Institute of Medical Research, Parkville, Australia*

David Olsen  
*Merck and Co Inc, West Point, PA, United States*

#### **11:30 a.m.** **INTRODUCTION**

#### **11:40 a.m.** **DEVELOPMENT OF PLASMEPSIN IX/X DUAL INHIBITORS - BIOLOGY AND MECHANISM OF ACTION**

Alan F. Cowman  
*WEHI, Parkville, Australia*

#### **Noon** **DUAL PLASMEPSIN INHIBITORS: 3 STAGE MALARIA INHIBITORY POTENCY AND ROBUST *P. FALCIPARUM* RESISTANCE PROFILE**

Paola Favuzza  
*The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia*

#### **12:20 p.m.** **CHALLENGES OF *P. VIVAX* MALARIA TREATMENT: PLASMEPSIN INHIBITOR PROFILING**

Agnes Orbanova  
*Malaria Research Unit, Institut Pasteur du Cambodge, Phnom Penh, Cambodia*

#### **12:40 p.m.** **SAFETY, TOLERABILITY, AND PHARMACOKINETICS OF THE ANTIMALARIAL MK-7602 IN HEALTHY PARTICIPANTS**

Susan E. Stanley  
*Merck and Co Inc, Boston, MA, United States*

#### **1 p.m.** **CHEMOVACCINATION: LIVER STAGE PLASMEPSIN INHIBITOR PHARMACOLOGY LEADING TO LONG LASTING IMMUNITY TO REINFECTION**

Justin A. Boddey  
*The Walter and Eliza Hall Institute of Medical Research, Parkville, Australia*

## **ASTMH 2023 Annual Meeting Adjourns**

Sunday, October 22, 1:15 p.m. U.S. Central Time Zone

## **See you next year at the 2024 Annual Meeting**

October 23-27, 2024 (Wednesday through Sunday)

New Orleans Ernest N. Morial Convention Center  
New Orleans, Louisiana, United States



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