

## Wednesday, October 18

### Registration

Grand Ballroom Foyer - Ballroom Level (East Tower)  
 Wednesday, October 18, 9 a.m. - 7:30 p.m. U.S. Central Time Zone

### Prayer Room

Hong Kong - Ballroom Level (West Tower) and Field - Third Floor (West Tower)  
 Wednesday, October 18, 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)  
 Wednesday, October 18, 7 a.m. - 7 p.m. U.S. Central Time Zone

### Global Health (ACGH) Pre-Meeting Course: Effectively Communicating in Global Health: The Science of Public Engagement and Lessons from the Field

Michigan 3 - Concourse Level (East Tower)  
 Wednesday, October 18, 9 a.m. - 3:30 p.m. U.S. Central Time Zone

The purpose of this course is to provide global health professionals tools they need to improve their engagement with community partners and their communication with media, governments, healthcare professionals and the general public. In this course, participants will first learn methodologies of developing successful public engagement activities and initiatives and will hear from experts in the field of community and public engagement. They will then learn didactic and pragmatic tools for communicating in science and the science behind these tools and gain more specific tools tailored to global health work from professionals working in public health. By the end of the course, participants will have learned the skills needed to more effectively communicate their work to various different audiences.

At the end of the activity, participants will be able to:

- ▶ Understand the basic principles of public engagement, science communication and community outreach;
- ▶ Consider the different audiences in global health communication and tools for reaching them;
- ▶ Describe the best approaches for community outreach;
- ▶ Compare/contrast the differences between community outreach and communicating scientific content; and
- ▶ Develop a toolkit that can be used for communicating their work in the future.

#### COURSE CO-CHAIRS

James Colborn  
 Clinton Health Access Initiative, Inc., Evergreen, CO, United States  
 Hannah Bialic  
 Wellcome Centre for Integrative Parasitology, University of Glasgow, Glasgow, United Kingdom

#### 9 a.m. WELCOME, INTRODUCTION OF TOPICS AND LOGISTICS

James Colborn  
 Clinton Health Access Initiative, Inc., Evergreen, CO, United States

Hannah Bialic  
 Wellcome Centre for Integrative Parasitology, University of Glasgow, Glasgow, United Kingdom

#### 9:15 a.m. COMMUNITY ENGAGEMENT IN NORTHEAST THAILAND

Tom Crellen  
 University of Glasgow, Glasgow, United Kingdom

#### 9:15 a.m. COMMUNITY ENGAGEMENT IN NORTHEAST THAILAND

Arporn Wangwiwatsin  
 Khon Kaen University, Khon Kaen, Thailand

#### 9:45 a.m. COMMUNITY ENGAGEMENT AND HEALTH MESSAGING IN MALAWI

Janelisa Musaya  
 Kamuzu University of Health Sciences, Blantyre, Malawi

#### 10:15 a.m. PUBLIC ENGAGEMENT IN GLOBAL HEALTH: HOW, WHERE AND WHY (WORKSHOP)

Hannah Bialic  
 Wellcome Centre for Integrative Parasitology, University of Glasgow, Glasgow, United Kingdom

#### 10:15 a.m. PUBLIC ENGAGEMENT IN GLOBAL HEALTH: HOW, WHERE AND WHY (WORKSHOP)

Julian C. Rayner  
 Cambridge Institute for Medical Research, University of Cambridge, Cambridge, United Kingdom

#### 11:30 a.m. BREAK

#### 11:45 a.m. PANEL DISCUSSION - COMMUNITY OUTREACH AND PUBLIC ENGAGEMENT

Tom Crellen  
 University of Glasgow, Glasgow, United Kingdom

Arporn Wangwiwatsin  
 Khon Kaen University, Khon Kaen, Thailand

Janelisa Musaya  
 Blantyre, Malawi

#### 12:15 p.m. LUNCH BREAK

#### 1 p.m. INTRODUCTION OF AFTERNOON SESSION

James Colborn  
 Clinton Health Access Initiative, Inc., Evergreen, CO, United States

Hannah Bialic  
 Wellcome Centre for Integrative Parasitology, University of Glasgow, Glasgow, United Kingdom

**1:15 p.m.**

**COMMUNICATING SCIENCE TO THE MEDIA**

Jennie Bragg  
*Malaria No More, Washington, DC, United States*

**2 p.m.**

**RISK COMMUNICATIONS – STRATEGIES TO COMMUNICATE PUBLIC HEALTH INFORMATION DURING OUTBREAKS**

Jessica Anderson  
*U.S. Centers for Disease Control and Prevention, Atlanta, GA, United States*

**2:30 p.m.**

**RESEARCH ELEVATOR PITCH INTERACTIVE SESSION**

Hannah Bialic  
*Wellcome Centre for Integrative Parasitology, University of Glasgow, Glasgow, United Kingdom*

**2:30 p.m.**

**RESEARCH ELEVATOR PITCH INTERACTIVE SESSION**

Julian C. Rayner  
*Cambridge Institute for Medical Research, University of Cambridge, Cambridge, United Kingdom*

**Clinical Pre-Meeting Course (ACCTMTH):  
Fever in the Tropics**

*Plaza Ball Room- Lobby Level (East Tower)*

**Wednesday, October 18, 9 a.m. - 5 p.m. U.S. Central Time Zone**

The purpose of this course is to educate healthcare professionals about the clinical aspects of fever in the tropics and the etiologies prevalent in Central and Southeast Asia, Sub-Saharan Africa and Central and South America. Participants will learn about the epidemiology of fevers in tropical areas, their diagnosis, management, prevention and control, as well as the public health impact and the measures taken by public health authorities to prevent and control these diseases and their transmission.

**COURSE CO-CHAIRS**

Sapha Barkati  
*J.D. MacLean Centre for Tropical Diseases, McGill University, Montreal, QC, Canada*  
Miguel Cabada  
*University of Texas Medical Branch and UPGH and UTMB Collaborative Research Center – Cusco Universidad Peruana Cayetano Heredia, Galveston, TX, United States*

**9 a.m.**

**INTRODUCTION**

Sapha Barkati  
*J.D. MacLean Centre for Tropical Diseases, McGill University, Montreal, QC, Canada*  
Miguel Cabada  
*University of Texas Medical Branch and UPGH and UTMB Collaborative Research Center – Cusco Universidad Peruana Cayetano Heredia, Galveston, TX, United States*

**9:15 a.m.**

**EMERGENT CAUSES OF FEVER OUTSIDE THE TROPICS**

Francesca Norman  
*Hospital Ramón Y Cajal, Madrid, Spain*

**10 a.m.**

**FEVER IN CENTRAL AND SOUTH AMERICA**

Carlos Seas  
*Universidad Peruana Cayetano Heredia, Instituto de Medicina Tropical Alexander von Humboldt, Lima, Peru*

**10:45 a.m.**

**BREAK**

**11 a.m.**

**FEVER IN SUB-SAHARAN AFRICA**

Emmanuel Bottieau  
*Institute of Tropical Medicine, Antwerp, Belgium*

**11:45 a.m.**

**INTERACTIVE CASE PRESENTATION**

Carlos Seas  
*Universidad Peruana Cayetano Heredia, Lima, Peru*

**11:45 a.m.**

**INTERACTIVE CASE PRESENTATION**

Emmanuel Bottieau  
*Institute of Tropical Medicine, Antwerp, Belgium*

**12:30 p.m.**

**LUNCH**

**1:30 p.m.**

**FEVER FROM SOUTH CENTRAL ASIA**

Priscilla Rupali  
*Christian Medical College (CMC), Vellore, India*

**2:15 p.m.**

**EPIDEMIOLOGY OF FEVER IN THE TROPICS**

Michael Libman  
*McGill University, Montréal, QC, Canada*

**3 p.m.**

**BREAK**

**3:15 p.m.**

**FEVER IN SOUTHEAST ASIA**

Wasin Matsee  
*Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand*

**4 p.m.**

**INTERACTIVE CASE PRESENTATIONS**

Wasin Matsee  
*Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand*

**Young Investigator Award Sessions**

The Young Investigator Award is presented to outstanding young researchers during the Annual Meeting. This award encourages developing young scientists to pursue careers in various aspects of tropical disease research. Support these young scientists by attending their presentations during this session.

**ASTMH thanks Pfizer for support of the Young Investigators.**

**ASTMH thanks the following Friends of the Young Investigators**

**Anonymous**

**William A. Petri, Jr. in memory of William A. Petri, Sr.**

**All individuals who made a donation during registration and throughout the year.**

## Young Investigator Award Session A

Grand Hall J - Ballroom Level (East Tower)

Wednesday, October 18, 9 a.m. – 2 p.m. U.S. Central Time Zone

### JUDGE

Sasisekhar Bennuru

National Institutes of Health, Bethesda, MD, United States

Katia Bruxvoort

University of Alabama at Birmingham, Birmingham, AL, United States

Juliana Otieno

Uzima University, Kisumu, Kenya

5029

### TEMPORAL TRENDS OF BLOOD GLUCOSE IN CHILDREN WITH CEREBRAL MALARIA

**Kennedy M. Chastang**<sup>1</sup>, Rami Imam<sup>2</sup>, Meredith G. Sherman<sup>3</sup>, Ronke Olowojesiku<sup>4</sup>, Amina M. Mukadam<sup>5</sup>, Karl B. Seydel<sup>6</sup>, Alice M. Liomba<sup>7</sup>, John R. Barber<sup>8</sup>, Douglas G. Postels<sup>9</sup>

<sup>1</sup>Howard University, Washington, DC, United States, <sup>2</sup>The George Washington University School of Medicine, Washington, DC, United States, <sup>3</sup>Global Health Initiative, Children's National Medical Center, Washington, DC, United States, <sup>4</sup>Department of Pediatrics, Children's National Medical Center, Washington, DC, United States, <sup>5</sup>University of Washington, Seattle, WA, United States, <sup>6</sup>Michigan State University, East Lansing, MI, United States, <sup>7</sup>Blantyre Malaria Project, Blantyre, Malawi, <sup>8</sup>Division of Biostatistics and Study Methodology, Children's National Research Institute, Washington, DC, United States, <sup>9</sup>Division of Neurology, Children's National Medical Center, Washington, DC, United States

5537

### FECAL PH AS A MARKER OF CHRONIC MALNUTRITION OR STUNTING AMONG CHILDREN HOSPITALIZED FOR DIARRHEA AND OTHER NON-DIARRHEAL PATHOLOGIES

**Md. Shabab Hossain**

International Centre for Diarrhoeal Disease Research, Bangladesh (icddr), Dhaka, Bangladesh

5706

### EFFECTIVENESS OF THE EUVICHOL® ORAL CHOLERA VACCINE AT 2 YEARS: A CASE-CONTROL AND BIAS-INDICATOR STUDY IN HAITI

**Wilfredo R. Matias**<sup>1</sup>, Yodeline Guillaume<sup>1</sup>, Gertrude Cene Augustin<sup>2</sup>, Kenia Vissieres<sup>2</sup>,

Ralph Ternier<sup>2</sup>, Damien M. Slater<sup>1</sup>, Jason B. Harris<sup>1</sup>, Molly F. Franke<sup>3</sup>, Louise C. Ivers<sup>1</sup>

<sup>1</sup>Massachusetts General Hospital, Boston, MA, United States, <sup>2</sup>Zanmi Lasante, Port-au-Prince, Haiti, <sup>3</sup>Harvard Medical School, Boston, MA, United States

5763

### POTENTIAL SUITABILITY OF SULFADOXINE-PYRIMETHAMINE PLUS AMODIAQUINE FOR SEASONAL MALARIA CHEMOPREVENTION IN AREAS OF HIGH, PRE-EXISTING DRUG RESISTANCE

**Gina Maria Cuomo-Dannenburg**<sup>1</sup>, Andria Mousa<sup>2</sup>, Sam Gudoi<sup>3</sup>, Kevin Baker<sup>3</sup>, Maria Suau

Sans<sup>3</sup>, Chuku Nnaji<sup>3</sup>, John Baptist Bwanika<sup>3</sup>, Ivan Alejandro Pulido Tarquino<sup>3</sup>, Christian

Rassi<sup>3</sup>, Monica A. de Cola<sup>1</sup>, Craig Bonnington<sup>3</sup>, Robert Verity<sup>1</sup>, Matthew Cairns<sup>2</sup>, Paul

Milligan<sup>2</sup>, Cally Roper<sup>2</sup>, Lucy Okell<sup>1</sup>, Patrick G T Walker<sup>1</sup>

<sup>1</sup>Imperial College London, London, United Kingdom, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Malaria Consortium, London, United Kingdom

5839

### ASSOCIATIONS BETWEEN MATERNAL AND PATERNAL STRESS, MATERNAL DEPRESSION, MATERNAL EXPOSURE TO INTIMATE PARTNER VIOLENCE, AND CHILD STRESS

**Alexis V. Silvera**<sup>1</sup>, Zachary Butzin-Dozier<sup>1</sup>, Sophia T. Tan<sup>1</sup>, Andrew N. Mertens<sup>1</sup>, Kausar

Parvin<sup>2</sup>, Md. Mahfuz Al Mamun<sup>2</sup>, Dora Il'yasova<sup>3</sup>, Md. Ziaur Rahman<sup>2</sup>, Helen O. Pitchik<sup>1</sup>,

Benjamin F. Arnold<sup>4</sup>, Idan Shalev<sup>5</sup>, Ivan Spasojevic<sup>3</sup>, Shahjahan Ali<sup>2</sup>, Gabrielle Shuman<sup>1</sup>,

Mohammed R. Karim<sup>2</sup>, Sunny Shahriar<sup>2</sup>, Christine P. Stewart<sup>6</sup>, Abul K. Shoab<sup>2</sup>, Syeda L.

Famida<sup>2</sup>, Salma Akther<sup>2</sup>, Md. Saheen Hossen<sup>2</sup>, Palash Mutsuddi<sup>2</sup>, Mahbubur Rahman<sup>2</sup>,

Leanne Unicomb<sup>2</sup>, Liying Yan<sup>7</sup>, Lia C. H. C. H. Fernald<sup>1</sup>, John M. Colford Jr.<sup>1</sup>, Stephen P.

Luby<sup>8</sup>, Douglas A. Granger<sup>9</sup>, Ruchira T. Naved<sup>2</sup>, Audrie Lin<sup>5</sup>

<sup>1</sup>School of Public Health, University of California, Berkeley, Berkeley, CA, United

States, <sup>2</sup>International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka,

Bangladesh, <sup>3</sup>Department of Medicine, Duke University, Durham, NC, United States, <sup>4</sup>Francis

I. Proctor Foundation, University of California, San Francisco, San Francisco, CA, United

States, <sup>5</sup>Department of Biobehavioral Health, Pennsylvania State University, University

Park, PA, United States, <sup>6</sup>Department of Nutrition, University of California, Davis, Davis, CA,

United States, <sup>7</sup>EpigenDx, Inc., Hopkinton, MA, United States, <sup>8</sup>Division of Infectious Diseases

and Geographic Medicine, Stanford University, Stanford, CA, United States, <sup>9</sup>Institute for

Interdisciplinary Salivary Bioscience Research, University of California, Irvine, Irvine, CA,

United States

6310

### CLINICAL SIGNS AND IMMUNE RESPONSE CHANGES DURING PLASMODIUM FRAGILE CO-INFECTION OF ART-TREATED HIV+ RHESUS MACAQUES

**Sydney Nempfos**<sup>1</sup>, Hannah Green<sup>1</sup>, Sallie Fell<sup>1</sup>, James Prusak<sup>1</sup>, Kelly Goff<sup>1</sup>, Matilda

Moström<sup>1</sup>, Coty Tatum<sup>1</sup>, Robert Blair<sup>1</sup>, Carolina Allers<sup>1</sup>, Monica Embers<sup>1</sup>, Nicholas

Maness<sup>1</sup>, Preston Marx<sup>1</sup>, Brooke Gasperge<sup>1</sup>, Amitinder Kaur<sup>1</sup>, Berlin Londono-Renteria<sup>2</sup>,

Jennifer A. Manuzak<sup>1</sup>

<sup>1</sup>Tulane National Primate Research Center, Covington, LA, United States, <sup>2</sup>Tulane School of

Public Health and Tropical Medicine, New Orleans, LA, United States

6425

### DEVELOPING NOVEL FLATWORM ION CHANNEL LIGANDS TO TREAT NEGLECTED TROPICAL DISEASES

**Daniel J. Sprague**<sup>1</sup>, Sang-Kyu Park<sup>1</sup>, Claudia M. Rohr<sup>1</sup>, Simone Häberlein<sup>2</sup>, Jonathan S.

Marchant<sup>1</sup>

<sup>1</sup>Medical College of Wisconsin, Milwaukee, WI, United States, <sup>2</sup>Institute of Parasitology,

Justus Liebig University Giessen, Giessen, Germany

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>3</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

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

6766

### 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>

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

7021

### ASSOCIATION BETWEEN ARTERIAL STIFFNESS AND LOAMICROFILAREMIA: 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>5</sup>, Cédric B. Chesnais<sup>1</sup>

<sup>1</sup>Institut de Recherche pour le Développement, Montpellier, France, <sup>2</sup>CHU de Montpellier, Montpellier, France, <sup>3</sup>AP-HP, Paris, France, <sup>4</sup>PNLO, Brazzaville, Republic of the Congo, <sup>5</sup>CHU de Nîmes, Nîmes, France

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>7</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

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 Mangui<sup>3</sup>, Sabine Renggli<sup>2</sup>, Geoffrey Ashery<sup>2</sup>, Margreth Joram<sup>2</sup>, Ibrahim E. Mtebene<sup>2</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>5</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

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

### Young Investigator Award Session B

Roosevelt 3B - Concourse Level (East Tower)

Wednesday, October 18, 9 a.m. – 2 p.m. U.S. Central Time Zone

#### JUDGE

Andrea Conroy  
Indiana University, Indianapolis, IN, United States

Alex Eapen  
National Institute of Malaria Research, Chennai, India

Hugues C. Nana Djeunga  
Centre for Research on Filariasis and other Tropical Diseases (CRFiMT), Yaounde, Cameroon

Ashley Vaughan  
Seattle Children's Research Institute, Seattle, WA, United States

5313

### EVALUATING THE CONTRIBUTION OF NS1 ANTIGENEMIA TO DENGUE-ELICITED NEUTROPENIA

Chad Gebo, Mitchell Waldran, Lauren Bahr, Adam Wegman, Nathan Roy, Adam Waickman

SUNY Upstate Medical University, Syracuse, NY, United States

5348

### SIMPLE, INEXPENSIVE *IN VITRO* DRUG SURVIVAL ASSAY FOR MONITORING ANTIMALARIAL DRUG SENSITIVITY IN MALARIA ENDEMIC REGIONS

Chinedu Ogbonnia Egwu, Fatoumata Bojang, Ndey Fatou Drammeh, Aminata Seedy Jawara, Fatou K. Jaitheh, Eniyou Oriero, Alfred Amambua-Ngwa  
Medical Research Council unit at London School School of Hygiene and Tropical Medicine, Banjul, Gambia

5388

### EXPLORING DIMETHYL FUMARATE AS AN ADJUNCTIVE THERAPY FOR CEREBRAL MALARIA IN EXPERIMENTAL CEREBRAL MALARIA MODEL

Cheryl Sachdeva<sup>1</sup>, Tarun Keswani<sup>1</sup>, Akua Mensah<sup>2</sup>, Min-Hui Cui<sup>1</sup>, Craig Branch<sup>1</sup>, Johanna P. Daily<sup>1</sup>

<sup>1</sup>Albert Einstein College of Medicine, Bronx, NY, United States, <sup>2</sup>CUNY Lehman College, Bronx, NY, United States

5512

**COMPARISON OF ESTIMATES OF MALARIA TRANSMISSION INTENSITY DERIVED FROM THE FACILITY-BASED TEST POSITIVITY RATE VERSUS HOUSEHOLD, MALARIA-INDICATOR STYLE SURVEYS****Brandon D. Hollingsworth<sup>1</sup>**, Emmanuel Baguma<sup>2</sup>, Moses Ntaro<sup>2</sup>, Edgar Mulogo<sup>2</sup>, Ross M. Boyce<sup>3</sup><sup>1</sup>Cornell University, Ithaca, NY, United States, <sup>2</sup>Mbarara University of Science & Technology, Mbarara, Uganda, <sup>3</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States

5658

**SCHISTOSOMAL CIRCULATING ANODIC ANTIGEN CLEARANCE IN PRESCHOOL AGED CHILDREN FROM THE PIP (PRAZIQUANTEL IN PRESCHOOLERS) TRIAL****Gloria Kakoba Ayebazibwe<sup>1</sup>**, Andrew Edielu<sup>1</sup>, Susannah Colt<sup>2</sup>, Emily L. Webb<sup>3</sup>, Patrice A. Mawa<sup>1</sup>, Hannah W. Wu<sup>3</sup>, Govert J. van Dam<sup>4</sup>, Paul Corstjens<sup>4</sup>, Racheal Nakyesige<sup>1</sup>, Jennifer F. Friedman<sup>2</sup>, Amaya L. Bustinduy<sup>3</sup><sup>1</sup>Medical Research Council/Uganda Virus Research Institute and London School of Hygiene & Tropical Medicine Uganda Research Unit, Entebbe, Uganda, <sup>2</sup>Lifespan Center for International Health Research, Providence, Rhode Island, RI, United States, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>4</sup>Leiden University Medical Centre, Leiden, Netherlands

6026

**MOSQUITO ID: NANOPORE SEQUENCING OUT OF A SUITCASE LAB AS AN EARLY WARNING SYSTEM FOR EMERGING INFECTIOUS DISEASES****Arianna Ceruti<sup>1</sup>**, Antonios Michaelakis<sup>2</sup>, Marina Bisia<sup>2</sup>, Uwe Truyen<sup>1</sup>, Georgios Balatsos<sup>2</sup>, John Palmer<sup>3</sup>, Mohammad Shafiul Alam<sup>4</sup>, Ahmed Abd El Wahed<sup>1</sup><sup>1</sup>Leipzig University, Leipzig, Germany, <sup>2</sup>Benaki Phytopathological Institute, Athens, Greece, <sup>3</sup>Universitat Pompeu Fabra, Barcelona, Spain, <sup>4</sup>icddr, Dhaka, Bangladesh

6172

**DEFINING THE *PLASMODIUM* PIPECOLIC ACID PATHWAY AND ROLE IN CEREBRAL MALARIA****Akua Mensah<sup>1</sup>**, Cheryl Sachdeva<sup>2</sup>, Tarun Keswani<sup>2</sup>, Edward Nieves<sup>2</sup>, Photini Sinnis<sup>3</sup>, Terrie Taylor<sup>4</sup>, Karl Seydel<sup>4</sup>, Kyu Rhee<sup>5</sup>, Anas Saleh<sup>5</sup>, Johanna P Daily<sup>2</sup><sup>1</sup>CUNY Lehman College, Bronx, NY, United States, <sup>2</sup>Albert Einstein College of Medicine, Bronx, NY, United States, <sup>3</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>4</sup>Michigan State University, East Lansing, MI, United States, <sup>5</sup>Weill Cornell Medical College, New York, NY, United States

6275

**LATE POST-TREATMENT INFLAMMATORY RESPONSE AND RESIDUAL CALCIFICATION IN NEUROCYSTICERCOSIS****Laura E. Baquedano Santana<sup>1</sup>**, Noemi Miranda<sup>1</sup>, Gianfranco Arroyo<sup>1</sup>, Hector H. Garcia<sup>2</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

6438

**MULTIPLEXED ANTIGEN SPECIFIC ANTIBODY FC PROFILING FOR POINT OF CARE DIAGNOSIS OF TUBERCULOSIS****Sarah Ali**, Preetham Peddireddy, Abhipsa Panigrahi, Asma Hashim, Aniruddh Sarkar  
*Georgia Institute of Technology, Atlanta, GA, United States*

6458

**ASSESSING PROGRESS TOWARDS THE WORLD HEALTH ORGANIZATION TARGET OF ZERO CATASTROPHIC COSTS DUE TO TUBERCULOSIS BY 2035****Paula P. Jimenez<sup>1</sup>**, Sumona Datta<sup>2</sup>, Luz Quevedo Cruz<sup>1</sup>, Matthew J. Saunders<sup>1</sup>, Carlton A. Evans<sup>1</sup><sup>1</sup>Innovation For Health and Development, London, United Kingdom, <sup>2</sup>Department of Clinical Sciences, Liverpool School of Tropical Medicine, Liverpool, United Kingdom

6790

**INVESTIGATING THE ACCURACY OF MALARIA DIAGNOSTIC TESTS: A BAYESIAN META-ANALYSIS COMPARING CONVENTIONAL AND ULTRASENSITIVE RAPID DIAGNOSTIC TOOLS****Muhammed Elfaituri**, Taha Khaled*University of Tripoli, Tripoli, Libyan Arab Jamahiriya*

6876

**MOLECULAR EPIDEMIOLOGY OF NON-FALCIPARUM *PLASMODIUM* INFESTATIONS IN DIFFERENT AREAS OF THE IVORY COAST****Assouhoun Jean Sebastien Miezán<sup>1</sup>**, Akpa Paterne Gnagne<sup>2</sup>, Akoua Valérie Bedia-Tanoh<sup>1</sup>, Estelle Kone<sup>1</sup>, Abibatou Konate-Toure<sup>1</sup>, Kpongbo Etienne Angora<sup>1</sup>, Abo Henriette Bosson-Vanga AH<sup>1</sup>, Kondo Fulgence Kassi<sup>1</sup>, Pulchérie Christiane Michelle Kiki-Barro<sup>1</sup>, Vincent Djohan<sup>1</sup>, Eby Hervé Menan<sup>1</sup>, William Yavo<sup>3</sup><sup>1</sup>UNIVERSITE FELIX HOUPHOUET BOIGNY, Abidjan, Côte D'Ivoire, <sup>2</sup>National Institute of Public Health, Abidjan, Côte D'Ivoire, <sup>3</sup>Universite Felix Houphoet Boigny, Abidjan, Côte D'Ivoire

6978

**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, Mohammad Jobayer Chisti*International Centre for Diarrheal Disease Research, Bangladesh, Dhaka, Bangladesh*

7018

**TOWARDS IMPROVED ONCHOCERCIASIS DIAGNOSTICS: CHARACTERIZATION OF A MAJOR ANTIGEN OF ONCHOCERCA VOLVULUS IDENTIFIED FROM THE PLASMA OF INFECTED INDIVIDUALS****Adebiji A. Adeniran**, Kurt C. Kurtis, Lucia Sanchez Di Maggio, Kerstin Fischer, Gary Weil, Peter U. Fischer*Washington University School of Medicine, St Louis, MO, United States***Young Investigator Award Session C***Regency Ballroom A - Ballroom Level (West Tower)***Wednesday, October 18, 9 a.m. – 2 p.m. U.S. Central Time Zone****JUDGE**

Fernando Bruno

*National Institutes of Health, Bethesda, MD, United States*

Rebecca Fischer

*Texas A&M University, College Station, TX, United States*

Alexander Kwarteng

*Kumasi Centre for Collaborative Research in Tropical Medicine, Kumasi, Ghana*

5273

**SUPERSPREADING OF SARS-COV-2: A SYSTEMATIC REVIEW AND META-ANALYSIS****Clifton D. McKee<sup>1</sup>**, Emma X. Yu<sup>1</sup>, Andrés Garcia<sup>1</sup>, Jules Jackson<sup>1</sup>, Aybüke Koyuncu<sup>1</sup>, Sophie Rose<sup>1</sup>, Andrew S. Azman<sup>1</sup>, Katie Lobner<sup>2</sup>, Emma Sacks<sup>1</sup>, Maria Van Kerkhove<sup>3</sup>, Emily S. Gurley<sup>1</sup><sup>1</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>2</sup>Welch Medical Library, Johns Hopkins School of Medicine, Baltimore, MD, United States, <sup>3</sup>World Health Organization, Geneva, Switzerland

5408

### KNOWLEDGE AND PERCEPTIONS OF NATIONAL GUIDELINES FOR THE CASE MANAGEMENT OF MALARIA IN PREGNANCY AMONG HEALTHCARE PROVIDERS AND DRUG DISPENSERS IN THE CONTEXT OF MULTIPLE FIRST-LINE THERAPIES IN WESTERN KENYA: A MIXED METHODS STUDY

Caroline B. Osoro<sup>1</sup>, Stephanie Dellicour<sup>2</sup>, Eleanor Ochodo<sup>1</sup>, Taryn Young<sup>1</sup>, Feiko O. ter Kuile<sup>2</sup>, Julie R. Gutman<sup>3</sup>, Jenny Hill<sup>2</sup>

<sup>1</sup>Stellenbosch University, Cape Town, South Africa, <sup>2</sup>Liverpool School of Tropical Medicine, Liverpool, United Kingdom, <sup>3</sup>United States Centers for Disease Control and Prevention, Atlanta, GA, United States

5426

### A PRELIMINARY ANALYSIS OF HEALTH BEHAVIORS AND ACCESS TO CARE FOR SEVERE MALARIA DISEASE AT SUSSUNDENGA-SEDE HEALTH CENTER

Dominique E. Earland<sup>1</sup>, Albino F. Bibe<sup>2</sup>, Vali Muhiro<sup>3</sup>, Diocleciano Nelio<sup>3</sup>, João Ferrão<sup>4</sup>, Kelly Searle<sup>1</sup>

<sup>1</sup>University of Minnesota School of Public Health, Minneapolis, MN, United States, <sup>2</sup>Escola Secundária de Sussundenga, Manica, Mozambique, <sup>3</sup>Sussundenga-Sede Rural Health Center, Manica, Mozambique, <sup>4</sup>Consultores Associados de Manica, Manica, Mozambique

5572

### RETROSPECTIVE EPIDEMIOLOGICAL STUDY ON THE EFFECTIVENESS OF VISCERAL LEISHMANIASIS TREATMENT PROTOCOLS AND RISK FACTORS FOR RELAPSE IN TIATY EAST AND TIATY WEST SUB-COUNTIES, KENYA

Grace C. Kennedy<sup>1</sup>, Katherine O'Brien<sup>1</sup>, Hellen Nyakundi<sup>2</sup>, Mwatela Kitondo<sup>2</sup>, Wilson Biwott<sup>3</sup>, Richard G. Wamai<sup>4</sup>

<sup>1</sup>Department of Health Sciences, Bouve College of Health Sciences, Northeastern University, Boston, MA, United States, <sup>2</sup>African Center for Community Investment in Health, Chemolingot, Kenya, <sup>3</sup>Chemolingot Sub-county Hospital, Chemolingot, Kenya, <sup>4</sup>Department of Cultures, Societies, and Global Studies, College of Social Sciences and Humanities, Northeastern University, Boston, MA, United States

5661

### POPULATION LEVEL IMPACT OF NOVEL DRUGS TARGETING JUVENILE SCHISTOSOMES ON CONTROL AND ELIMINATION OF SCHISTOSOMIASIS

Benjamin J. Singer<sup>1</sup>, Minoli Daigavane<sup>1</sup>, Sophia Tan<sup>1</sup>, Mireille Gomes<sup>2</sup>, Thomas Spangenberg<sup>2</sup>, Jason R. Andrews<sup>3</sup>, Isaac I. Bogoch<sup>4</sup>, Nathan C. Lo<sup>1</sup>

<sup>1</sup>University of California, San Francisco, San Francisco, CA, United States, <sup>2</sup>Global Health Institute of Merck, Ares Trading S.A., a subsidiary of Merck KGaA, Eysins, Switzerland, <sup>3</sup>Stanford University, Stanford, CA, United States, <sup>4</sup>University of Toronto, Toronto, ON, Canada

5750

### HEALTHY CHILDREN, HEALTHY CHIMPS: A RESEARCH-PRACTICE PARTNERSHIP FOR REDUCING RESPIRATORY DISEASE TRANSMISSION FROM HUMANS TO CHIMPANZEES IN UGANDA

Taylor Weary<sup>1</sup>, Tressa Pappas<sup>2</sup>, Patrick Tusiime<sup>3</sup>, Shamilah Tuhaise<sup>3</sup>, Elizabeth Ross<sup>3</sup>, James Gern<sup>2</sup>, Tony Goldberg<sup>1</sup>

<sup>1</sup>University of Wisconsin School of Veterinary Medicine, Madison, WI, United States, <sup>2</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, United States, <sup>3</sup>The Kasiisi Project, Fort Portal, Uganda

6080

### THRESHOLD LIMITS OF DETECTION AND QUANTIFICATION OF MALARIA PARASITES IN DRIED BLOOD SPOT: A COMBINED APPROACH OF MID-INFRARED SPECTROSCOPY AND MACHINE LEARNING

Issa H. Mshani<sup>1</sup>, Fredros Okumu<sup>1</sup>, Frank Musa<sup>1</sup>, Rehema Mwanga<sup>2</sup>, Doreen Josen<sup>1</sup>, Emmanuel P. Mwanga<sup>1</sup>, Prisca Kweyamba<sup>2</sup>, Simon A. Babayan<sup>3</sup>, Francesco Baldini<sup>3</sup>

<sup>1</sup>Ifakara Health Institute, Morogoro, United Republic of Tanzania, <sup>2</sup>Ifakara Health Institute, Bagamoyo, United Republic of Tanzania, <sup>3</sup>University of Glasgow, Glasgow, United Kingdom

6384

### ASSOCIATION OF FEMALE UROGENITAL SCHISTOSOMIASIS WITH HIGH-RISK HUMAN PAPILLOMAVIRUS AMONG WOMEN IN ZAMBIA: BASELINE RESULTS OF A LONGITUDINAL COHORT STUDY (THE ZIPIME WEKA SCHISTA STUDY)

Olimpia Lamberti<sup>1</sup>, Helen Kelly<sup>1</sup>, Rhoda Ndubani<sup>2</sup>, Nkatya Kasese<sup>2</sup>, Emily Webb<sup>3</sup>, Beatrice Nyondo<sup>2</sup>, Barry Kosloff<sup>2</sup>, Jennifer Fitzpatrick<sup>2</sup>, Bonnie Webster<sup>4</sup>, Maina Cheeba<sup>2</sup>, Helen Ayles<sup>2</sup>, Kwame Shanaube<sup>2</sup>, Amaya Bustinduy<sup>1</sup>

<sup>1</sup>Department of Clinical Research, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Zambart, Lusaka, Zambia, <sup>3</sup>Department of Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>4</sup>Natural History Museum, London, United Kingdom

6407

### INVESTIGATING THE POTENTIAL OF DENGUE AND ZIKA VIRUS TO ESTABLISH A SYLVATIC TRANSMISSION CYCLE IN THE NEOTROPICS THROUGH A MODELING LENS

Hélène Cecilia<sup>1</sup>, Benjamin M. Althouse<sup>2</sup>, Sasha R. Azar<sup>3</sup>, Shannan L. Rossi<sup>3</sup>, Nikos Vasilakis<sup>3</sup>, Kathryn A. Hanley<sup>1</sup>

<sup>1</sup>New Mexico State University, Las Cruces, NM, United States, <sup>2</sup>University of Washington, Seattle, WA, United States, <sup>3</sup>University of Texas Medical Branch, Galveston, TX, United States

6715

### 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>, Agricola 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, 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

6822

### EVALUATING THE EFFECT HETEROGENEITY OF MALARIA CAMP INTERVENTIONS IN HARD-TO-REACH AREAS OF ODISHA STATE, INDIA

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>3</sup>, Danielle C. Ompad<sup>1</sup>, Jane M. Carlton<sup>3</sup>, Yesim Tozan<sup>1</sup>

<sup>1</sup>New York University School of Global Public Health, New York, NY, United States, <sup>2</sup>Department of Molecular & Infectious Diseases, Community Welfare Society Hospital, Rourkela, India, <sup>3</sup>Center for Genomics and Systems Biology, Department of Biology, New York University, New York, NY, United States

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>,

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>2</sup>, Stella CW Self<sup>1</sup>, Melissa S. Nolan<sup>1</sup>

<sup>1</sup>University of South Carolina, Columbia, SC, United States, <sup>2</sup>Universidad de Antioquia, Medellín, Colombia, <sup>3</sup>Secretaría de Salud Departamento de Boyacá, Tunja, Colombia

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. Sumbah<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**Young Investigator Award Session D**

Regency Ballroom B - Ballroom Level (West Tower)

Wednesday, October 18, 9 a.m. – 2 p.m. U.S. Central Time Zone

**JUDGE**Charles Adetunji  
Edo State University, Iyambo, NigeriaDionicia Gamboa  
Universidad Peruana Cayetano Heredia, Lima, PeruPrasanna Jagannathan  
Stanford University, Stanford, CA, United StatesAnita Suresh  
FINN, Singapore, Singapore

5011

**WHO IS MISSED IN A COMMUNITY-BASED SURVEY: DIFFERENCES IN SOCIO-DEMOGRAPHIC CHARACTERISTICS AND HEALTHCARE SEEKING AMONG MISSED AND SAMPLED INDIVIDUALS FOR A SEROSURVEY IN ZAMBIA AND IMPLICATIONS FOR BIASED ESTIMATES OF HEALTHCARE SEEKING, VACCINATION COVERAGE, AND SEROPREVALENCE****Natalya Kostandova<sup>1</sup>**, Simon Mutembo<sup>1</sup>, Christine Prosper<sup>1</sup>, Francis D. Mwansa<sup>2</sup>, Chola N. Daka<sup>3</sup>, Harriet Namukoko<sup>3</sup>, Bertha Nachinga<sup>3</sup>, Gershom Chongwe<sup>4</sup>, Innocent Chilumba<sup>4</sup>, Kalumbu H. Matakala<sup>5</sup>, Gloria Musukwa<sup>5</sup>, Mutinta Hamahuwa<sup>5</sup>, Webster Mufwambi<sup>4</sup>, Japhet Matoba<sup>5</sup>, Kenny Situtu<sup>4</sup>, Irene Mutale<sup>4</sup>, Edgar Simulundu<sup>5</sup>, Phillimon Ndubani<sup>5</sup>, Alvira Z. Hasan<sup>1</sup>, Shaun A. Truelove<sup>1</sup>, Amy K. Winter<sup>6</sup>, Andrea C. Carcelen<sup>1</sup>, Amy Wesolowski<sup>1</sup>, Bryan Lau<sup>1</sup>, William J. Moss<sup>1</sup><sup>1</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Directorate of Public Health and Research, Ministry of Health, Lusaka, Zambia, <sup>3</sup>Zambia Statistics Agency, Lusaka, Zambia, <sup>4</sup>Tropical Diseases Research Centre, Ndola, Zambia, <sup>5</sup>Macha Research Trust, Macha, Zambia, <sup>6</sup>University of Georgia, Athens, GA, United States

5178

**THE GENOMICS BEHIND INSECTICIDE RESISTANCE IN ANOPHELES MOSQUITOES FROM THE BIJAGÓS ARCHIPELAGO****Sophie Moss<sup>1</sup>**, Elizabeth Pretorius<sup>1</sup>, Sainey Ceasay<sup>2</sup>, Robert Jones<sup>1</sup>, Jody Phelan<sup>1</sup>, Emma Collins<sup>1</sup>, Taane G. Clark<sup>1</sup>, Anna Last<sup>1</sup>, Susana Campino<sup>1</sup><sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Medical Research Council, The Gambia (MRCG), Serrekunda, Gambia

5209

**WOLBACHIA-INFECTED Aedes Aegypti TO CONTROL DENGUE IN DHAKA, BANGLADESH****Hasan Mohammad Al-Amin<sup>1</sup>**, Leon E. Hugo<sup>1</sup>, Gordana Rašić<sup>1</sup>, Nigel W. Beebe<sup>2</sup>, Gregor J. Devine<sup>3</sup><sup>1</sup>QIMR Berghofer Medical Research Institute, Brisbane, Australia, <sup>2</sup>University of Queensland, Brisbane, Australia, <sup>3</sup>QIMR Berghofer, Brisbane, Australia

5351

**PLASMODIUM FALCIPARUM KELCH13 R561H SPREAD AND EMERGENCE OF OTHER ARTEMISININ PARTIAL RESISTANT MUTATIONS ACROSS RWANDA USING A SITE AND TEMPORAL RAPID POOLING STRATEGY****Neeva Wernsman Young<sup>1</sup>**, Gashema Pierre<sup>2</sup>, David Giesbrecht<sup>1</sup>, Tharcisse Munyaneza<sup>3</sup>, Alec Leonetti<sup>1</sup>, Rebecca Crudale<sup>1</sup>, Vincent Iradukunda<sup>2</sup>, Ntwari Jean Bosco<sup>2</sup>, Corine Karema<sup>4</sup>, Jean-Baptiste Mazarati<sup>2</sup>, Jonathan J. Juliano<sup>5</sup>, Jeffrey A. Bailey<sup>1</sup><sup>1</sup>Brown University, Providence, RI, United States, <sup>2</sup>INES-Ruhengeri, Musanze, Rwanda, <sup>3</sup>National Reference Laboratory, Rwanda Biomedical Center, Kigali, Rwanda, <sup>4</sup>Quality Equity Health Care, Kigali, Rwanda, <sup>5</sup>University of North Carolina - Chapel Hill, Chapel Hill, NC, United States

5593

**BENCHMARKING AN ACCESSIBLE METHOD FOR GENERATING COMPLETE GENOMES FROM PARASITIC NEMATODES****Kaylee S. Herzog**, Joseph R. Fauver

University of Nebraska Medical Center, Omaha, NE, United States

6065

**COMPARISON OF STRENGTH OF SELECTION FOR P. FALCIPARUM ARTEMISININ RESISTANCE-ASSOCIATED MUTATIONS BETWEEN SOUTHEAST ASIA AND UGANDA****Cecile P. G. Meier-Scherling<sup>1</sup>**, Oliver J. Watson<sup>2</sup>, Victor Asua<sup>3</sup>, Isaac Ghinai<sup>4</sup>, Thomas Katairo<sup>3</sup>, Shreeya Garg<sup>5</sup>, Dominic Kwiatkowski<sup>4</sup>, Melissa Conrad<sup>5</sup>, Philip J. Rosenthal<sup>5</sup>, Lucy C. Okell<sup>2</sup>, Jeffrey A. Bailey<sup>6</sup><sup>1</sup>Center for Computational Molecular Biology, Brown University, Providence, RI, United States, <sup>2</sup>Medical Research Council Centre for Global Infectious Disease Analysis, Imperial College London, London, United Kingdom, <sup>3</sup>Infectious Diseases Research Collaboration, Kampala, Uganda, <sup>4</sup>Oxford University, Oxford, United Kingdom, <sup>5</sup>University of California San Francisco, Medicine, San Francisco, CA, United States, <sup>6</sup>Department of Pathology and Laboratory Medicine, Warren Alpert Medical School, Brown University, Providence, RI, United States

6432

**DISCORDANT CIRCULATING AND MUCOSAL ANTIBODY RESPONSES ELICITED BY SARS-COV-2 INFECTION AND VACCINATION IN A LONGITUDINAL COHORT FROM BRAZIL****Mariam O. Fofana<sup>1</sup>**, Julio Silva<sup>2</sup>, Nivison Nery Jr<sup>3</sup>, Juan Pablo Aguilar Ticona<sup>3</sup>, Valter Silva Monteiro<sup>2</sup>, Emilia Andrade Belitardo<sup>3</sup>, M. Catherine Muenker<sup>1</sup>, Jaqueline Cruz<sup>3</sup>, Renato Victoriano<sup>3</sup>, Daiana Santos de Oliveira<sup>3</sup>, Laiara Lopes dos Santos<sup>3</sup>, Juliet Oliveira Santana<sup>3</sup>, Ananias Sena do Aragão Filho<sup>3</sup>, Adam Waickman<sup>4</sup>, Ricardo Khouri<sup>3</sup>, Matt D.T. Hitchings<sup>5</sup>, Mitermayer G. Reis<sup>3</sup>, Federico Costa<sup>6</sup>, Carolina Lucas<sup>2</sup>, Akiko Iwasaki<sup>2</sup>, Derek Cummings<sup>5</sup>, Albert I. Ko<sup>1</sup><sup>1</sup>Yale School of Public Health, New Haven, CT, United States, <sup>2</sup>Yale School of Medicine, New Haven, CT, United States, <sup>3</sup>Instituto Gonçalo Moniz (Fiocruz), Salvador, Brazil, <sup>4</sup>SUNY Upstate Medical University, Syracuse, NY, United States, <sup>5</sup>University of Florida, Gainesville, FL, United States, <sup>6</sup>Universidade Federal da Bahia, Salvador, Brazil

**6615****CLIP RNAI SCREEN: UNVEILING THE PROTEASE NETWORK THAT REGULATES HUMORAL IMMUNITY IN ANOPHELES GAMBIAE****Bianca Morejon**, Kristin Michel  
*Kansas State University, Manhattan, KS, United States***6764****CHARACTERIZING A NOVEL DENGUE VACCINE BY LEVERAGING CLINICAL TRIAL DATA WITH A MULTI-LEVEL MODEL****Manar Alkuzweny**, Guido España, T. Alex Perkins  
*University of Notre Dame, Notre Dame, IN, United States***6899****HOST-DERIVED LIPIDS SHAPE PLASMODIUM FALCIPARUM DEVELOPMENT AND PATHOGENICITY: AN INTEGRATIVE MULTI-OMICS ANALYSIS IN MALARIA-INFECTED CHILDREN****Wael Abdrabou**<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>  
<sup>1</sup>*New York University, Abu Dhabi, United Arab Emirates*, <sup>2</sup>*New York University, New York, NY, United States*, <sup>3</sup>*Glide, Abu Dhabi, United Arab Emirates*, <sup>4</sup>*Centre National de Recherche et de Formation sur le Paludisme, Ouagadougou, Burkina Faso***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>2</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. Traversos<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***Young Investigator Award Session E***Regency Ballroom C - Ballroom Level (West Tower)*  
**Wednesday, October 18, 9 a.m. – 2 p.m. U.S. Central Time Zone****JUDGE**David Diemert  
*George Washington University, Washington, DC, United States*  
Pedro Gazzinelli-Guimaraes  
*National Institutes of Health, Bethesda, MD, United States*  
Sara Healy  
*NIH/NIAID, Bethesda, MD, United States*  
Kirsten E. Lyke  
*Center for Vaccine Development, University of Maryland, Baltimore, MD, United States***5260****HIGH TRANSMISSION OF ENDEMIC HUMAN CORONAVIRUSES DURING THE COVID-19 PANDEMIC IN ADOLESCENTS IN CEBU, PHILIPPINES****Ogeneitsegga Janet Joseph**<sup>1</sup>, Michelle Ylade<sup>2</sup>, Jeda Veronica Daag<sup>2</sup>, Rosemary Aogo<sup>1</sup>, Maria Vinna Crisostomo<sup>2</sup>, Kristal-An Agrupis<sup>2</sup>, Patrick Mpingabo<sup>1</sup>, Lakshamane Premkumar<sup>3</sup>, Jacqueline Deen<sup>2</sup>, Leah Katzelnick<sup>1</sup>  
<sup>1</sup>*Viral Epidemiology and Immunity Unit, Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States*, <sup>2</sup>*Institute of Child Health and Human Development, National Institutes of Health, University of the Philippines-Manila, Manila, Philippines*, <sup>3</sup>*Department of Microbiology and Immunology, University of North Carolina School of Medicine, Chapel Hill, NC, United States***5297****PERSISTENCE OF SERUM IGM ANTIBODIES ANTI-CHIKUNGUNYA VIRUS FOR MORE THAN 24 MONTHS AFTER THE ONSET OF ACUTE SYMPTOMS****Leile Camila Jacob-Nascimento**<sup>1</sup>, Moyra Machado Portilho<sup>1</sup>, Rosangela Oliveira Anjos<sup>1</sup>, Patricia Sousa dos Santos Moreira<sup>1</sup>, Viviane Machicado<sup>2</sup>, Adriane Souza Paz<sup>2</sup>, Lorena Gomes<sup>1</sup>, Uriel Kitron<sup>3</sup>, Scott Weaver<sup>4</sup>, Mitermayer Galvão Reis<sup>5</sup>, Guilherme Sousa Ribeiro<sup>6</sup>  
<sup>1</sup>*Oswaldo Cruz Foundation, Salvador, Brazil*, <sup>2</sup>*Bahiana School of Medicine and Public Health, Salvador, Brazil*, <sup>3</sup>*Emory University, Atlanta, GA, United States*, <sup>4</sup>*World Reference Center for Emerging Viruses and Arboviruses, University of Texas Medical Branch, Galveston, TX, United States*, <sup>5</sup>*Oswaldo Cruz Foundation / Federal University of Bahia / Yale University, Salvador / New Haven, Brazil*, <sup>6</sup>*Oswaldo Cruz Foundation / Federal University of Bahia, Salvador, Brazil***5301****ASSESSING THE ROLE OF NON-NEUTRALIZING ANTIBODIES IN ANTIBODY-DEPENDENT CELLULAR CYTOTOXICITY OF DENGUE VIRUS INFECTED CELLS****Mitchell J. Waldran**<sup>1</sup>, Adam T. Waickman<sup>1</sup>, Jeffrey Currier<sup>2</sup>  
<sup>1</sup>*SUNY Upstate Medical University, Syracuse, NY, United States*, <sup>2</sup>*Walter Reed Army Institute of Research, Silver Spring, MD, United States***5305****DETECTION OF ENVELOPE-DIMER EPIPEPTIDE-LIKE BROADLY PROTECTIVE ANTIBODIES IN DENGUE-IMMUNE CHILDREN IN THE PHILIPPINES FOLLOWING VACCINATION AND NATURAL INFECTION****Patrick I. Mpingabo**<sup>1</sup>, Michelle Ylade<sup>2</sup>, Maria Vinna Crisostomo<sup>2</sup>, Devina Thion<sup>3</sup>, Jeda Veronica Daag<sup>2</sup>, Kristal-An Agrupis<sup>2</sup>, Ana Coello Escoto<sup>1</sup>, Guillermo Raimundi Rodriguez<sup>1</sup>, Kelsey E. Lowman<sup>1</sup>, Saba Fideous<sup>1</sup>, Rosemary A. Aogo<sup>1</sup>, Camila Odio<sup>1</sup>, Laura White<sup>3</sup>, Aravinda de Silva<sup>3</sup>, Jacqueline Deen<sup>2</sup>, Leah C. Katzelnick<sup>1</sup>  
<sup>1</sup>*Viral Epidemiology and Immunity Unit, Laboratory of Infectious Diseases, NIAID, NIH, Bethesda, MD, United States*, <sup>2</sup>*University of Philippine-Manila, Manila, Philippines*, <sup>3</sup>*Department of Microbiology and Immunology, University of North Carolina Chapel-Hill, Chapel-Hill, NC, United States***5312****MALARIA ABOLISHES ONNV-INDUCED ARTHRITIS BY ALTERING THE KINETICS OF VIRUS-SPECIFIC CD4 T CELL DEVELOPMENT IN THE FOOTPAD-DRAINING LYMPH NODES****Anthony Torres-Ruesta**, Teck-Hui Teo, Yi-Hao Chan, Siti Naqiah Amrun, Siew-Wai Fong, Fok-Moon Lum, Laurent Renia, Lisa Ng  
*A\*STAR Infectious Diseases Labs, Singapore, Singapore***5472****COMPARISON OF P. FALCIPARUM GROWTH IN VITRO AND IN VIVO IN HUMANISED MICE****Katty Wadda**<sup>1</sup>, James Keeble<sup>1</sup>, Giselle McKenzie<sup>1</sup>, Christine Zverev<sup>1</sup>, Rose Leahy<sup>1</sup>, Vicky Rannow<sup>1</sup>, Jessica Gruninger<sup>1</sup>, Charles Olomu<sup>1</sup>, Shaun Baker<sup>1</sup>, Paul Bowyer<sup>1</sup>, Sandrine Vessillier<sup>1</sup>, Alison Kemp<sup>2</sup>, Julian Rayner<sup>2</sup>, Sandra Diebold<sup>1</sup>, Adela Nacer<sup>1</sup>  
<sup>1</sup>*Medicines and Healthcare Products Regulatory Agency, South Mimms, United Kingdom*, <sup>2</sup>*Cambridge Institute for Medical Research, University of Cambridge, Cambridge, United Kingdom***5697****BORRELIA BURGDOFFERI CO-EXPOSURE ENHANCES IN VITRO HOST CELL SUSCEPTIBILITY TO L. INFANTUM AND INDUCES TH17-LIKE CELL RESPONSES IN L. INFANTUM-SEROPOSITIVE DOGS****Danielle Pessoa-Pereira**<sup>1</sup>, Breanna M. Scorza<sup>1</sup>, Karen Cyndari<sup>2</sup>, Erin A. Beasley<sup>1</sup>, Christine A. Petersen<sup>1</sup>  
<sup>1</sup>*University of Iowa, Iowa City, IA, United States*, <sup>2</sup>*University of Iowa Hospitals and Clinics, Iowa City, IA, United States*



5698

**STAT6-DEPENDENT/IL-5-MEDIATED EOSINOPHILIA PRIMED BY PRE-EXPOSURE TO UNINFECTED SANDFLY VECTOR BITES ENHANCE SUBSEQUENT LEISHMANIA INFECTION**

**Chukwunonso O. Nzelu<sup>1</sup>**, Matheus B. H. Carneiro<sup>1</sup>, Claudio Meneses<sup>2</sup>, Gabriella Gee<sup>1</sup>, Leon Melo<sup>1</sup>, Nathan C. Peters<sup>1</sup>

<sup>1</sup>Snyder Institute for Chronic Diseases, Department of Microbiology, Immunology, and Infectious Diseases, Cumming School of Medicine and Faculty of Veterinary Medicine, University of Calgary, Calgary, AB, Canada, <sup>2</sup>Vector Molecular Biology Section, Laboratory of Malaria and Vector Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Rockville, MD, USA, Rockville, MD, United States

5700

**INHIBITION OF SRC SIGNALING INDUCES AUTOPHAGIC KILLING OF TOXOPLASMA GONDII INDEPENDENT OF EGF RECEPTOR**

**Alyssa Hubal<sup>1</sup>**, Jose-Andres Portillo<sup>1</sup>, Anusha Vendhoti<sup>1</sup>, Sarah Vos<sup>1</sup>, Charles Shaffer<sup>2</sup>, Carlos Subauste<sup>1</sup>

<sup>1</sup>Case Western Reserve University School of Medicine, Cleveland, OH, United States, <sup>2</sup>Case Western Reserve University, Cleveland, OH, United States

5701

**LOSS OF SIGLEC-7 CORRELATES WITH ENHANCED NATURAL KILLER CELL FUNCTION AND PROTECTION FROM MALARIA SYMPTOMS**

**Jenna Dick<sup>1</sup>**, Jules Sangala<sup>1</sup>, Benjamin Zandstra<sup>1</sup>, Peter Crompton<sup>2</sup>, Geoffrey Hart<sup>1</sup>

<sup>1</sup>University of Minnesota, Minneapolis, MN, United States, <sup>2</sup>National Institutes of Health, Bethesda, MD, United States

5841

**A NOVEL VIRULENCE MODIFYING EXOTOXIN SECRETED BY PATHOGENICLEPTOSPIRAMEDIATEDISEASE PATHOGENESIS AND IS A PAN LEPTOSPIROSIS VACCINE CANDIDATE**

**Reetika Chaurasia**, Dielson S. Vieira, Joseph M. Vinetz

Yale University, New Haven, CT, United States

6033

**INVESTIGATING THE IMMUNE PROFILES ELICITED BY CLINICALLY APPARENT AND CLINICALLY INAPPARENT DENGUE VIRUS INFECTIONS**

**Lauren Bahr<sup>1</sup>**, Darunee Buddhari<sup>2</sup>, Surachai Kaewhiran<sup>3</sup>, Direk Khampaen<sup>3</sup>, Sopon Iamsirithaworn<sup>3</sup>, Stefan Fernandez<sup>2</sup>, Aaron Farmer<sup>2</sup>, Alan Rothman<sup>4</sup>, Stephen Thomas<sup>1</sup>, Timothy Endy<sup>1</sup>, Adam Waickman<sup>1</sup>, Kathryn Anderson<sup>1</sup>

<sup>1</sup>State University of New York Upstate Medical University, Syracuse, NY, United States, <sup>2</sup>Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, <sup>3</sup>Ministry of Public Health, Tiwanond, Nonthaburi, Thailand, <sup>4</sup>University of Rhode Island, Providence, RI, United States

6367

**PERFORMANCE OF SARS COV-2 IGG ANTI-N AS AN INDEPENDENT MARKER OF EXPOSURE TO SARS COV-2 IN AN UNVACCINATED WEST-AFRICAN POPULATION**

**Adam Abdullahi<sup>1</sup>**, Michael Owusu<sup>2</sup>, Mark Cheng<sup>1</sup>, Colette Smith<sup>3</sup>, Sani Aliyu<sup>4</sup>, Alash'le Abimiku<sup>5</sup>, Richard Phillips<sup>2</sup>, Ravindra K. Gupta<sup>1</sup>

<sup>1</sup>University of Cambridge, Cambridge, United Kingdom, <sup>2</sup>Kumasi Centre for Collaborative Research in Tropical Medicine, Kumasi, Ghana, Kumasi, Ghana, <sup>3</sup>University College London, UK, London, United Kingdom, <sup>4</sup>Addenbrooke's Hospital, Cambridge University Hospitals NHS Foundation Trust, Cambridge, UK, Cambridge, United Kingdom, <sup>5</sup>Institute of Human Virology, Abuja, Nigeria, Abuja, Nigeria

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>, Dibadyuti 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

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 Yousafza<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

7252

**SEX HORMONES, CD8+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

**Young Investigator Award Session F**

*Regency Ballroom D - Ballroom Level (West Tower)*

**Wednesday, October 18, 9 a.m. – 2 p.m. U.S. Central Time Zone**

**JUDGE**

Zannatul Ferdous

Connecticut Agricultural Experiment Station, Cheshire, CT, United States

Solomon Kibret Birhanie

West Valley Mosquito and Vector Control District, Ontario, CA, United States

Maggy Sikulu

GriQIMR Berghofer Medical Research Institute, Herston, Australia

Maria Luisa Simoes

Institute of Tropical Medicine Antwerp, Antwerp, Belgium

5212

**MOSQUITOCIDAL ACTIVITY OF IVERMECTIN-TREATED NETTINGS AND SPRAYED WALLS ON ANOPHELES GAMBIAE**

**Majidah Hamid-Adiamoh<sup>1</sup>**, Abdul Khalie Muhammed<sup>2</sup>, Benoit Sessinou Assogba<sup>3</sup>, Harouna Massire Soumare<sup>3</sup>, Lamin Jadama<sup>3</sup>, Moussa Diallo<sup>3</sup>, Mamadou Ousmane Ndiath<sup>3</sup>, Umberto D'Alessandro<sup>3</sup>, Alfred Amambua-Ngwa<sup>3</sup>, Annette Erhart<sup>3</sup>

<sup>1</sup>Indiana University school of Medicine, South bend, IN, United States, <sup>2</sup>Medical Research Council Unit The Gambia at the London School of Hygiene & Tropical Medicine, Banjul, Gambia, <sup>3</sup>Medical Research Council Unit The Gambia at the London School of Hygiene & Tropical Medicine, Banjul, Gambia

5901

**EFFECT OF LOW RELATIVE HUMIDITY OVER MORTALITY AND VIRAL VECTOR COMPETENCE IN Aedes Aegypti**

**Jaime Manzano<sup>1</sup>**, Gerard Terradas<sup>1</sup>, Christopher J. Holmes<sup>2</sup>, Joshua B. Benoit<sup>2</sup>, Jason L. Rasgon<sup>1</sup>

<sup>1</sup>The Pennsylvania State University, State College, PA, United States, <sup>2</sup>University of Cincinnati, Cincinnati, OH, United States

6127

**MAXIMIZING THE USE OF HUMAN POPULATION MOVEMENT DATA FOR MALARIA CONTROL AND ELIMINATION**

**Greta Tam<sup>1</sup>**, Ipsita Sinha<sup>1</sup>, Kulchada Pongsoipetch<sup>1</sup>, Keobouphaphone Chindavongsa<sup>2</sup>, Mayfong Mayxay<sup>3</sup>, Sonexay Phalivong<sup>1</sup>, Elizabeth Ashley<sup>3</sup>, Benjamin Cowling<sup>4</sup>, Olivo Miotto<sup>1</sup>, Richard Maude<sup>1</sup>

<sup>1</sup>Mahidol Oxford Tropical Medicine Research Unit (MORU), Bangkok, Thailand, <sup>2</sup>Center of Malariology, Parasitology and Entomology (CMPE), Vientiane, Lao People's Democratic Republic, <sup>3</sup>Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Vientiane, Lao People's Democratic Republic, <sup>4</sup>University of Hong Kong, Hong Kong, Hong Kong

Wednesday  
October 18

**6189****IMPACT OF INDOOR RESIDUAL SPRAYING AT THE END OF THE RAINY SEASON IN A HOLOENDEMIC MALARIA TRANSMISSION SETTING IN NORTHERN ZAMBIA: A DEMONSTRATION PROJECT**

**Anne Martin**<sup>1</sup>, Mike Chaponda<sup>2</sup>, Mbangwa Muleba<sup>2</sup>, James Sichivula Lupiya<sup>2</sup>, Mary Gebhardt<sup>1</sup>, Sophie Bérubé<sup>1</sup>, Timothy Shields<sup>1</sup>, Amy Wesolowski<sup>1</sup>, Tamaki Kobiyashi<sup>1</sup>, Douglas Norris<sup>1</sup>, Daniel E. Impoinvil<sup>3</sup>, Nduka Iwuchukwu<sup>4</sup>, Gerald Chongo<sup>5</sup>, Emmanuel Kooma<sup>6</sup>, Paul Psychas<sup>7</sup>, Matthew Ippolito<sup>8</sup>, William J. Moss<sup>1</sup>

<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>2</sup>Tropical Disease Research Centre, Ndola, Zambia, <sup>3</sup>U.S. President's Malaria Initiative (PMI), U.S. Centers for Disease Control and Prevention (CDC), Atlanta, GA, United States, <sup>4</sup>VectorLink, Lusaka, Zambia, <sup>5</sup>Ministry of Health, District Health Office, Nchelenge, Zambia, <sup>6</sup>National Malaria Elimination Center, Lusaka, Zambia, <sup>7</sup>U.S. President's Malaria Initiative (PMI), U.S. Centers for Disease Control and Prevention (CDC), Lusaka, Zambia, <sup>8</sup>Johns Hopkins School of Medicine, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

**6355****HOUSING STRUCTURES AND VISCERAL LEISHMANIASIS TRANSMISSION IN BARINGO COUNTY, KENYA**

**Katherine OBrien**<sup>1</sup>, Grace Kennedy<sup>1</sup>, Hellen Nyakundi<sup>2</sup>, Mwatela Kitondo<sup>2</sup>, Wilson Biwott<sup>3</sup>, Valeria Pembee<sup>3</sup>, Richard Wamai<sup>1</sup>

<sup>1</sup>Northeastern University, Boston, MA, United States, <sup>2</sup>African Centre for Community Investment in Health, Chemolingot, Kenya, <sup>3</sup>Chemolingot Sub County Hospital, Chemolingot, Kenya

**6382****THE EFFECT OF SOAP USE CONDITIONS ON SCHISTOSOME CERCARIAE IN WATER**

**Jiaodi Zhang**<sup>1</sup>, Ana K. Pitol<sup>2</sup>, Laura Braun<sup>3</sup>, Michael R. Templeton<sup>1</sup>

<sup>1</sup>Imperial College London, London, United Kingdom, <sup>2</sup>Liverpool School of Tropical Medicine, Liverpool, United Kingdom, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom

**5409****EXPOSURE TO WEST NILE VIRUS AND STRAIN-SPECIFIC DIFFERENCES SHAPE TRANSMISSION BYCX. PIPPIENSUNDER CLIMATE CHANGE**

**Rachel Fay**<sup>1</sup>, Mauricio Cruz-Loya<sup>2</sup>, Elyse Banker<sup>3</sup>, Jessica Stout<sup>3</sup>, Anne Payne<sup>3</sup>, Erin Mordecai<sup>2</sup>, Alexander Ciota<sup>2</sup>

<sup>1</sup>School of Public Health, State University of New York Albany, Albany, NY, United States, <sup>2</sup>Biology Department, Stanford University, Stanford, CA, United States, <sup>3</sup>Arbovirus Laboratory, Wadsworth Center, New York State Department of Health, Slingerlands, NY, United States

**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

**6616****IMPACT OF ARBOVIRUS INFECTION ON THE HOST-SEEKING BEHAVIOUR OF Aedes Aegypti MOSQUITOES**

**Tessa M. Visser**<sup>1</sup>, Chantal B. F. Vogels<sup>2</sup>, Gorben P. Pijlman<sup>3</sup>, Constantianus J. M. Koenraadt<sup>1</sup>

<sup>1</sup>Laboratory of Entomology, Wageningen University & Research, Wageningen, Netherlands, <sup>2</sup>Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT, United States, <sup>3</sup>Laboratory of Virology, Wageningen University & Research, Wageningen, Netherlands

**6661****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. García, Luis Marrero, Tatiana Ortiz-Ortiz, Julieanne Miranda-Bermúdez, Grayson Brown  
*Puerto Rico Vector Control Unit, Ponce, PR, United States*

**7141****CULEX PIPPIENS 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*

**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>2</sup>, Esrah Du<sup>1</sup>, Alexandra Probst<sup>1</sup>, Flaminia Catteruccia<sup>2</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

**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

**Workshop****Global Malaria and Gender Community of Practice (CoP)**

*Grand Hall KL- Ballroom Level (East Tower)*

**Wednesday, October 18, 10 a.m. - 12:30 p.m. U.S. Central Time Zone**

Supported by the Bill & Melinda Gates Foundation, the Global Malaria and Gender Community of Practice (CoP) seeks to work with relevant stakeholders and partners to co-create, catalyze, and develop a cohesive, strategic, and measurable approach that integrates gender into malaria work and identifies gender intentional and gender-transformative opportunities to advance gender equity in the fight against malaria.

The objectives of the workshop are to:

- Promote the "Gendered Approach to the Fight Against Malaria" Advocacy Agenda.

- b. Enhance ongoing engagement and resourcing of the CoP's Advocacy Agenda.
- c. Promote the CoP to individuals and organizations working in the field of malaria and/or gender.
- d. Bring together existing and new stakeholders at the local, regional, and global levels who are engaged in malaria eradication and gender equality work for discussions and deliberations on emerging paradigms in malaria and gender intersection.

## University of Notre Dame, Pan-African Mosquito Control Association and Northshore Mosquito Abatement District

### Offsite Event

Wednesday, October 18, 10 a.m. - 3 p.m. U.S. Central Time Zone

Attendees will meet at the Hyatt Regency Chicago by 7:15 am and depart for the North Shore Mosquito Abatement District (NSMAD) (<https://www.nsmad.org>) in the Chicago suburbs by Uber/Taxis. Transportation provided to/from the Hyatt Regency Chicago. Breakfast and lunch provided.

Come and experience mosquito control in the US-Midwest context, with emphasis on Integrated Pest Management (IPM) and Larval Source Management (LSM). We welcome you to tour the NSMAD facility and learn about the equipment, procedures, data management tools, and administrative/funding model used across the Chicago area.

Also participating:

- ▶ Northwest Mosquito Abatement District (<https://www.nwmadil.com/>)
- ▶ Des Plaines Valley Mosquito Abatement District (<https://dvmad.org/>)
- ▶ North Shore Mosquito Abatement District Trustees (political leadership of the district) and local stakeholders
- ▶ Clarke Mosquito Control (a major vendor of mosquito control products in the USA as well as contractor for municipalities wishing to outsource mosquito control, <https://www.clarke.com>)
- ▶ Valent Biosciences (A global leader with a comprehensive range of target-specific biorational solutions for public health professionals, <https://www.valentbiosciences.com>)
- ▶ Leading Edge (Drones, <https://leaerialtech.com/> and data management, <https://leateam.com/>)

## ACCTMTH Clinical Research Award Session

DuSable- Third Floor (West Tower)

Wednesday, October 18, 11 a.m. – 3 p.m. U.S. Central Time Zone

The ACCTMTH Clinical Research Award recognizes excellence in clinically-oriented research presented by a student (within six months of completing undergraduate or master's level training, including medical undergraduate degrees) or person in graduate medical training at the Annual Meeting.

### CHAIR

Obinna Nnaemeka Nnedu  
Ochsner Clinic Foundation, New Orleans, LA, United States

### JUDGE

German Henostroza  
University of Alabama at Birmingham, Birmingham, AL, United States

Kristina Krohn  
University of Minnesota, Roseville, MN, United States

Bryan N. Tegomoh  
University of Yaounde I Medical School, Cameroon, Yaounde, Cameroon

5610

### UTILITY OF THE LOOP-MEDIATED ISOTHERMAL AMPLIFICATION ASSAY FOR THE DIAGNOSIS OF VISCERAL LEISHMANIASIS FROM BLOOD SAMPLES IN ETHIOPIA

Dawit Gebreegziabher Hagos<sup>1</sup>, Yazezew Kebede kiros<sup>1</sup>, Mahmud Abdulkadir<sup>1</sup>, Dawit Wolday<sup>1</sup>, D. F. Henk Schallig<sup>2</sup>

<sup>1</sup>Mekelle University, college of health Sciences, Mekelle, Ethiopia, <sup>2</sup>University of Amsterdam, Academic Medical Centre (AMC), Amsterdam, Netherlands

6277

### HELMINTH INFECTION DRIVES REDUCED SERUM COMPLEMENT AND COMPLEMENT REGULATORY PROTEIN ACTIVATION IN INDIVIDUALS WITH COINCIDENT TYPE 2 DIABETES

Anuradha Rajamanickam<sup>1</sup>, Bindu Dasan<sup>1</sup>, Saravanan Munisankar<sup>1</sup>, Pradeep Aravindan Menon<sup>2</sup>, Fayaz Ahamed Shaik<sup>1</sup>, Ponnuraja Chinnaiyan<sup>2</sup>, Thomas B. Nutman<sup>3</sup>, Subash Babu<sup>1</sup>

<sup>1</sup>NIRT-ICER, Chennai, India, <sup>2</sup>National Institute for Research in Tuberculosis, Chennai, India, <sup>3</sup>Laboratory of Parasitic Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States

6374

### EVALUATION OF TUBERCULOSIS TREATMENT OUTCOME AND THEIR PREDICTORS IN PUBLIC AND PRIVATE HEALTH INSTITUTIONS, SOUTHEAST, NIGERIA; AN IMPLICATION FOR POLICY IMPLEMENTATION, CLIENT CENTERED EDUCATION AND TREATMENT FOLLOW-UP

Nelson C. Eze  
Federal Ministry of Health, Abuja, Nigeria

5726

### MOLECULAR-BASED EVIDENCE OF TRANSMISSION OF ATYPICAL TRYPANOSOMIASIS (A-HAT) IN HUMANS IN SELECTED COMMUNITIES IN THE SUHUM MUNICIPALITY OF GHANA

Kofi Agyapong Addo  
Akonten Appiah-Menka University of Skills Training and Entrepreneurial Development, Kumasi, Ghana

Wednesday  
October 18

**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>3</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

**6978****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, Mohammad Jobayer Chisti  
International Centre for Diarrheal Disease Research, Bangladesh, Dhaka, Bangladesh

**6790****INVESTIGATING THE ACCURACY OF MALARIA DIAGNOSTIC TESTS: A BAYESIAN META-ANALYSIS COMPARING CONVENTIONAL AND ULTRASENSITIVE RAPID DIAGNOSTIC TOOLS**

Muhammed Elfaituri, Taha Khaled  
University of Tripoli, Tripoli, Libyan Arab Jamahiriya

**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

**5424****DYNAMICS OF SUBMICROSCOPIC MALARIA INFECTION IN SOUTHERN BENIN**

Akpeyedje Yannelle Dossou  
Institut de Recherche Clinique du BENIN, Abomey-Calavi, Benin

**5488****IMPACT OF KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING LONG-LASTING IMPREGNATED NETS ON THE PREVALENCE OF MALARIA INFECTION AMONG CHILDREN UNDER 5 YEARS OF AGE IN THE DODJI-BATA DISTRICT OF SOUTHERN BENIN**

Tchehoundje Benamine Sèna  
clinical research institute of Benin, Abomey-calavi, Benin

**5439****GENETIC DIVERSITY OF *PLASMODIUM FALCIPARUM* AND GENETIC PROFILE IN CHILDREN WITH ACUTE UNCOMPLICATED MALARIA IN CAMEROON**

Theresia Njuabe Metoh<sup>1</sup>, Jun-Hu Chen<sup>2</sup>, Philip Fongah<sup>3</sup>, Xia Zhou<sup>4</sup>, Roger Somo-Moyou<sup>5</sup>, XiaoNong Zhou<sup>6</sup>

<sup>1</sup>University of Bamenda, Bamenda, Cameroon, <sup>2</sup>NIPD CDC, Shanghai, China, <sup>3</sup>ITC Enschede, University of Twente, Hengelosestraat 99, 7514 AE Enschede, Hengelosestraat, Netherlands, <sup>4</sup>National Institute of Parasitic Diseases, Chinese Centre for Disease Control and Prevention, Shanghai 200025, People's Republic of China., <sup>5</sup>National Institute of Parasitic Diseases (NIPD-CDC, China, <sup>6</sup>University of Yaounde I, Yaounde, Cameroon, <sup>6</sup>National Institute of Parasitic Diseases, Chinese Centre for Disease Control and Prevention, Shanghai 200025, People's Republic of China, Shanghai, China

**5528****DETERMINANTS OF VACCINE COVERAGE AND ACCEPTABILITY OF MALARIA VACCINE IN CHILDREN AGED 6-23 MONTHS IN MALAWI: A HEALTHCARE PROVIDER'S PERSPECTIVE**

Dumisile Sibongile Nkosi  
Training and Research Unit of Excellence, Blantyre, Malawi

**6075****EXTERNAL VALIDATION OF THE WORLD HEALTH ORGANIZATION INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS (IMCI) PROTOCOL FOR MALARIA TESTING IN LOW MALARIA RISK AREAS**

Nadia Cattaneo<sup>1</sup>, Alexandra V. Kulinkina<sup>2</sup>, Chacha Mangu<sup>3</sup>, Victor P. Rwardarwacu<sup>4</sup>, Ludovico Cobuccio<sup>1</sup>, Lameck Luwanda<sup>5</sup>, Godfrey Kavishe<sup>3</sup>, Sabine Renggli<sup>2</sup>, Geoffrey I. Ashery<sup>5</sup>, Magreth Joram<sup>5</sup>, Ibrahim E. Mtebene<sup>5</sup>, Peter Agrea<sup>3</sup>, Humphrey Mhagama<sup>3</sup>, Joseph Habakurama<sup>4</sup>, Antoinette Makuza Safi<sup>4</sup>, Jonathan Niyonzima<sup>4</sup>, Emmanuel Kalisa<sup>4</sup>, Angélique Ingabire<sup>4</sup>, Cassien Havugimana<sup>4</sup>, Gilbert Rukundo<sup>4</sup>, Honorati Masanja<sup>5</sup>, Nyanda E. Ntinginya<sup>3</sup>, Valérie D'Acromont<sup>1</sup>, Rainer Tan<sup>1</sup>  
<sup>1</sup>Center for Primary Care and Public Health (Unisanté), Lausanne, Switzerland, <sup>2</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland, <sup>3</sup>National Institute of Medical Research – Mbeya Medical Research Center, Mbeya, United Republic of Tanzania, <sup>4</sup>Swiss Tropical and Public Health Institute, Kigali, Rwanda, <sup>5</sup>Ifakara Health Institute, Dar es Salaam, United Republic of Tanzania

**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

## American Committee on Arthropod-Borne and Zoonotic Viruses (ACAV) SIE Subcommittee Meeting

Atlanta - Ballroom Level (West Tower)

Wednesday, October 18, 11 a.m. - Noon U.S. Central Time Zone

### Speaker Ready Room

Grand Suite 2AB - Ballroom Level (East Tower)

Wednesday, October 18, Noon - 5 p.m. U.S. Central Time Zone

## American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP) Mentor/Trainee Lunch Kick-Off Panel

Crystal Ballroom C - Lobby Level (West Tower)

Wednesday, October 18, Noon- 1:30 p.m. U.S. Central Time Zone

An introduction to the experts, their fields, and a quick discussion of suggested topics to get experts and trainees in the mentoring mindset for their one-on-two Mentor/Mentee lunch. By invitation only.

### Press Room

Randolph 1A - Concourse Level (East Tower)

Wednesday, October 18, Noon- 5 p.m. U.S. Central Time Zone

## American Committee on Arthropod-Borne and Zoonotic Viruses (ACAV) SIRACA Subcommittee Meeting

Atlanta - Ballroom Level (West Tower)

Wednesday, October 18, Noon- 2 p.m. U.S. Central Time Zone

### Point-of-Entry: First-Time Attendee Orientation

Crystal Ballroom A - Lobby Level (West Tower)

Wednesday, October 18, 1 p.m. - 2 p.m. U.S. Central Time Zone

Are you new to the ASTMH Annual Meeting and want to get the lay of the land? Don't miss our Point of Entry session. ASTMH Board Member Desiree LaBeaud will orient new attendees to the schedule, session structure and highlights of the Annual Meeting. Meet others attending the conference for the first time and expand your professional network while learning the ins and outs of the meeting.

#### POINT OF ENTRY: FIRST-TIME ATTENDEE ORIENTATION

Desiree LaBeaud

Stanford University, Stanford, CA, United States

## Workshop

### Malaria No More/Forecasting Healthy Futures/ACGH - Climate Fresk: Empowerment in Action. A Workshop to Understand the Physics, Causes and Consequences of Climate Change

Michigan 1A - Concourse Level (East Tower)

Wednesday, October 18, 1 p.m. - 4 p.m. U.S. Central Time Zone

In partnership with the ASTMH Committee on Global Health (ACGH), Forecasting Healthy Futures, an initiative of Malaria No More, plans to host a Climate Fresk workshop as a part of a climate-health series of events for ASTMH. Through the workshop, we aim to:

- 1) Offer a collaborative learning experience for ACGH members and the larger ASTMH community to understand the science, causes, and consequences of climate change, based on the IPCC reports.
- 2) Encourage participants to engage with climate change by identifying strategic linkages to their existing body of work, and
- 3) Increase awareness of potential climate-health solutions that participants can incorporate into their specific work in infectious/tropical disease or health in general

More generally, we hope this workshop will help to make ACGH the voice of climate change and health within ASTMH, and to generate momentum for future climate change and health activities within ASTMH.

### American Committee on Arthropod-Borne and Zoonotic Viruses (ACAV) SALS Subcommittee Meeting

Atlanta - Ballroom Level (West Tower)

Wednesday, October 18, 2 p.m. - 3:30 p.m. U.S. Central Time Zone

## Workshop

### Biological Threat Reduction Program - Supporting Global Health Engagement Biosafety and Biosecurity Goals through Cooperative Biosurveillance Studies

Acapulco - Ballroom Level (West Tower)

Wednesday, October 18, 2 p.m. - 4 p.m. U.S. Central Time Zone

Come out and learn how you can be a part of the BTRP mission to help strengthen capabilities of partner nations and the international community to prevent, detect, and prepare for outbreaks caused by biological pathogens through efforts focused on improving biosurveillance to support early and accurate warning of biological threats and reporting of incidents to appropriate national, regional, and international bodies.

## Workshop

### Writing for Publication and Discovery: Best Practice for Manuscript Writing and Open Science

Grand Hall K/L - Ballroom Level (East Tower)

Wednesday, October 18, 2 p.m. – 4 p.m. U.S. Central Time Zone

PLOS Neglected Tropical Diseases presents a writing workshop to equip and support early-career researchers and re-searchers from disease-endemic regions in understanding the publication process and best practices for manuscript writing. The session will address framing your research and choosing a journal, mapping out your paper, abstracts, the mechanics of writing, how to properly respond to reviewer comments, and best practices for data sharing and Open Science. The panel of presenters will feature PLOS Editors-in-Chief, and this workshop is designed to give attendees the opportunity to tailor the end of the session with an Editor Q&A.

### Young Investigator Award Committee Meeting

Regency Ballroom A (West Tower)

Wednesday, October 18, 2 p.m. - 3:30 p.m. U.S. Central Time Zone

### Student Reception

Crystal Ballroom C - Lobby Level (West Tower)

Wednesday, October 18, 2:30 p.m. - 3:30 p.m. U.S. Central Time Zone

The ASTMH Board of Directors invites students, postdoctoral fellows and residents to the student reception. This reception is an opportunity to meet fellow trainees, network with colleagues and mentors and engage in conversation with Society leaders.

### ACCTMTH Clinical Research Award Committee Meeting

DuSable- Third Floor (West Tower)

Wednesday, October 18, 3 p.m. - 4 p.m. U.S. Central Time Zone

### American Committee of Medical Entomology (ACME) Council Meeting

Skyway 260 -Skyway Level (East Tower)

Wednesday, October 18, 3:30 p.m. - 5:30 p.m. U.S. Central Time Zone

### American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP) Council Meeting

Gold Coast - Concourse Level (West Tower)

Wednesday, October 18, 3:30 p.m. - 5:30 p.m. U.S. Central Time Zone

### American Committee on Arthropod-Borne and Zoonotic Viruses (ACAV) Council Meeting

Atlanta - Ballroom Level (West Tower)

Wednesday, October 18, 3:30 p.m. - 5:30 p.m. U.S. Central Time Zone

### ASTMH Committee on Global Health (ACGH) Council Meeting

Columbian - Concourse Level (West Tower)

Wednesday, October 18, 4:00 p.m. - 5:30 p.m. U.S. Central Time Zone

### Clinical Group (American Committee on Clinical Tropical Medicine and Travelers' Health - ACCTMTH) Council Meeting

McCormick - Third Floor (West Tower)

Wednesday, October 18, 3:30 p.m. - 5:30 p.m. U.S. Central Time Zone

### Young Investigator Award Reception

Grand Hall MN- Ballroom Level (East Tower)

3:45 p.m. -4:30 p.m.

## Plenary Session 1



### Plenary Session I: Opening Session and Awards Program

Grand Ballroom - Ballroom Level (East Tower)

Wednesday, October 18, 5:30 p.m. - 7 p.m. U.S. Central Time Zone

*This session does not carry CME credit.*

#### CHAIR

Daniel G. Bausch  
FINN, Geneva, Switzerland

**5:30 p.m.**

#### WELCOMING REMARKS

**Christine Petersen**

University of Iowa, Iowa City, IA, United States

**5:45 p.m.**

#### HIV/AIDS AND COVID-19 PANDEMICS: IMPLICATIONS FOR GLOBAL HEALTH SECURITY



**Ambassador Dr. John N. Nkengasong**

U.S. Global AIDS Coordinator and Special Representative for Global Health Diplomacy

The United States President's Emergency Plan for AIDS Relief

Washington, DC, United States

Dr. John N. Nkengasong was selected to lead the new U.S. Bureau of Global Health Security and Diplomacy that was launched August 1. The Bureau's mission is to fortify global health and help prevent, detect, control and respond to infectious diseases, including HIV/AIDS, through international cooperation. Dr. Nkengasong serves as Ambassador-at-Large, U.S. Global AIDS Coordinator, and Senior

Bureau Official for Global Health Security and Diplomacy, reporting directly to U.S. Secretary of State Antony Blinken.

Prior to this role, he was the first Director of Africa CDC. He has received numerous prestigious awards and recognitions, and has authored or co-authored over 250 peer-reviewed papers and book chapters in professional journals.

PEPFAR is the largest commitment by any nation to address a single disease in history, preventing millions of HIV infections, saving lives and making progress toward ending the HIV/AIDS pandemic.

Through Dr. Nkengasong's leadership, a framework for transforming Africa CDC into a full autonomous health agency of the Africa Union was established. He also led the COVID-19 response in Africa, coordinating with heads of state and governments across the continent, among other achievements, to fight the COVID-19 pandemic and helped secure 400 million doses of COVID-19 vaccines at the height of vaccine scarcity. Dr. Nkengasong also served as acting deputy principal director of the Center for Global Health, as well as the Division of Global HIV and TB's chief of the International Laboratory Branch at the U.S. Centers for Disease Control and Prevention.

As a world-renowned public health leader, Dr. Nkengasong's contributions to global health have been recognized by numerous prestigious awards and honors including the Bill & Melinda Gates Foundation, 2020 Global Goalkeeper Award; Time Magazine, 2021 Time 100 List of Most Influential People; Fortune magazine, 2021 World's 50 Greatest Leaders; Bloomberg, 2021 Bloomberg 50 Influential People; and U.S. Centers for Disease Control and Prevention, Shepard Award and William Watson Medal of Excellence. In 2022, he was invited to join the National Academy of Medicine and he became the first laureate of the Virchow Prize for Global Health. Dr. Nkengasong also holds the rare honor of being knighted by the governments of Sénégal, Côte d'Ivoire, and Cameroon.

**6:15 p.m.**  
**AWARDS PROGRAM**

Daniel G. Bausch  
*FIND, Geneva, Switzerland*

**Recognition of ASTMH/BMGF Annual Meeting Travel Awards**

**Recognition of Burroughs Wellcome Fund - ASTMH Postdoctoral Fellowship in Tropical Infectious Diseases**

**Donald Krogstad Award for Early-Career Malian Scientists**

Moussa Sangare  
*University of Sciences, Techniques, and Technology of Bamako, Mali*

**Recognition of Young Investigator Awards**

**Recognition of ACCTMTH (Clinical Group) Clinical Research Award**

**Recognition of ASTMH Fellowship and Grant Recipients**

**Recognition of 2023 Fellows of ASTMH (FASTMH)**

**Recognition of ASTMH Distinguished International Fellows (FASTMH)**

Subash Babu  
*NIAID-ICER, India*

Alan Cowman  
*Walter & Eliza Hall Institute of Medical Research, Australia*

Patricia Graves  
*James Cook University, Australia*

Jennifer Keiser  
*Swiss Tropical & Public Health Institute, Switzerland*

Marcelo Labruna  
*Universidade de São Paulo, Brazil*

Maria Anice Sallum  
*Universidade de São Paulo, Brazil*

Eli Schwartz  
*Center for Geographic Medicine Tropical Disease, Israel*

Mauro Teixeira  
*Universidade Federal d Minas Gerais, Brazil*

**Alan J. Magill Fellow**

Issiaka Soulama  
*Institut de Recherche en Sciences de la Santé (IRSS), Burkina Faso*

## Subgroup Medals and Awards

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### Harry Hoogstraal Medal (ACME)

Jose Ribeiro  
*National Institute of Allergy and Infectious Diseases, United States*

### William Trager Award For Basic Parasitology (ACMCIP)

Jonathan Marchant  
*Medical College of Wisconsin, United States*

### Dalrymple-Young (ACAV)

Nikos Vasilakis  
*University of Texas Medical Branch, United States*

## Society-Level Medals and Awards

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### Communications Award

**"Small Victories: Nearly 30 years after apartheid's demise, a reporter revisits children's health in South Africa"**

Meredith Wadman  
*Science*

### Bailey K. Ashford Medal

Andrea L. Conroy  
*Indiana University, United States*

Manoj Theodore Duraisingh  
*Harvard T. H. Chan School of Public Health, United States*

Philippe J. Guérin  
*University of Oxford, United Kingdom*

Matt Laurens  
*University of Maryland School of Medicine, United States*

### Clara Southmayd Ludlow Medal

Dyann Wirth  
*Harvard T. H. Chan School of Public Health, United States*

### Donald Mackay Medal

Maria Friedly  
*WHO, Congo*

### Walter Reed Medal

Charles H. Calisher  
*Colorado State University, United States*

## Opening Reception

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*Riverside Center - Exhibit Level (East Tower)*  
**Wednesday, October 18, 7 p.m. - 9:30 p.m. U.S. Central Time Zone**

## Exhibit Hall Open

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*Riverside Center - Exhibit Level (East Tower)*  
**Wednesday, October 18, 7 p.m. - 9:30 p.m. U.S. Central Time Zone**



## Thursday, October 19

### Registration

Grand Ballroom Foyer - Ballroom Level (East Tower)  
Thursday, October 19, 7 a.m. - 5 p.m. U.S. Central Time Zone

### Speaker Ready Room (Closed 11 a.m. - Noon)

Grand Suite 2AB - Ballroom Level (East Tower)  
Thursday, October 19, 7 a.m. - 5 p.m. U.S. Central Time Zone

### Meeting Sign-Up Room

Horner and Ogden - Third Floor (West Tower)  
Thursday, October 19, 7 a.m. - 7 p.m. U.S. Central Time Zone

### TropStop - Student/Trainee Lounge

Grand Hall MN - Ballroom Level (East Tower)  
Thursday, October 19, 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.

### Prayer Room

Hong Kong - Ballroom Level (West Tower) and Field - Third Floor (West Tower)  
Thursday, October 19, 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)  
Thursday, October 19, 7 a.m. - 7 p.m. U.S. Central Time Zone

### Diploma Course Directors Meeting

Wright - Third Floor (West Tower)  
Thursday, October 19, 7 a.m. - 8 a.m. U.S. Central Time Zone

### International Membership Committee Meeting

Haymarket - Concourse Level (West Tower)  
Thursday, October 19, 7 a.m. - 8 a.m. U.S. Central Time Zone

### AJTMH Editorial Board Meeting

McCormick - Third Floor (West Tower)  
Thursday, October 19, 7 a.m. - 8 a.m. U.S. Central Time Zone

### Centennial Travel Award Committee Meeting

DuSable - Third Floor (West Tower)  
Thursday, October 19, 7 a.m. - 8 a.m. U.S. Central Time Zone

### Special Session 1A

#### A Conversation about NIH Pre-Clinical Services

Grand Hall J - Ballroom Level (East Tower)  
Thursday, October 19, 7 a.m. - 7:30 a.m. U.S. Central Time Zone

The purpose of this conversation is to learn more about the NIH pre-clinical contractual services offered to scientists. Join us and meet other larger collaborative grant holders (CREID network, ICMR, TMRC, etc.) that attend ASTMH but may not normally be in the sessions you attend.

#### CHAIR

Christine Petersen  
University of Iowa, Iowa City, IA, United States

#### NIH PRE-CLINICAL SERVICES

John Pesce  
NIH, Bethesda, MD, United States

#### Press Room

Randolph 1A - Concourse Level (East Tower)  
Thursday, October 19, 7:45 a.m. - 5 p.m. U.S. Central Time Zone

### Symposium 2

#### How the Pandemic Pushed the Paradigm to Elevate the Voice of Health Care Providers in Public Health Problem-Solving

Grand Ballroom A - Ballroom Level (East Tower)  
Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

The COVID pandemic interrupted our typical ways of working. With the ability to meet, work and learn in-person suspended, new approaches were needed to maintain progress in public health programs. This presented an opportunity to push the paradigm for public health training, resulting in new and creative ways to engage health care providers at all levels, bringing in new voices and perspectives across the health care spectrum. This session will explore some of these experiments and their potential to change the paradigm of training and engagement in global health and public health problem solving. Historically, formal, in-service training has been hierarchical, often relying on male physicians from international organizations or the national level of a country to define learning needs and methods for sub-national staff and health workers on the front lines. However, an estimated 70% of health care workers are female and many at the community level are nurses, aides or volunteers rather than physicians. Their voices and experience are seldom included in training or problem-solving for new solutions. Most significant learning that contributes to improved performance takes place outside of formal training but occurs through informal and incidental forms of learning between

peers. However, the most prevalent pedagogies have ignored such learning and been limited to training focused on knowledge transmission from teacher (knowledge holder) to student (knowledge recipient) hierarchies, underestimating the capacity of health care workers to create knowledge and undervaluing the educational value of their voices and experiences. New approaches are needed to tackle increasingly complex, globally interconnected challenges. Transformation requires realizing how much we can learn from each other (peer learning), experiencing the power of defying distance to solve problems together (remote learning), and feeling a growing sense of belonging to a community (social learning), emergent across country borders and health system levels (networked learning). This session invites you to learn from practical approaches and interventions that are forging new paths away from traditional, knowledge-transfer to intrinsically - motivated, participatory peer learning that builds on the direct experience and local contexts of health practitioners and volunteers and strengthens global capacity to support local transformation.

#### CHAIR

Julie Jacobson  
*Bridges to Development, Vashon, WA, United States*

Reda Sadki  
*The Geneva Learning Foundation, Geneva, Switzerland*

#### 8 a.m. INTRODUCTION

#### 8:10 a.m. PEER LEARNING FOR GLOBAL HEALTH: WHY AND LEARNING SCIENCE WHAT UNDERPINS IT

Reda Sadki  
*The Geneva Learning Foundation, Geneva, Switzerland*

#### 8:30 a.m. ENGAGING NEW VOICES AND EMPOWERING LOCAL PROBLEM SOLVING: CASE STUDY 1; IMMUNIZATION

Maria Fernanda Monzón  
*Ministry of Health, Corrientes, Argentina*

#### 8:45 a.m. ENGAGING NEW VOICES AND EMPOWERING LOCAL PROBLEM SOLVING: CASE STUDY 2 FEMALE GENITAL SCHISTOSOMIASIS

Ruth Allotey  
*Ministry of Health, Accra, Ghana*

#### 9 a.m. ENGAGING NEW VOICES AND EMPOWERING LOCAL PROBLEM SOLVING: CASE STUDY 3; INTEGRATED SKIN DISEASE TRAINING

George Taleo  
*Consultant, Port Vila, Vanuatu*

#### 9:15 a.m. A NEW PARADIGM FOR EQUITABLE AND INCLUSIVE LEARNING IN PUBLIC HEALTH

Alan Brooks  
*Bridges to Development, Geneva, Switzerland*

## Scientific Session 3

### Malaria - Elimination

*Grand Ballroom B - Ballroom Level (East Tower)*

**Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

#### CHAIR

Karl Seydel  
*Michigan State University, East Lansing, MI, United States*

Siv Sovannaroth  
*National Center for Parasitology, Entomology and Malaria Control, Phnom Penh, Cambodia*

**8 a.m. 5000**

#### SMALL-SCALE RELEASE OF NON-GENE DRIVE MOSQUITOES IN BURKINA FASO: FROM ENGAGEMENT IMPLEMENTATION TO ASSESSMENT, A LEARNING JOURNEY

Lea Pare Toe<sup>1</sup>, **Nourou Barry**<sup>1</sup>, Anselme D. Ky<sup>1</sup>, Souleymane Kekele<sup>1</sup>, Wilfrid Medah<sup>1</sup>, Korotimi Bayala<sup>1</sup>, Mouhamed Drabo<sup>2</sup>, Delphine Thizy<sup>2</sup>, Abdoulaye Diabate<sup>1</sup>  
<sup>1</sup>*Institut de recherche en sciences de la santé (IRSS/UNB), Bobo Dioulasso, Burkina Faso*, <sup>2</sup>*Department of Life Sciences, Imperial College London, London, UK, Bobo Dioulasso, Burkina Faso*

**8:15 a.m. 5001**

#### ACCELERATING MALARIA ELIMINATION IN CAMBODIA: ANALYSIS OF IMPACT OF THE "LAST MILE" INTENSIFICATION PLAN

**Siv Sovannaroth**<sup>1</sup>, Chawarat Rotejanaprasert<sup>2</sup>, Pengby Ngor<sup>2</sup>, Anchalee Jatapai<sup>2</sup>, Richard J. Maude<sup>2</sup>  
<sup>1</sup>*National Center for Parasitology, Entomology and Malaria Control, Phnom Penh, Cambodia*, <sup>2</sup>*Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand*

**8:30 a.m. 5002**

#### MALARIA TREND AND IDENTIFICATION OF RISK GROUPS IN AN ELIMINATION SETTING, 2019-2022

**Safia Mohammed**<sup>1</sup>, Majda Hassan<sup>1</sup>, Bimkubwa Khamis<sup>1</sup>, Bakar Mohammed<sup>1</sup>, Shija J. Shija<sup>1</sup>, Mohamed Haji<sup>1</sup>, Humphrey Mkali<sup>2</sup>, Saidi Mgata<sup>2</sup>, Stella Makwaruzi<sup>2</sup>, Michael Gulaka<sup>2</sup>, Nicodemus Govella<sup>2</sup>, Sigsibert Mkude<sup>2</sup>, Erik Reaves<sup>3</sup>, Naomi Serbantez<sup>4</sup>, Chonge Kitojo<sup>4</sup>, Geoffrey Makenga<sup>2</sup>, Isobel Routledge<sup>5</sup>, Roly Gosling<sup>5</sup>  
<sup>1</sup>*Zanzibar Malaria Elimination Program, Ministry of Health, Zanzibar, United Republic of Tanzania*, <sup>2</sup>*Dhibiti Malaria project, Population Services International, Dar es Salaam, United Republic of Tanzania*, <sup>3</sup>*U.S. President's Malaria Initiative, U.S. Centers for Disease Control and Prevention, Dar es Salaam, United Republic of Tanzania*, <sup>4</sup>*U.S. President's Malaria Initiative, U.S. Agency for International Development, Dar es Salaam, United Republic of Tanzania*, <sup>5</sup>*PMI Insights Project, Malaria Elimination Initiative, University of California San Francisco, California, CA, United States*

**8:45 a.m. 5003**

#### EFFECTIVENESS OF THE EXPANDED ROLE OF COMMUNITY HEALTH WORKERS IN MALARIA ELIMINATION IN MYANMAR: AN OPEN STEPPED-WEDGE CLUSTER-RANDOMISED CONTROLLED TRIAL

**Win Han Oo**<sup>1</sup>, Win Htike<sup>1</sup>, May Chan Oo<sup>1</sup>, Ei Phyu Htwe<sup>1</sup>, Aung Khine Zaw<sup>1</sup>, Kaung Myat Thu<sup>1</sup>, Naw Hkawng Galau<sup>1</sup>, Julia C. Cutts<sup>2</sup>, Nilar Aye Tun<sup>1</sup>, Nick Scott<sup>2</sup>, Katherine O'Flaherty<sup>2</sup>, Paul A. Agius<sup>3</sup>, Freya J I Fowkes<sup>2</sup>  
<sup>1</sup>*Burnet Institute, Yangon, Myanmar*, <sup>2</sup>*Burnet Institute, Melbourne, Australia*, <sup>3</sup>*Deakin University, Melbourne, Australia*

9 a.m.

5004

**MALARIA CASE-BASED SURVEILLANCE FOR THE INTERRUPTION OF LOCAL MALARIA TRANSMISSION IN TANZANIA MAINLAND**

Elizabeth kasagama<sup>1</sup>, Khalifa Munisi<sup>2</sup>, Denis Kailembo<sup>1</sup>, Fabrizio Molteni<sup>1</sup>, Noela Kisoka<sup>1</sup>, Pai Chambongo<sup>2</sup>, Christian Lengeler<sup>3</sup>, Samwel Lazaro<sup>2</sup>, Sijenuu Aron<sup>2</sup>  
<sup>1</sup>SWISS TPH, Dar es Salaam, United Republic of Tanzania, <sup>2</sup>NMCP, Dodoma, United Republic of Tanzania, <sup>3</sup>SWISS TPH, Swiss Tropical and Public Health Institute, Basel, Switzerland

9:15 a.m.

5005

**ENHANCED ACTIVE CASE DETECTION TO ELIMINATE MALARIA IN YALA PROVINCE, THAILAND**

Suravadee Kitchakarn<sup>1</sup>, Sathapana Naowarat<sup>2</sup>, Prayuth Sudathip<sup>1</sup>, Pratin Dharmarak<sup>3</sup>, Deyer Gopinath<sup>4</sup>, Hope Simpson<sup>5</sup>, Rungrawee Tipmontree<sup>1</sup>, Chantana Padungtod<sup>1</sup>, Donal Bisanzio<sup>2</sup>, Niparueradee Pinyajeerapat<sup>6</sup>, David Sintasath<sup>6</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>Independent consultant, Bangkok, Thailand, <sup>4</sup>World Health Organization, Nonthaburi, Thailand, <sup>5</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>6</sup>U.S. President's Malaria Initiative, United States Agency for International Development (USAID), Regional Development Mission for Asia, Bangkok, Thailand

9:30 a.m.

5006

**A PROGRAM EVALUATION OF REACTIVE FOCAL DRUG ADMINISTRATION IN NORTHERN SENEGAL**

Ellen Ferriss<sup>1</sup>, Caterina Guinovart<sup>2</sup>, Yakou Dieye<sup>3</sup>, Moustapha Cisse<sup>3</sup>, Abiboulaye Sall<sup>3</sup>, Tidiane Thiam<sup>3</sup>, Adam Bennett<sup>1</sup>  
<sup>1</sup>PATH, Seattle, WA, United States, <sup>2</sup>PATH, Barcelona Institute for Global Health, Barcelona, Spain, <sup>3</sup>PATH, Dakar, Senegal

**Scientific Session 4**

**Global Health: Maternal Health, Community Health and Non-Communicable Diseases**

Grand Hall J - Ballroom Level (East Tower)  
 Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

**CHAIR**

Mamadou O. Diallo  
 Centers for Disease Control and Prevention, Atlanta, GA, United States  
 Andrea Buchwald  
 University of Maryland School of Medicine, Baltimore, MD, United States

8 a.m.

5007

**PREGNANT WOMEN EXCLUSION IN CLINICAL TRIALS FOR MALARIA, TUBERCULOSIS, AND COVID-19: A REVIEW OF TRIAL REGISTRY DATA**

Elias Rejice Maynard Phiri<sup>1</sup>, Claudia Emerson<sup>2</sup>, Lizzie Divala<sup>3</sup>, Aaron Roberts<sup>2</sup>, Lufina Tzirizani-Galileya<sup>4</sup>, Randy George Mungwira<sup>5</sup>, Titus Divala<sup>6</sup>  
<sup>1</sup>Malawi-Liverpool-Wellcome Programme, Blantyre, Malawi, <sup>2</sup>MacMaster University, Hamilton, ON, Canada, <sup>3</sup>Glasgow University, Glasgow, United Kingdom, <sup>4</sup>University of Cape Town, Cape Town, South Africa, <sup>5</sup>World Health Organization, Turin, Italy, <sup>6</sup>Wellcome Trust, London, United Kingdom

8:15 a.m.

5008

**NODDING SYNDROME CLINICAL CHARACTERISTICS, RISKS FACTORS, ACCESS TO TREATMENT, AND PERCEPTIONS IN THE GREATER MUNDRI AREA, SOUTH SUDAN**

Gasim Abd-Elfarag<sup>1</sup>, Jake Mathewson<sup>2</sup>, Lukudu Emmanuel<sup>1</sup>, Arthur Edridge<sup>3</sup>, Stella van Beers<sup>2</sup>, Mohamed Sebit<sup>4</sup>, Robert Colebunders<sup>5</sup>, Michaël van Hensbroek<sup>3</sup>, Ente Rood<sup>2</sup>  
<sup>1</sup>Access for Humanity, Juba, South Sudan, <sup>2</sup>Kit-Royal Tropical Institute, Amsterdam, Netherlands, <sup>3</sup>Amsterdam Center for Global Health, Department of Pediatrics and Department of Global Health, Amsterdam, Netherlands, <sup>4</sup>University of Juba, Juba, South Sudan, <sup>5</sup>Global Health Institute, University of Antwerp, Antwerp, Belgium

8:30 a.m.

5009

**DIABETES-ASSOCIATED MAJOR LIMB AMPUTATION IN SOLOMON ISLANDS: EPIDEMIOLOGICAL CHARACTERISTICS AND CLINICAL MANAGEMENT**

Dylan Bush<sup>1</sup>, Thomas Fitzpatrick<sup>2</sup>, Adrian Garcia Hernandez<sup>3</sup>, Rooney Jagilly<sup>4</sup>, Eileen Natuzzi<sup>5</sup>, Mickey Olangi<sup>6</sup>, Mark Love<sup>7</sup>, Jones Ghabu<sup>4</sup>, Hugo Bugoro<sup>8</sup>, Alexandra Martiniuk<sup>9</sup>  
<sup>1</sup>Solomon Islands Ministry of Health and Medical Services, Honiara, Solomon Islands, <sup>2</sup>Australian Volunteers International, Melbourne, Australia, <sup>3</sup>Columbia University, New York City, NY, United States, <sup>4</sup>Solomon Islands National Referral Hospital, Honiara, Solomon Islands, <sup>5</sup>Georgetown Center for Australian, New Zealand & Pacific Studies, Georgetown, DC, United States, <sup>6</sup>Kilu'ufi Hospital, Auki, Solomon Islands, <sup>7</sup>Griffith University, Brisbane, Australia, <sup>8</sup>Solomon Islands National University, Honiara, Solomon Islands, <sup>9</sup>University of Sydney School of Public Health, Sydney, Australia

8:45 a.m.

5010

**LEVERAGING PARTICIPATORY MAPPING AND FINE-SCALE GEOSPATIAL ANALYSES TO OPTIMIZE COMMUNITY-BASED HEALTHCARE PROGRAMS AND POLICIES**

Felana A. Ichantamalala<sup>1</sup>, Vincent Herbreteau<sup>2</sup>, Christophe Revillon<sup>3</sup>, Lucas Longour<sup>2</sup>, Michelle V. Evans<sup>2</sup>, Mauricianot Randriamihaja<sup>1</sup>, Laura F. Cordier<sup>1</sup>, Benedicte Razafinjato<sup>1</sup>, Luc Rakotonirina<sup>1</sup>, Isaïe Jules Andriamiandra<sup>4</sup>, Karen E. Finnegan<sup>5</sup>, Matthew H. Bonds<sup>5</sup>, Andres Garchitorena<sup>2</sup>  
<sup>1</sup>ONG Pivot, Ranomafana, Madagascar, <sup>2</sup>Institut de Recherche pour le Développement, Montpellier, France, <sup>3</sup>Université de La Réunion, La Réunion, France, <sup>4</sup>Ministry of Public Health, Antananarivo, Madagascar, <sup>5</sup>Harvard Medical School, Boston, MA, United States

9 a.m.

5011

**WHO IS MISSED IN A COMMUNITY-BASED SURVEY: DIFFERENCES IN SOCIO-DEMOGRAPHIC CHARACTERISTICS AND HEALTHCARE SEEKING AMONG MISSED AND SAMPLED INDIVIDUALS FOR A SEROSURVEY IN ZAMBIA AND IMPLICATIONS FOR BIASED ESTIMATES OF HEALTHCARE SEEKING, VACCINATION COVERAGE, AND SEROPREVALENCE**

Natalya Kostandova<sup>1</sup>, Simon Mutembo<sup>1</sup>, Christine Prosper<sup>1</sup>, Francis D. Mwansa<sup>2</sup>, Chola N. Daka<sup>3</sup>, Harriet Namukoko<sup>3</sup>, Bertha Nachinga<sup>3</sup>, Gershom Chongwe<sup>4</sup>, Innocent Chilumba<sup>4</sup>, Kalumbu H. Matakala<sup>5</sup>, Gloria Musukwa<sup>5</sup>, Mutinta Hamahuwa<sup>5</sup>, Webster Mufwambi<sup>4</sup>, Japhet Matoba<sup>5</sup>, Kenny Situtu<sup>4</sup>, Irene Mutale<sup>4</sup>, Edgar Simulundu<sup>5</sup>, Phillimon Ndubani<sup>5</sup>, Alvira Z. Hasan<sup>1</sup>, Shaun A. Truelove<sup>1</sup>, Amy K. Winter<sup>6</sup>, Andrea C. Carcelen<sup>1</sup>, Amy Wesolowski<sup>1</sup>, Bryan Lau<sup>1</sup>, William J. Moss<sup>1</sup>  
<sup>1</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Directorate of Public Health and Research, Ministry of Health, Lusaka, Zambia, <sup>3</sup>Zambia Statistics Agency, Lusaka, Zambia, <sup>4</sup>Tropical Diseases Research Centre, Ndola, Zambia, <sup>5</sup>Macha Research Trust, Macha, Zambia, <sup>6</sup>University of Georgia, Athens, GA, United States

Thursday  
October 19

9:15 a.m.

5012

**THE EFFECT OF COMMUNITY-BASED PACKAGE OF INTERVENTIONS ON IMPROVING INSTITUTIONAL DELIVERY CARE SERVICES UTILIZATION IN ARBA MINCH HDSS, SOUTHERN ETHIOPIA: A CLUSTER-RANDOMIZED CONTROLLED TRIAL**

Mekdes Kondale Gurara<sup>1</sup>, Veerle Draulans<sup>2</sup>, Jean-Pierre Van geertruyden<sup>3</sup>, Yves Jacquemyn<sup>4</sup>

<sup>1</sup>Arba Minch University, Arba Minch, Ethiopia, <sup>2</sup>KU Leuven, Leuven, Belgium, <sup>3</sup>Antwerp University, Belgium, Belgium, <sup>4</sup>Antwerp University, Antwerp, Belgium

9:30 a.m.

5013

**IMPACT OF A MOBILE OBSTETRIC REFERRAL EMERGENCY SYSTEM (MORES) ON REDUCING CARE DELAYS IN RURAL LIBERIA**

Christopher Reynolds<sup>1</sup>, Nancy Lockhart<sup>1</sup>, Joseph Sieka<sup>2</sup>, Clare Edson<sup>1</sup>, Aloysius Nyanplu<sup>3</sup>, Jody Lori<sup>1</sup>

<sup>1</sup>University of Michigan, Ann Arbor, MI, United States, <sup>2</sup>University of Liberia, Monrovia, Liberia, <sup>3</sup>Bong County Health Team, Gbanga, Liberia

**Scientific Session 5**



**Malaria - Diagnosis: Challenges and Innovations**

Grand Ballroom CDEF - Ballroom Level (East Tower)

Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

**CHAIR**

Susanta K. Ghosh

ICMR Complex, National Institute of Malaria Research, Bangalore, India

Delenasaw Yewhalaw

Jimma University, Jimma, Ethiopia

8 a.m.

5014

**DETECTING CIRCULATING MALARIA-INFECTED ERYTHROCYTES IN HUMANS WITHOUT A DROP OF BLOOD**

Jillian N. Armstrong<sup>1</sup>, Aayire C. Yadem<sup>2</sup>, Mustafa Sarimollaoglu<sup>3</sup>, Kiki Massa Civian<sup>4</sup>, Jean Michel Ndifo Ngamba<sup>5</sup>, Yulian A. Menyae<sup>6</sup>, Anastasie Mbe<sup>5</sup>, Kacey Richards<sup>1</sup>, Martina Wade<sup>1</sup>, Yushun Zeng<sup>6</sup>, Ruimin Chen<sup>6</sup>, Qifa Zhou<sup>6</sup>, Elvis Meten<sup>5</sup>, Rodrigue Ntone<sup>4</sup>, Yves Le Grand Napa Tchuedji<sup>5</sup>, Safi Ullah<sup>3</sup>, Ekaterina I. Galanzha<sup>3</sup>, Lucrece Eteki<sup>4</sup>, Hortense Kamga Gonsu<sup>5</sup>, Alex Biris<sup>2</sup>, James Y. Suen<sup>3</sup>, Yap Boum II<sup>5</sup>, Vladimir P. Zharov<sup>3</sup>, Sunil Parikh<sup>1</sup>

<sup>1</sup>Yale School of Public Health, New Haven, CT, United States, <sup>2</sup>University of Arkansas at Little Rock, Little Rock, AR, United States, <sup>3</sup>University of Arkansas for Medical Sciences, Little Rock, AR, United States, <sup>4</sup>Epicentre, Yaoundé, Cameroon, <sup>5</sup>University of Yaoundé I, Yaoundé, Cameroon, <sup>6</sup>University of Southern California, Los Angeles, CA, United States

8:15 a.m.

5015

**DROPLET DIGITAL PCR AND SEQUENCING REVEALS CONCURRENT PFHRP2/3 GENE DELETIONS AND KELCH 13 MUTATIONS ACROSS ETHIOPIA**

Jack Burke-Gaffney<sup>1</sup>, Claire Kamaliddin<sup>1</sup>, Aderaw Adamu<sup>2</sup>, Shoaib Ashraf<sup>1</sup>, Ayesha Wijesinghe<sup>1</sup>, Enaara Pussegoda<sup>3</sup>, Daniel Castaneda Mogollon<sup>1</sup>, Sindew Mekasha Feleke<sup>2</sup>, Dylan R. Pillai<sup>1</sup>

<sup>1</sup>University of Calgary, Calgary, AB, Canada, <sup>2</sup>Ethiopia Public Health Institute, Addis Ababa, Ethiopia, <sup>3</sup>University of Western Australia, Perth, Australia

8:30 a.m.

5016

**MULTIPLEX MICROFLUIDIC CARTRIDGE 'MICROLAMP' FOR MALARIA DETECTION AND SPECIATION**

Hitendra Kumar, Nabil Royez, Jack Burke-Gaffney, Keekyoung Kim, Dylan R. Pillai  
University of Calgary, Calgary, AB, Canada

8:45 a.m.

5017

**ACTIVE CASE DETECTION AND TREATMENT OF MALARIA IN PREGNANCY USING LAMP TECHNOLOGY (LAMPREG): A PRAGMATIC RANDOMIZED DIAGNOSTIC OUTCOMES TRIAL**

Rediet Fikru<sup>1</sup>, Claire Kamaliddin<sup>2</sup>, Filmona Mekuria<sup>1</sup>, Betelhem Solomon<sup>1</sup>, Banchamlak Tegegne<sup>3</sup>, Delenasaw Yewhalaw<sup>4</sup>, Mekonnen Teferi<sup>1</sup>, Abebe G. Bayih<sup>5</sup>, Dylan R. Pillai<sup>2</sup>, LAMPREG STUDY TEAM<sup>2</sup>

<sup>1</sup>Armauer Hansen Research Institute, Addis Ababa, Ethiopia, <sup>2</sup>University of Calgary, Calgary, AB, Canada, <sup>3</sup>Amhara Public Health Institute, Bahir Dar, Ethiopia, <sup>4</sup>Jimma University, Jimma, Ethiopia, <sup>5</sup>Armauer Hansen Research Institute, Addis Ababa, Ethiopia

9 a.m.

5018

**NEW THYMIDINE KINASE-INDEPENDENT CLICK CHEMISTRY DNA DETECT™ PROBES FOR ASSESSMENT OF DNA PROLIFERATION IN MALARIA PARASITES**

David H. Hilko, Gillian M. Fisher, Katherine Andrews, Sally-Ann Poulsen  
Griffith University, Nathan, Australia

(ACMCIP Abstract)

9:15 a.m.

5019

**USE OF MINIMALLY INVASIVE TISSUE SAMPLING (MITS) TO DETERMINE THE CONTRIBUTION OF MALARIA INFECTIONS TO MORTALITY IN CHILDREN UNDER 5 YEARS OF AGE IN THE CHAMPS NETWORK**

Ikechukwu U. Ogbuanu<sup>1</sup>, Kephas Otieno<sup>2</sup>, Rosauro Varo<sup>3</sup>, Zachary Madewell<sup>4</sup>, Beth A. Tippet Barr<sup>5</sup>, Inacio Mandomando<sup>6</sup>, Dianna M. Blau<sup>4</sup>, Cynthia G. Whitney<sup>7</sup>, Aaron M. Samuels<sup>4</sup>, Quique Bassat<sup>3</sup>

<sup>1</sup>Crown Agents in Sierra Leone, Freetown, Sierra Leone, <sup>2</sup>Kenya Medical Research Institute, Centre for Global Health Research, Kisumu, Kenya, <sup>3</sup>ISGlobal, Barcelona, Spain, <sup>4</sup>Center for Global Health, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>5</sup>Nyanja Health Research Institute, Salima, Malawi, <sup>6</sup>Centro de Investigação em Saude de Manhica, Manhica, Mozambique, <sup>7</sup>Emory Global Health Institute, Emory University, Atlanta, GA, United States

9:30 a.m.

**Lightning Talks**

(Lightning Talks are two-minute talks to highlight abstracts assigned to poster presentations.)

6791

**PRECLINICAL PERFORMANCE AND USABILITY EVALUATION OF A NEW POINT-OF-CARE TEST FOR GLUCOSE-6-PRECLINICAL PERFORMANCE AND USABILITY EVALUATION OF A NEW POINT-OF-CARE TEST FOR GLUCOSE-6-PRECLINICAL PERFORMANCE AND USABILITY EVALUATION OF A NEW POINT-OF-CARE TEST FOR GLUCOSE-6-PHOSPHATE DEHYDROGENASE DEFICIENCY 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>, Podjanee 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>

<sup>1</sup>PATH, Diagnostics, Seattle, WA, United States, <sup>2</sup>Shoklo Malaria Research Unit, Mahidol-Oxford Tropical Medicine Research Unit, Mahidol University, Mae Sot, Thailand, <sup>3</sup>PATH,

Vietnam Country Program, Hanoi, Vietnam, <sup>4</sup>Centre for Tropical Medicine and Global Health, University of Oxford, Oxford, United Kingdom, <sup>5</sup>Mahidol-Oxford Tropical Medicine Research Unit, Mahidol University, Bangkok, Thailand

5361

**DIAGNOSTIC PERFORMANCE OF NXTEK™ ELIMINATE MALARIA PF TEST FOR THE DETECTION OF *PLASMODIUM FALCIPARUM* IN SCHOOL CHILDREN WITH ASYMPTOMATIC MALARIA**

Abdissa Biruksew Hordofa<sup>1</sup>, Ashenafi Demeke<sup>2</sup>, Prof. Zewdie Birhanu<sup>1</sup>, Estifanos Kebede<sup>1</sup>, Lemu Golassa<sup>3</sup>, Evans M. Mathebula<sup>4</sup>, Prof. Delenasaw Yewhalaw<sup>1</sup>  
<sup>1</sup>Jimma University, Jimma, Ethiopia, <sup>2</sup>Minch Health Science College, Arba Minch, Ethiopia, <sup>3</sup>Aklilu Lemma Institute of Pathobiology, Addis Ababa University, Addis Ababa, Ethiopia, <sup>4</sup>University of Pretoria, South Africa, Ethiopia

6804

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

Lina Alemayehu Lulu<sup>1</sup>, Migbaru Keffale<sup>1</sup>, Melat Melat<sup>1</sup>, Ayalew Jejaw<sup>1</sup>, Mikiyas Gebremichael<sup>1</sup>, Legesse Alamerie<sup>1</sup>, Alayu Bogale<sup>1</sup>, Fikregabrail Abera Kassa<sup>1</sup>, Cristian Koepfli<sup>2</sup>, **Fitsum Girma Tadesse<sup>1</sup>**  
<sup>1</sup>Armauer Hansen Research Institute, Addis Ababa, Ethiopia, <sup>2</sup>University of Notre Dame, Notre Dame, IN, United States

6084

**A DIGITAL MICROSCOPE FOR THE DIAGNOSIS OF *PLASMODIUM FALCIPARUM* PARASITES WITH HRP2 AND HRP3 DELETION AND *PLASMODIUM VIVAX***

Yalemwork Ewnetu<sup>1</sup>, Lise Carlier<sup>2</sup>, Claudia A. Vera Arias<sup>3</sup>, Jieun Shin<sup>2</sup>, Chae Yun Bae<sup>2</sup>, Hyun Cher Youm<sup>2</sup>, Nega Berhane<sup>1</sup>, Wossenseged Lemma<sup>1</sup>, Soyeon Yi<sup>2</sup>, **Cristian Koepfli<sup>3</sup>**  
<sup>1</sup>Gondar University, Gondar, Ethiopia, <sup>2</sup>Noul Inc., Seoul, Republic of Korea, <sup>3</sup>University of Notre Dame, Notre Dame, IN, United States

5368

**MALARIA PARASITEMIA ESTIMATES BASED ON HRP2 AND PLDH ANTIGEN CONCENTRATIONS FROM A LARGE HOUSEHOLD SURVEY IN NIGERIA: HOW MUCH DIFFERENCE DOES RDT PERFORMANCE MAKE?**

Laura Steinhardt<sup>1</sup>, Abiodun Oggunniyi<sup>2</sup>, Nwando Mba<sup>2</sup>, Ado Abubakar<sup>3</sup>, Perpetua Uhomoibhi<sup>4</sup>, McPaul Okoye<sup>5</sup>, Nnaemeka Iriemenam<sup>5</sup>, Michael Aidoo<sup>1</sup>, Eric Rogier<sup>1</sup>, Chikwe Ihekweazu<sup>2</sup>  
<sup>1</sup>CDC, Atlanta, GA, United States, <sup>2</sup>Nigeria Centre for Disease Control, Abuja, Nigeria, <sup>3</sup>Institute for Human Virology, Nigeria, Abuja, Nigeria, <sup>4</sup>Ministry of Health, Abuja, Nigeria, <sup>5</sup>CDC, Abuja, Nigeria

**Scientific Session 6**

**Kinetoplastida and Other Protozoa: Immunology, Invasion, Cellular and Molecular Biology**

Grand Hall K - Ballroom Level (East Tower)

Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

**CHAIR**

Camila I. de Oliveira  
FIOCRUZ, Salvador, Brazil

Vyacheslav Yurchenko  
University of Ostrava, Ostrava, Czech Republic

8 a.m.

5020

**ALTERED IL-7/IL-7R SIGNALING IN CD4+ T CELLS FROM PATIENTS WITH ACTIVE VISCERAL LEISHMANIASIS**

Shashi Kumar<sup>1</sup>, Shashi Bhushan Chauhan<sup>2</sup>, Shreya Upadhyay<sup>1</sup>, Siddharth Sankar Singh<sup>3</sup>, Rajiv Kumar<sup>1</sup>, Christian Engwerda<sup>4</sup>, Susanne Nysten<sup>5</sup>, Shyam Sundar<sup>1</sup>  
<sup>1</sup>Banaras Hindu University, Varanasi, India, <sup>2</sup>George Washington University, Washington, WA, United States, <sup>3</sup>University of Massachusetts Chan Medical School, Varanasi, MA, United States, <sup>4</sup>QIMR Berghofer Medical Research Institute, Brisbane, Australia, Brisbane, Australia, <sup>5</sup>Karolinska Institutet, Stockholm, Sweden

8:15 a.m.

5021

**DECONSTRUCTING TRANSMISSION OF VISCERAL LEISHMANIASIS THROUGH ANALYSIS OF BLOOD FED SAND FLIES**

Patrick Allen Huffcutt<sup>1</sup>, Khushbu Priyamvada<sup>2</sup>, Pushkar Dubey<sup>2</sup>, Joy Bindroo<sup>2</sup>, Asgar Ali<sup>2</sup>, Asahar Alam<sup>2</sup>, Shalini Singh<sup>2</sup>, Mohammad Shahnawaz<sup>2</sup>, Debanjan Patra<sup>2</sup>, Indranil Sukla<sup>2</sup>, Avneesh Kumar<sup>2</sup>, Gaurav Kumar<sup>2</sup>, Pankaj Kumar<sup>2</sup>, Shani Pandey<sup>2</sup>, Claudio Meneses<sup>1</sup>, Jesus G. Valenzuela<sup>1</sup>, Sridhar Srikanthiah<sup>2</sup>, Caryn Bern<sup>3</sup>, Tiago Donatelli Serafim<sup>1</sup>, Eva Iniguez<sup>1</sup>, Shaden Kamhawi<sup>1</sup>  
<sup>1</sup>National Institutes of Health, Laboratory of Molecular Vector Research, Rockville, MD, United States, <sup>2</sup>CARE India Solutions for Sustainable Development, Patna, India, <sup>3</sup>University of California, San Francisco, CA, United States

(ACMCIP Abstract)

8:30 a.m.

5022

**NEUTROPHILS IN PATHOGENESIS OF POST KALA-AZAR DERMAL LEISHMANIASIS (PKDL), FRIEND OR FOE?**

Madhurima Roy  
Institute of Post Graduate Medical Education & Research, Kolkata, India

(ACMCIP Abstract)

8:45 a.m.

5023

**ALTERED PROFILE OF CD4+T CELLS CHEMOKINE RECEPTOR EXPRESSION DURING VISCERAL LEISHMANIASIS**

Shreya Upadhyay<sup>1</sup>, Shashi Kumar<sup>1</sup>, Shashi Bhushan Chauhan<sup>2</sup>, Siddharth Sankar Singh<sup>3</sup>, Susanne Nysten<sup>4</sup>, Christian Engwerda<sup>5</sup>, Rajiv Kumar<sup>1</sup>, Madhukar Rai<sup>1</sup>, Shyam Sundar<sup>1</sup>  
<sup>1</sup>Institute of Medical Sciences, Banaras Hindu University, Varanasi, India, <sup>2</sup>George Washington University, Washington, WA, United States, <sup>3</sup>University of Massachusetts Medical School, Worcester, MA, United States, <sup>4</sup>Karolinska Institutet, Stockholm, Sweden, <sup>5</sup>QIMR Berghofer Medical Research Institute, Brisbane, Australia

(ACMCIP Abstract)

9 a.m.

5024

**A POTENTIAL ROLE FOR ADIPOCYTES IN VISCERAL LEISHMANIASIS**

Patrick Kwadwo Nuro-Gyina, Bayan Zhanbolat, Yani Chen, Carter R. Dwyer, Jacilara Alexandrino-Conceicao, Aloysius Klingelutz, Mary Wilson  
University of Iowa, Iowa City, IA, United States

(ACMCIP Abstract)

Thursday  
October 19

9:15 a.m.

5025

**IMMUNE MODULATION INDUCED BY LEISHMANIA EUKARYOTIC INITIATION FACTOR BEFORE LEISHMANIA INFANTUM INFECTION OF THP1 DERIVED MACROPHAGES**

Imen Bassoumi Jamoussi, Yosser Zina Abdelkrim, Ons Zakraoui, Rafah Oualha, Mourad Barhoumi, Khadija Essafi Benkhadir, Ikram Guizani  
INSTITUT PASTEUR DE TUNIS, Tunis, Tunisia

(ACMCIP Abstract)

9:30 a.m.

5026

**CATALASE IS DETRIMENTAL FOR LEISHMANIA VIRULENCE (WITH NOTES ON EVOLUTION OF CATALASES IN TRYPANOSOMATIDAE)**

Vyacheslav Yurchenko<sup>1</sup>, Lubomira Chmelová<sup>1</sup>, Natalia Kraeva<sup>1</sup>, Petr Volf<sup>2</sup>, Jovana Sádlová<sup>2</sup>

<sup>1</sup>University of Ostrava, Ostrava, Czech Republic, <sup>2</sup>Charles University, Prague, Czech Republic

## Symposium 7

### Reaching Indigenous Populations with NTDs Interventions

Grand Hall L - Ballroom Level (East Tower)

Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

Preventive chemotherapy (PC) through mass drug administration (MDA) is one of the main interventions endorsed by WHO to eliminate several neglected tropical diseases (NTDs). Many countries have adopted this strategy and made significant progress: 47 countries have declared elimination of at least one NTD by 2022, and several other countries are well on their way to stopping MDA. However, it is well known that the proverbial 'last mile' is usually the hardest. To reach NTD elimination goals and to ensure equity, Health Ministries must be able to identify and address the barriers to reaching marginalized populations with MDA, including indigenous communities. Many indigenous populations face a variety of socio-economic barriers, which powerfully shape their access to and acceptance of MDA, with the potential for continued risk of disease. Geographic remoteness, language differences, mobile pastoralism, and distinct social and political identities can result in less contact with or resistance to health services. It is therefore incumbent on health service providers to overcome these barriers, to identify knowledge and skill gaps, and to learn from successes reaching indigenous populations from around the world. This symposium will explore this issue using four case studies that present an analysis of NTD treatment delivery to four different indigenous populations. Each case study will present the related disease epidemiology and social determinants of health, the barriers to access they face, and efforts that have been made to re-design MDA approaches. The case studies will be preceded with an introduction that frames the issues within the scientific literature. The first two cases will look at delivering Trachoma MDA to nomadic Pastoralist populations in East Africa and how barriers to participation were addressed using participatory approaches and supported gaining entry to the communities and empowering communities. The third case focuses on the implementation of Onchocerciasis MDA

in Yanomami communities. The fourth case will focus on how trust was built back in "custom villages" in Vanuatu to enable MDA for Yaws following the COVID-19 pandemic. The key theme that runs strongly across these case studies is the need for locally developed and locally led solutions that facilitate strong community engagement. These case highlight how the expertise and leadership of the indigenous communities themselves was used to design effective NTD interventions.

#### CHAIR

Upendo J. Mwingira  
RTI International, Washington, DC, United States

Margaret Baker  
Georgetown University, Washington, DC, United States

#### 8 a.m. INTRODUCTION

8:10 a.m.

#### ADDRESSING BARRIERS OF COMMUNITY PARTICIPATION AND ACCESS TO MDA FOR TRACHOMA USING PARTICIPATORY APPROACHES IN A PASTORAL CONFLICT AREA OF KENYA

Doris Njomo  
KEMRI, Nairobi, Kenya

8:30 a.m.

#### HOW TO GAIN ENTRY TO AND EMPOWER COMMUNITIES TO DELIVER MDA FOR NTDs: A CASE STUDY OF THE MAASAI POPULATION IN TANZANIA

Stella Kasindi Mwita  
WiHeR, Dar es salaam, United Republic of Tanzania

8:45 a.m.

#### BUILDING BACK TRUST FOR YAWS MDA AFTER COVID IN "CUSTOM VILLAGES" IN VANUATU, SOUTH PACIFIC

Fasiha Taleo  
WHO, Vanuatu, Vanuatu

9 a.m.

#### OVERVIEW OF THE LITERATURE IN DELIVERING CAMPAIGNS TO MINORITY POPULATIONS

Margaret Baker  
Georgetown University, Washington, DC, United States

9:20 a.m.

#### IMPLEMENTATION OF ONCHOCERCIASIS MDA IN YANOMAMI COMMUNITIES IN VENEZUELA

Oscar Noya  
SACAICET, Venezuela, Bolivarian Republic of Venezuela

## Symposium 8

### Strategies for Prevention and Control of Typhoid and Cholera Outbreaks

Plaza Ballroom - Lobby Level (East Tower)

Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

Enteric diseases, including typhoid and cholera, threaten life and well-being in already marginalized communities. Typhoid, caused by Salmonella Typhi, and cholera, caused by Vibrio cholerae, disproportionately impact poor communities with inadequate sanitation and populations made vulnerable by displacement

and migration. Both diseases are spread through ingestion of unclean water or contaminated food and are endemic in several countries. Typhoid affects up to 20 million people annually, claiming 8 million years of healthy life each year. Cholera infects more than two million people per year, threatens an estimated 1.3 billion people living in risk zones, and is prone to explosive outbreaks that can cause high mortality. Though improved water and sanitation infrastructure remain the most robust long-term prevention strategies for enteric infections, targeted vaccination may serve as a bridge intervention to interrupt transmission in acute outbreak scenarios. Indeed, the global cholera vaccine stockpile was established for this reason. The number and frequency of outbreaks has stretched the stockpile to its limit, leading to vaccine use prioritization decisions and rationing. While typhoid conjugate vaccines (TCV) are being added to the routine immunization schedule in many countries, there is no clear guidance on how to deploy TCV most effectively in an outbreak setting. Gavi, the Vaccine Alliance, has negotiated mechanisms with vaccine manufacturers to supply 500,000 doses of TCV in the event of a typhoid outbreak. However, this supply promise has not been matched with clear guidance from SAGE regarding how those vaccines should be used in emergency circumstances. In a 2019 outbreak in Harare, Zimbabwe, anecdotal evidence indicates that delays in the availability of TCVs likely contributed to unnecessary additional mortality and morbidity. To ensure timely, appropriate response, outbreaks must be identified and characterized with accurate diagnostics. Current typhoid diagnostics require a laboratory setting; field use of these tools is not yet possible. Without accurate, rapid diagnostics, outbreaks remain undetected and infect many more. Consensus is developing that outbreak prevention and rapid termination require development and utilization of quality rapid diagnostic tests (RDTs), validation of their use for identification and characterization of outbreaks, modeling of scenarios to inform when and how vaccine should be used in outbreak response, and development of clear guidance for decision-makers facing outbreaks. This symposium brings together researchers from the typhoid and cholera fields to present the latest progress toward meeting these goals and addressing the key challenges that remain.

#### CHAIR

Denise Garrett  
Sabin Vaccine Institute, Washington, DC, United States

Lucy Breakwell  
Centers for Disease Control, Atlanta, Georgia

#### 8 a.m. INTRODUCTION

#### 8:10 a.m. TYPHOID AND CHOLERA DIAGNOSTIC TOOLS CURRENTLY AVAILABLE AND IN DEVELOPMENT

Richelle Charles  
Massachusetts General Hospital, Boston, MA, United States

#### 8:25 a.m. PAKISTAN FLOOD RESPONSE 2022 AND DISEASE SURVEILLANCE

Adil Haider  
Aga Khan University, Medical College, Karachi, Pakistan

#### 8:40 a.m. VACCINE INTRODUCTION IN OUTBREAK SETTINGS

Phiona Atuhebwe  
UNICEF, Nairobi, Kenya

#### 8:55 a.m. CHALLENGES IN DETECTING AND RESPONDING TO TYPHOID OUTBREAKS

Daniela Garone  
Médecins Sans Frontières, Brussels, Belgium

#### 9:10 a.m. EFFECTIVE USE OF ORAL CHOLERA VACCINE IN OUTBREAK SETTINGS

Elizabeth Lee  
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

#### 9:25 a.m. MODERATOR, PANEL DISCUSSION

Denise Garrett  
Sabin Vaccine Institute, Washington, DC, United States

## Scientific Session 9

### Clinical Tropical Medicine: Pediatrics

Crystal Ballroom A - Lobby Level (West Tower)  
Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

#### CHAIR

Melinda Tanabe  
UTMB, Galveston, TX, United States

Martin Grobusch  
Academic Medical Center, Amsterdam, Netherlands

#### 8 a.m. 5027

#### GEOSPATIAL ANALYSIS OF THE DISTRIBUTION OF H. NANA INFECTION AMONG CHILDREN'S HOUSEHOLDS AND SCHOOLS OF THE PROVINCE OF ANTA, PERU

Melinda B. Tanabe<sup>1</sup>, Maria Alejandra Caravedo Martinez<sup>1</sup>, Maria Luisa Morales<sup>2</sup>, Martha Lopez<sup>2</sup>, Benicia Baca-Turpo<sup>2</sup>, Eulogia Arque Sollace<sup>2</sup>, Miguel M. Cabada<sup>3</sup>  
<sup>1</sup>University of Texas Medical Branch, Galveston, TX, United States, <sup>2</sup>Alexander von Humboldt Tropical Medicine Institute, UPCH, Cusco, Peru, <sup>3</sup>UPCH – UTMB Collaborative Research Center - Cusco, Universidad Peruana Cayetano, Cusco, Peru

#### 8:15 a.m. 5028

#### ACUTE KIDNEY INJURY IN CHILDREN WITH SICKLE CELL ANEMIA IS LINKED TO TUBULOINTERSTITIAL INJURY AND MICROCIRCULATORY DYSFUNCTION

Rodney Ogwang<sup>1</sup>, Ivan Mufumba<sup>1</sup>, Caroline Kazinga<sup>1</sup>, Anthony Batte<sup>2</sup>, Andrea Conroy<sup>3</sup>  
<sup>1</sup>Global Health Uganda, Kampala, Uganda, <sup>2</sup>Makerere University, Kampala, Uganda, <sup>3</sup>University of Indiana, Indiana, IN, United States

8:30 a.m.

5029

### TEMPORAL TRENDS OF BLOOD GLUCOSE IN CHILDREN WITH CEREBRAL MALARIA

Kennedy M. Chastang<sup>1</sup>, Rami Imam<sup>2</sup>, Meredith G. Sherman<sup>3</sup>, Ronke Olowojesiku<sup>4</sup>, Amina M. Mukadam<sup>5</sup>, Karl B. Seydel<sup>6</sup>, Alice M. Liomba<sup>7</sup>, John R. Barber<sup>8</sup>, Douglas G. Postels<sup>9</sup>  
<sup>1</sup>Howard University, Washington, DC, United States, <sup>2</sup>The George Washington University School of Medicine, Washington, DC, United States, <sup>3</sup>Global Health Initiative, Children's National Medical Center, Washington, DC, United States, <sup>4</sup>Department of Pediatrics, Children's National Medical Center, Washington, DC, United States, <sup>5</sup>University of Washington, Seattle, WA, United States, <sup>6</sup>Michigan State University, East Lansing, MI, United States, <sup>7</sup>Blantyre Malaria Project, Blantyre, Malawi, <sup>8</sup>Division of Biostatistics and Study Methodology, Children's National Research Institute, Washington, DC, United States, <sup>9</sup>Division of Neurology, Children's National Medical Center, Washington, DC, United States

8:45 a.m.

5030

### NEUROLOGICAL SYMPTOMS IN SICK CHILDREN PRECEDING DEATH AND CORRELATION WITH POSTMORTEM DIAGNOSIS: RESULTS FROM CHAMPS MORTALITY SURVEILLANCE NETWORK

Sara Ajanovic Andelic<sup>1</sup>, Elisio Xerinda<sup>2</sup>, Rosauero Varo<sup>1</sup>, Zachary Madewell<sup>3</sup>, Muntasir Alam<sup>4</sup>, Nega Assefa<sup>5</sup>, Shams El Arifeen<sup>4</sup>, Lola Madrid<sup>6</sup>, Aggrey Igunza<sup>7</sup>, Aaron Samuels<sup>8</sup>, Adama Keita<sup>9</sup>, Amara Jambai<sup>10</sup>, Solomon Samura<sup>11</sup>, Sana Mahtab<sup>12</sup>, Portia Mutevedzi<sup>12</sup>, Beth A. Tippet Barr<sup>13</sup>, Dianna Blau<sup>14</sup>, Cynthia Whitney<sup>15</sup>, Quique Bassat<sup>1</sup>  
<sup>1</sup>Barcelona Institute for Global Health (ISGlobal), Barcelona, Spain, <sup>2</sup>Centro de Investigação em Saúde de Manhiça (CISM), Maputo, Mozambique, <sup>3</sup>Center for Global Health, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>4</sup>International Center for Diarrhoeal Diseases Research (icddr), Dhaka, Bangladesh, <sup>5</sup>College of Health Medical Sciences, Haramaya University, Harar, Ethiopia, <sup>6</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>7</sup>Kenya Medical Research Institute (KEMRI), Nairobi, Kenya, <sup>8</sup>Center for Global Health, Centers for Disease Control and Prevention, Kisumu, Kenya, <sup>9</sup>Centre pour le Développement des Vaccines (CVD-Mali), Bamako, Mali, <sup>10</sup>Ministry of Health and Sanitation, Freetown, Sierra Leone, <sup>11</sup>World Hope International, Makeni, Sierra Leone, <sup>12</sup>Wits Health Consortium, University of Witwatersrand, Johannesburg, South Africa, <sup>13</sup>Center for Global Health, Centers for Disease Control and Prevention, Kisumu, Kenya, <sup>14</sup>Center for Global Health, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>15</sup>Emory Global Health Institute, Emory University, Atlanta, GA, United States

9 a.m.

5031

### SOLUBLE TRIGGERING RECEPTOR EXPRESSED ON MYELOID CELLS 1 (STREM-1) TO RISK-STRATIFY CHILDREN PRESENTING WITH FEBRILE ILLNESS IN SOUTHERN MOZAMBIQUE

Núria Balanza<sup>1</sup>, Bárbara Baro<sup>1</sup>, Sara Ajanovic<sup>1</sup>, Andrea M. Weckman<sup>2</sup>, Marta Valente<sup>1</sup>, Justina Bramugy<sup>3</sup>, Anelsio Cossa<sup>3</sup>, Kathleen Zhong<sup>2</sup>, Elizabeth JA Fitchett<sup>4</sup>, Shunmay Yeung<sup>4</sup>, Tegwen Marlais<sup>4</sup>, Heidi Hopkins<sup>4</sup>, David Mabey<sup>4</sup>, Kevin C. Kain<sup>2</sup>, Quique Bassat<sup>1</sup>  
<sup>1</sup>ISGlobal, Hospital Clínic - Universitat de Barcelona, Barcelona, Spain, <sup>2</sup>Sandra-Rotman Centre for Global Health, Toronto General Research Institute, University Health Network-Toronto General Hospital, Toronto, ON, Canada, <sup>3</sup>Centro de Investigação em Saúde de Manhiça, Maputo, Mozambique, <sup>4</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom

9:15 a.m.

5032

### EFFECT OF POINT-OF-CARE RAPID DIAGNOSTIC TESTS ON ANTIBIOTIC PRESCRIPTION IN PRIMARY HEALTH CARE SETTINGS IN TWO PERI-URBAN DISTRICTS IN GHANA

Alexander Adjei<sup>1</sup>, Vida A. Kukula<sup>1</sup>, Clement Narh<sup>2</sup>, Piero Olliaro<sup>3</sup>, Rita Baiden<sup>1</sup>  
<sup>1</sup>dodowa health research centre, Accra, Ghana, <sup>2</sup>Fred N. Binka School of Public Health, University of Health and Allied Sciences, Ho, Ghana, <sup>3</sup>FIND, the global alliance for diagnostics, Geneva, Switzerland

9:30 a.m.

5033

### ASSESSING THE PORTABILITY OF A PEDIATRIC TELEMEDICINE AND MEDICATION DELIVERY SERVICE TO THE GHANAIAN SETTING: A PILOT STUDY

Katelyn E. Flaherty<sup>1</sup>, Molly Klarman<sup>1</sup>, Nana Anyimadua Anane-Binfah<sup>2</sup>, Mohammed-Najeeb Mahama<sup>3</sup>, Maxwell Osei-Ampofo<sup>4</sup>, Taiba Afaa Jibril<sup>5</sup>, Ahmed N. Zakariah<sup>5</sup>, Eric J. Nelson<sup>1</sup>, Torben K. Becker<sup>1</sup>  
<sup>1</sup>University of Florida, Gainesville, FL, United States, <sup>2</sup>Korle Bu Teaching Hospital, Accra, Ghana, <sup>3</sup>National Ambulance Service, Accra, Ghana, <sup>4</sup>Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, <sup>5</sup>University of Ghana, Accra, Ghana

## Symposium 10

### A Changing World - Practice in Travel Medicine

Crystal Ballroom B - Lobby Level (West Tower)

Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

The world is rapidly evolving. Changing travel and migration patterns are progressively confronted due to socio-economic advances, emerging infections in a changing ecosystem causing pandemics such as COVID-19, travelers are high risk because of their itinerary microbes that accrued during the journey and awaiting at a destination, eventually the digital revolution and telemedicine that has improved our lives and accelerated by COVID-19 pandemic. So how will our daily practice in travel medicine be affected? How can we practice travel medicine and meet the increasing demand for travel medicine services in this changing world? Each talk will cover different aspects in travel medicine. Dr. Paul Hunsjarupan will share his recent research finding of the trend in practicing travel medicine. Rebecca Acosta will share her experience working in running travel medicine during the pandemic and what lessons learned from that and how it can improve our practice in travel medicine. Followed by Dr. David Freedman, who will give a talk on the recent epidemiologic shifts and optimizing pre-travel preparation through the pandemic, discussing the up to date guidelines in COVID-19 prophylactic medication and vaccination. Lastly, we will also hear from Dr. Camille Kotton in the latest and up-to-date travel medicine practice in consulting special risk travelers by presenting challenging travel scenarios.

#### CHAIR

Shaymaa Abdalal  
King Abdul-Aziz University, Jeddah, Saudi Arabia

David Freedman  
University of Alabama at Birmingham, Birmingham, AL, United States

8 a.m.

#### INTRODUCTION

8:10 a.m.

#### LANDSCAPE OF TRAVEL MEDICINE PRACTICE

Bhanasut Hunsjarupan  
Institute of Preventive Medicine, Department of Disease Control, Ministry of Public Health Thailand, Nonthaburi, Thailand

8:30 a.m.

#### STARTING A TRAVEL CLINIC: OPERATIONAL NEEDS

Rebecca Wolfe Acosta  
Traveler's Medical Service, New York, NY, United States



**8:50 a.m.**  
**IMMUNOCOMPROMISED TRAVELERS: CHALLENGING TRAVEL SCENARIOS**

Camille Kotton  
 Massachusetts General Hospital, Boston, MA, United States

**9:10 a.m.**  
**RECENT EPIDEMIOLOGIC SHIFTS: ADVISING TRAVELERS**

David Freedman  
 University of Alabama at Birmingham, Birmingham, AL, United States

**Scientific Session 11**

**Viruses - Field Studies of Viruses**

Regency Ballroom A - Ballroom Level (West Tower)  
 Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone

**CHAIR**

Rebekah Kading  
 Colorado State University, Fort Collins, CO, United States

Ariful Islam  
 EcoHealth Alliance, New York, NY, United States

**8 a.m.** **5034**

**SEROLOGIC EVIDENCE OF MARBURG VIRUSES AND A BUNDBUGY VIRUS-LIKE EBOLAVIRUS IN MADAGASCAN ROUSSETTE BATS**

**Marana Tso**<sup>1</sup>, Spencer Sterling<sup>1</sup>, Hafaliana Christian Ranaivoson<sup>2</sup>, Gwenddolen Kettenburg<sup>2</sup>, Angelo Andrianaina<sup>3</sup>, Santino Andry<sup>3</sup>, Jean-Michel Héraud<sup>4</sup>, Eric D. Laing<sup>1</sup>, Cara E. Brook<sup>2</sup>  
<sup>1</sup>Uniformed Services University of Health Sciences, Bethesda, MD, United States, <sup>2</sup>University of Chicago, Chicago, IL, United States, <sup>3</sup>University of Antananarivo, Antananarivo, Madagascar, <sup>4</sup>Institut Pasteur de Dakar, Dakar, Senegal

**8:15 a.m.** **5035**

**EXPOSURE OF EGYPTIAN ROUSSETTE BATS (ROUSETTUS AEGYPTIACUS) AND A LITTLE FREE-TAILED BAT (CHAEREPHON PUMILUS) TO ALPHAVIRUSES IN UGANDA**

**Rebekah Kading**<sup>1</sup>, Erin Borland<sup>2</sup>, Eric C. Mossel<sup>2</sup>, Teddy Nakayiki<sup>3</sup>, Betty Nalikka<sup>4</sup>, Jeremy P. Ledermann<sup>2</sup>, Mary B. Crabtree<sup>2</sup>, Nicholas A. Panella<sup>2</sup>, Luke Nyakarahuka<sup>3</sup>, Amy T. Gilbert<sup>5</sup>, Julian Kerbis Peterhans<sup>6</sup>, Jonathan S. Towner<sup>7</sup>, Brian R. Amman<sup>7</sup>, Tara K. Sealy<sup>7</sup>, Barry R. Miller<sup>2</sup>, Julius J. Lutwama<sup>3</sup>, Robert M. Kityo<sup>4</sup>, Ann M. Powers<sup>2</sup>  
<sup>1</sup>Colorado State University, Fort Collins, CO, United States, <sup>2</sup>Centers for Disease Control and Prevention, Division of Vector-borne Diseases, Fort Collins, CO, United States, <sup>3</sup>Department of Arbovirology, Emerging, and Re-emerging Infections, Uganda Virus Research Institute, Entebbe, Uganda, <sup>4</sup>Department of Zoology, Entomology, and Fisheries Science, Makerere University, Kampala, Uganda, <sup>5</sup>Poxvirus and Rabies Branch, Division of High-Consequence Pathogens, United States Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>6</sup>Negaunee Integrative Research Center, Field Museum of Natural History, College of Arts & Sciences, Roosevelt University, Chicago, IL, United States, <sup>7</sup>Viral Special Pathogens Branch, Division of High-Consequence Pathogens, United States Centers for Disease Control and Prevention, Atlanta, GA, United States

**8:30 a.m.** **5036**

**SPATIAL VARIATION IN NIPAH VIRUS SEROPREVALENCE AMONG PTEROPUS MEDIUS BATS IN BANGLADESH**

**Ausraful Islam**<sup>1</sup>, Spencer Sterling<sup>2</sup>, Clifton McKee<sup>3</sup>, Mohammad Enayet Hossain<sup>1</sup>, Mohammed Ziaur Rahman<sup>1</sup>, Md. Jahidul Kabir<sup>4</sup>, Eric D. Laing<sup>2</sup>, Peter Hudson<sup>5</sup>, Raina Plowright<sup>6</sup>, Emily S. Gurley<sup>3</sup>  
<sup>1</sup>icddr, Dhaka, Bangladesh, <sup>2</sup>Uniformed Services University of the Health Sciences, Maryland, MD, United States, <sup>3</sup>Johns Hopkins University, Maryland, MD, United States, <sup>4</sup>Bangladesh Forest Department, Dhaka, Bangladesh, <sup>5</sup>The Pennsylvania State University, Pennsylvania, PA, United States, <sup>6</sup>Cornell University, New York, NY, United States

**8:45 a.m.** **5037**

**CENCURUT VIRUS: A NOVEL ORTHONAIROVIRUS FROM ASIAN HOUSE SHREWS (SUNCUS MURINUS) IN SINGAPORE**

**Dolyce Hong Wen Low**<sup>1</sup>, Lena Ch'ng<sup>1</sup>, Yvonne Su<sup>1</sup>, Martin Linster<sup>1</sup>, Rong Zhang<sup>1</sup>, Yan Zhuang<sup>1</sup>, Mackenzie Kwak<sup>2</sup>, Sophie Borthwick<sup>1</sup>, Alan Hitch<sup>3</sup>, Gavin Smith<sup>1</sup>, Ian Mendenhall<sup>1</sup>  
<sup>1</sup>Duke-NUS Medical School, Singapore, Singapore, <sup>2</sup>Hokkaido University, Sapporo, Japan, <sup>3</sup>University of California, Davis, CA, United States

**9 a.m.** **5038**

**EPIDEMIOLOGY AND GENETIC DIVERSITY OF NOVEL PARAMYXOVIRUSES RELATED TO LANGYA VIRUS IN RODENTS AND SHREWS IN BANGLADESH**

**Ariful Islam**<sup>1</sup>, Md Ziaur Rahman<sup>2</sup>, Shariful Islam<sup>3</sup>, Melinda K Rostal<sup>1</sup>, Mohammad Enayet Hossain<sup>4</sup>, Md Kaiser Rahman<sup>3</sup>, Emily Hagan<sup>1</sup>, Monjurul Islam<sup>3</sup>, Tahmina Shirin<sup>3</sup>, Meerjady Sabrina Flora<sup>3</sup>, Simon J Anthony<sup>5</sup>, Peter Daszak<sup>1</sup>, Jonathan H Epstein<sup>1</sup>  
<sup>1</sup>EcoHealth Alliance, New York, NY, United States, <sup>2</sup>One Health laboratory, International center for diarrheal disease research (icddr), Dhaka, Bangladesh, <sup>3</sup>Institute of Epidemiology, Disease Control and Research (IEDCR), Dhaka, Bangladesh, <sup>4</sup>One Health laboratory, International center for diarrheal disease research (icddr), Dhaka, Bangladesh, <sup>5</sup>Department of Pathology, Microbiology, and Immunology, University of California-Davis School of Veterinary, California, CA, United States

**9:15 a.m.** **5039**

**INVESTIGATION OF RIFT VALLEY FEVER OUTBREAK ASSOCIATED WITH 'ABORTION STORMS' IN MBARARA DISTRICT, UGANDA 2023**

**Luke Nyakarahuka**<sup>1</sup>, Jackson Kyondo<sup>1</sup>, Jimmy Baluku<sup>1</sup>, Alex Tumusiime<sup>1</sup>, Sophia Mulei<sup>1</sup>, Shannon Whitmer<sup>2</sup>, Joel Montgomery<sup>2</sup>, Julius J. Lutwama<sup>1</sup>, Stephen K. Balinandi<sup>1</sup>, John D. Klena<sup>2</sup>, Trevor R. Shoemaker<sup>2</sup>  
<sup>1</sup>Uganda Virus Research Institute, Kampala, Uganda, <sup>2</sup>United States Centers for Disease Control and Prevention, Atlanta, GA, United States

**9:30 a.m.** **5040**

**GENETIC DIVERSITY AND AMINO ACIDS VARIATIONS AT VACCINE TARGET SITES IN RABIES VIRUSES COLLECTED FROM DIFFERENT HOST SPECIES IN MAKUENI AND SIAYA COUNTIES, KENYA**

**Evalyne N. Wambugu**<sup>1</sup>, Kimita Gathii<sup>2</sup>, Sarah Kituyi<sup>3</sup>, Michael Washington<sup>4</sup>, Clement Masakhwe<sup>2</sup>, Lucy Mutunga<sup>5</sup>, Gurdeep Jaswant<sup>5</sup>, Thumbi Mwangi<sup>5</sup>, Brian Schaefer<sup>1</sup>, John Waitumbi<sup>2</sup>  
<sup>1</sup>Walter Reed Project-Kenya, Kisumu, Kenya, <sup>2</sup>Walter Reed Project, Kisumu, Kenya, <sup>3</sup>Fogarty international center of the National institutes of health, Bethesda, MD, United States, <sup>4</sup>Uniformed Services University, Bethesda, MD, United States, <sup>5</sup>Institute of Tropical and Infectious Diseases, University of Nairobi, Kenya., Nairobi, Kenya

Thursday  
 October 19

## Symposium 12

### Spillover: Assessing the Risk and Preparing for Disease X

*Regency Ballroom B - Ballroom Level (West Tower)*

**Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

Emerging and re-emerging infectious diseases continue to pose significant threats to animal and human health. The preponderance of evidence suggests that most recent emerging infectious diseases events have wildlife origins, underscoring the importance of understanding transmission dynamics between animals and people and emphasizing the need for better characterization of the risk of spillover events from various classifications of pathogens. Zoonotic viruses remain a particular concern, as they are more frequently being identified as emerging human pathogens of significant concern. Once spillover from animals to humans has occurred, human-to-human transmission can facilitate sustained disease propagation given the right pathogen, environment, and host factors. Identifying common traits among zoonotic viruses and their associated potential for onward transmission is, therefore, an important step towards ultimately developing surveillance systems to rapidly identify emerging infectious diseases and the mitigation measures that will be essential to control them. Substantial efforts to characterize pathogen, host, and environmental factors have highlighted the role of high-risk interfaces as well as viral host plasticity as contributing factors to spillover events and disease transmission. Adopting a robust One Health approach to surveillance and forecasting of priority pathogens and their spillover potential will be critical to improving early warning systems of emerging health threats and for countermeasure development, including the optimization of vaccine pipelines. This symposium aims to provide an overview of spillover events and to explore global trends related to emerging infectious diseases from a One Health perspective. Factors associated with One Health reporting of outbreaks and global disease surveillance and forecasting will be discussed. Finally, programs that seek to identify priority zoonoses, potential spillover events, and their epidemic or pandemic potential will be presented in an attempt to explore optimal strategies for countermeasure development.

#### CHAIR

Angel N. Desai  
*University of California Davis Medical Center, Sacramento, CA, United States*

Maina L'Azou Jackson  
*Coalition for Epidemic Preparedness Innovations, London, United Kingdom*

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

#### **8:10 a.m.** **ASSESSING SPILLOVER RISK**

Jonna K. Mazet  
*University of California Davis, Davis, CA, United States*

#### **8:25 a.m.** **ACCELERATING PACE OF EMERGING INFECTIOUS DISEASES**

Angel N. Desai  
*University of California Davis Medical Center, Sacramento, CA, United States*

#### **8:40 a.m.** **TRACKING ONE HEALTH TIMELINESS METRICS TO OPTIMIZE OUTBREAK RESPONSE**

Jane Fieldhouse  
*University of California, San Francisco, San Francisco, CA, United States*

#### **8:55 a.m.** **ONE HEALTH SURVEILLANCE FOR DISEASE X -- LESSONS LEARNED IN SIERRA LEONE**

James Bangura  
*University of Makeni, Freetown, Sierra Leone*

#### **9:10 a.m.** **CEPI DISEASE X VACCINE LIBRARY DEVELOPMENT**

Maina L'Azou Jackson  
*Coalition for Epidemic Preparedness Innovations, London, United Kingdom*

## Symposium 13

### Spotted Fever Rickettsiosis: A Globally Neglected Cause of Acute Febrile Illness Hospitalizations

*Regency Ballroom C - Ballroom Level (West Tower)*

**Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

With increasing international travel and new or expanding distribution of tick species, the emergence of introduced and domestic tick-borne diseases is an urgent worldwide threat. Rickettsial infections are clinically indistinguishable from other causes of febrile illness and diagnostics for detection of acute disease are unavailable. Diagnostic delays translate into prolonged hospital stays, increased mortality, and epidemiology largely depends on findings from cohort studies and retrospective diagnoses of febrile returned travelers. While scrub typhus has commanded considerable attention in recent years, ongoing studies document the increasing prevalence and incidence of spotted fever group rickettsioses (SFGR) in AFI studies in more than 5-50% of cases across Africa, Asia, and South America. Unfortunately, little attention is paid to these neglected infections because of the difficulty in establishing diagnoses in real time, which in turn reflects the lack of mature technological advances in diagnostics seen for other infectious diseases. While most studies still rely on serologic investigations using 50 year-old methods, or PCR approaches that are insensitive because of low-burden bacteremia, there is a real need to move forward diagnostics that can be used at the time of acute illness such that specific anti-rickettsial therapies, such as doxycycline, can be used in a timely manner. This symposium will provide the background for SFGR epidemiology and knowledge gaps in studies of SFGR in order to provide highlights of some advances in diagnostic approaches that will facilitate early sensitive detection, including advanced PCR methods that target abundant SFGR RNAs and that detect circulating antigen during the acute illness, including point-of-care lateral flow devices.

**CHAIR**

John S. Dumler  
*Uniformed Services University, Bethesda, MD, United States*  
 Paul W. Blair  
*Henry M Jackson Foundation, Bethesda, MD, United States*

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

**8:10 a.m.**  
**EPIDEMIOLOGY OF SFGR**  
 David H. Walker  
*University of Texas Medical Branch at Galveston, Galveston, TX, United States*

**8:30 a.m.**  
**SPOTTED FEVER IN SOUTHERN INDIA: AN EMERGING DISEASE PROBLEM**  
 John J. Prakash  
*Christian Medical College, Vellore (South India), India*

**8:50 a.m.**  
**RICKETTSIOSIS AS MAJOR ETIOLOGIES OF UNRECOGNIZED ACUTE FEBRILE ILLNESS: MALAYSIA AND NICARAGUA**  
 Megan E. Reller  
*Duke University School of Medicine, Durham, NC, United States*

**9:10 a.m.**  
**RNA PCR: TARGETING HIGHLY EXPRESSED, PROTEIN STABILIZED RNAs TO MAXIMIZE DIAGNOSTIC SENSITIVITY**  
 Paul W. Blair  
*Uniformed Services University, Bethesda, MD, United States*

**9:30 a.m.**  
**SFGR ANTIGENEMIA DETECTED BY ELISA AND LATERAL FLOW CHROMATOGRAPHIC DEVICES**  
 Rong Fang  
*University of Texas Medical Branch, Galveston, TX, United States*

**Symposium 13A**

**Locally Acquired Mosquito-Transmitted Malaria in the United States: May-August, 2023**

*Regency Ballroom D - Ballroom Level (West Tower)*  
**Thursday, October 19, 8 a.m. - 9:45 a.m. U.S. Central Time Zone**

Malaria was eliminated as a public health problem in the United States in the mid-1950s and the US was certified malaria-free by WHO in 1970. Sporadic small outbreaks of malaria were documented in the 1980s and 1990s, with the last cases of locally acquired mosquito transmitted malaria in Palm Beach County, Florida in 2003. Despite the absence of locally acquired malaria cases in the US over the past two decades, imported malaria cases have increased nearly every year among recently arrived immigrants, leisure and business travelers, and persons traveling to visit friends and relatives in malaria endemic countries. Currently, approximately 2000 imported malaria cases are routinely diagnosed and treated in the US annually. These imported cases, together with competent Anopheles vectors distributed across most US states, creates potential for malaria parasite transmission to US residents who never travel abroad.

Between May and July 2023, eight cases of *P. vivax* malaria were diagnosed among persons in Florida and Texas. In early August 2023, one case of *P. falciparum* malaria was diagnosed in a Maryland resident. None of the cases reported travel to a malaria endemic country and all were determined to be the result of locally acquired mosquito transmission. We will present an overview of the clinical, epidemiological, entomological, and molecular investigations that supported the public health response to this outbreak. Interventions to interrupt malaria transmission in the affected communities will be described. We will explore potential explanations for a return of domestic malaria transmission after two decades.

**CHAIR**  
 Peter D. McElroy  
*CDC, Atlanta, GA, United States*

**8 a.m.**  
**INTRODUCTION**  
 Peter D. McElroy  
*CDC, Atlanta, GA, United States*

**8:10 a.m.**  
**THE START OF A BUSY SUMMER: CHARACTERISTICS OF LOCALLY ACQUIRED MALARIA CASES IN THE US**  
 Alison Ridpath  
*Malaria Branch, Division of Parasitic Diseases and Malaria, CDC, Atlanta, GA, United States*

**8:20 a.m.**  
**PUBLIC HEALTH SURVEILLANCE AND RESPONSE TO LOCALLY ACQUIRED PLASMODIUM VIVAX IN FLORIDA**  
 Andrea Morrison  
*Florida Department of Health, Tallahassee, FL, United States*

**8:30 a.m.**  
**STRATEGIES FOR ANOPHELES SURVEILLANCE AND LABORATORY ANALYSES TO GUIDE DOMESTIC OUTBREAK RESPONSE**  
 Audrey Lenhart  
*Entomology Branch, CDC, Atlanta, GA, United States*

**8:40 a.m.**  
**MALARIA DIAGNOSTICS AND PARASITE GENOTYPING APPROACHES TO INFORM A DOMESTIC MALARIA OUTBREAK**  
 Brian Raphael  
*Centers for Disease Control and Prevention, Atlanta, GA, United States*

**8:50 a.m.**  
**MODERATED DISCUSSION/QUESTION AND ANSWER**  
 Peter D. McElroy  
*CDC, Atlanta, GA, United States*

**9:10 a.m.**  
**WRAP-UP AND SUMMARY**  
 Peter D. McElroy  
*CDC, Atlanta, GA, United States*

Thursday  
October 19

## Career Chats: Networking Strategies for Trainees (via Zoom)

Thursday, October 19, 9:15 a.m. - 10:15 a.m. U.S. Central Time Zone

This session is limited to attendees who pre-registered for this event.

Networking—a crucial academic research skill for career advancement—can be challenging, particularly for early career researchers and trainees. Building relationship with established scientists, colleagues from a point of common interest - your career, work and ambitions. We will explore strategies for networking based around your current position, and your future plans.

### PANELISTS

Bartholomew Ondigo, Research Fellow. Lecturer  
Egerton University, Nakuru, Kenya

Sapna P. Sadarangani, Senior Consultant  
National Centre for Infectious Diseases, Singapore, Singapore

## Exhibit Hall Open

Riverside Center - Exhibit Level (East Tower)

Thursday, October 19, 9:30 a.m. - 10:30 a.m. U.S. Central Time Zone

## Coffee Break

Riverside Center - Exhibit Level (East Tower)

Thursday, October 19, 9:45 a.m. - 10:15 a.m. U.S. Central Time Zone

## Poster Session A Set-Up

Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI – Ballroom Level (East Tower)

Thursday, October 19, 9:45 a.m. - 10:15 a.m.

## Poster Session A Viewing

Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI – Ballroom Level (East Tower)

Thursday, October 19, 10:15 a.m. - Noon

## Symposium 14

### Reaching Conflict Affected Areas for Neglected Tropical Diseases, Malaria, and Polio - Barriers to Elimination

Grand Ballroom A - Ballroom Level (East Tower)

Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

Conflict-affected and fragile states are a barrier to disease elimination efforts. For neglected tropical diseases (NTDs), many countries continue to make impressive progress towards their ambitious neglected tropical disease elimination goals and freeing their populations of infection. This progress is seen in the number of districts successfully able to stop treatment, particularly for trachoma, lymphatic filariasis, and onchocerciasis. However, those areas that remain endemic above treatment threshold represent

a significant barrier to country-wide elimination and achieving the WHO's 2030 NTD goals. Lessons from long-standing polio and malaria programs illustrate how such areas pose the greatest operational, logistical, and epidemiological challenges. Conflict affected and fragile states are a key challenge and as the total number of districts requiring treatment declines, the proportion that remain in conflict-affected and fragile states increases. The world is experiencing a 30-year high in violent conflict. Recent reports have found a disconcerting increase in the total number of fragile contexts worldwide, with 1.9 billion people—24% of the world's population and 73% of the world's extreme poor—living in environments of chronic instability, conflict or violence. Working in conflict affected and fragile areas requires innovative thinking and changing our approaches to be able to repeatedly access at-risk populations multiple times at high treatment coverage and integrate conflict prevention and peacebuilding elements. In this session we will provide an overview of conflict and fragility and the challenges of working to reduce and eliminate diseases and the lessons from polio, and malaria (in Ethiopia) and how they can be used to inform NTD programs. We will present the experience of countries working in such areas against the NTDs lymphatic filariasis (Haiti) and trachoma (Mozambique). This session will build on ASTMH sessions in 2016 (Terrorism, Conflict, Epidemics, and Acts of God: The impact of the unpredictable on NTD programs) and 2019 (Challenges of Implementing NTD Assessments in Conflict Areas and Fragile States). Here we significantly broaden the scope to identify lessons across NTDs, malaria, and polio to overcome the challenges in reaching elimination and best practices from the conflict prevention and peacebuilding sector. As conflict and fragility is increasing, if the global community is to meet the WHO's 2030 NTD goals, we must innovate and change our approaches and not leave these areas until the 'last minute'.

### CHAIR

Michael French  
RTI International, Washington, DC, United States

### 10:15 a.m. INTRODUCTION

### 10:25 a.m. CONFLICT-AFFECTED AND FRAGILE STATES - SETTING THE SCENE

Liz Hume  
Alliance for Peace Building, Washington, DC, United States

### 10:40 a.m. REACHING CONFLICT AFFECTED AREAS, LESSONS FROM POLIO

Babar Khan  
RTI International, Washington, DC, United States

### 10:55 a.m. IMPACT OF INSECURITY ON MALARIA IN TIGRAY, ETHIOPIA

Hiwot Solomon  
Ministry of Health, Addis Ababa, Ethiopia

**11:10 a.m.**  
**IMPLEMENTING A LYMPHATIC FILARIASIS PROGRAM DURING CONFLICT, NATURAL DISASTERS, AND POLITICAL INSTABILITY**  
 Farah Momprevil  
 Ministère de la Santé Publique et de la Population, Port-au-Prince, Haiti

**11:25 a.m.**  
**ADAPTING CONFLICT SENSITIVE APPROACHES TO TRACHOMA IN CABO DELGADO, MOZAMBIQUE**  
 Henis Siteo  
 Ministério da Saude, Maputo, Mozambique

## Scientific Session 15

### American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Parasite Immunology

Grand Ballroom B - Ballroom Level (East Tower)  
 Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone  
 Supported with funding from the Burroughs Wellcome Fund

#### CHAIR

Omar Harb  
 University of Pennsylvania, Philadelphia, PA, United States  
 Camila Queiroz Glauss  
 National Institutes of Health, Bethesda, MD, United States

**10:15 a.m.** **5041**

#### A GUT COMMENSAL PROTOZOAN REMOTELY TUNES PULMONARY DISEASE SEVERITY

Kyle Burrows<sup>1</sup>, Louis Ngai<sup>1</sup>, Pailin Chiaranunt<sup>1</sup>, Jacqueline Watt<sup>2</sup>, Eric Cao<sup>1</sup>, Sui Ling<sup>1</sup>, Jun Liu<sup>2</sup>, Arthur Mortha<sup>1</sup>  
<sup>1</sup>Department of Immunology, University of Toronto, Toronto, ON, Canada, <sup>2</sup>Department of Molecular Genetics, University of Toronto, Toronto, ON, Canada

**10:30 a.m.** **5042**

#### HYPOXIA PROMOTES CYTOLYTIC ACTIVITY OF CD8 T CELLS AND PATHOGENESIS IN CUTANEOUS LEISHMANIASIS

Erin AL. Fowler<sup>1</sup>, Camila Amorim<sup>2</sup>, Emily Ds. Hales<sup>1</sup>, Aditi Varkey<sup>1</sup>, Mariam Salem<sup>1</sup>, Gang Xin<sup>1</sup>, Patrick L. Collins<sup>1</sup>, Fernanda O. Novais<sup>1</sup>  
<sup>1</sup>Department of Microbial Infection & Immunity, Wexner Medical Center, The Ohio State University, Columbus, OH, United States, <sup>2</sup>Department of Pathobiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA, United States

**10:45 a.m.** **5043**

#### CD30L EXPRESSION ON CD4+T CELLS IS REQUIRED FOR THE DEVELOPMENT OF ALLERGEN- AND HELMINTH-DRIVEN TYPE 2 INFLAMMATION IN THE LUNG

Camila de Almeida Lopes<sup>1</sup>, Dominic Golec<sup>2</sup>, Daniel Barber<sup>2</sup>, Thomas Nutman<sup>2</sup>, Pedro Gazzinelli-Guimaraes<sup>2</sup>  
<sup>1</sup>Federal University of Minas Gerais, Belo Horizonte, Brazil, <sup>2</sup>National Institutes of Health, Bethesda, MD, United States

[\(ACMCIP Abstract\)](#)

**11 a.m.** **5044**

#### HUMAN FILARIAL INFECTION DRIVES A DISTINCT SIGNATURE OF CD8<sup>+</sup>T CELL POPULATIONS AT HOMEOSTASIS AND IN RESPONSE TO CYTOMEGALOVIRUS (CMV) IN FILARIAL/CMV COINFECTIONS

Camila Queiroz Glauss, Thomas B. Nutman  
 National Institutes of Health, Bethesda, MD, United States

**11:15 a.m.** **5045**

#### IL-11 REGULATES MUCOSAL RESPONSES IN ACUTE PULMONARY HELMINTH INFECTION

Pablo Bara-Garcia<sup>1</sup>, Oyebola Oyesola<sup>1</sup>, Fabricio Oliveira<sup>2</sup>, Jonah Kupritz<sup>1</sup>, Thomas B. Nutman<sup>1</sup>, Pedro E. Gazzinelli-Guimaraes<sup>1</sup>  
<sup>1</sup>Laboratory of Parasitic Diseases, NIAID, National Institutes of Health, Bethesda, MD, United States, <sup>2</sup>Laboratory of Immunology and Genomics of Parasites, Department of Parasitology, ICB, UFMG, Belo Horizonte, Brazil

[\(ACMCIP Abstract\)](#)

**11:30 a.m.** **5046**

#### RAPID INDUCTION OF CLINICAL TOLERANCE IN A PLACEBO-CONTROLLED CLINICAL TRIAL INVESTIGATING REPEATED CONTROLLED EXPOSURE TO SCHISTOSOMA MANSONI

Jan Pieter R. Koopman, Jacqueline J. Janse, Emma L. Houlder, Olivia A.C. Lamers, Geert V.T. Roozen, Angela van Diepen, Jeroen C. Sijtsma, Stan T. Hilt, Eileen van der Stoep, Inge M. van Amerongen-Westra, Eric A.T. Brienen, Linda J. Wammes, Lisette van Lieshout, Govert J. van Dam, Paul L.A.M. Corstjens, Maria Yazdanbakhsh, Ron H. Hokke, Meta Roestenberg  
 Leiden University Medical Center, Leiden, Netherlands

**11:45 a.m.** **5047**

#### COMPREHENSIVE ANTIBODY PROFILING IN SCHISTOSOMIASIS REVEALS IMMUNOLOGICAL SIGNATURES OF ACTIVE INFECTION

Anushka Saha<sup>1</sup>, Trirupa Chakraborty<sup>2</sup>, Sukwan Handali<sup>3</sup>, William E. Secor<sup>3</sup>, Lucia Alves de Oliveira Fraga<sup>4</sup>, Jessica Fairley<sup>5</sup>, Jishnu Das<sup>2</sup>, Aniruddh Sarkar<sup>1</sup>  
<sup>1</sup>Georgia Institute of Technology, Atlanta, GA, United States, <sup>2</sup>University of Pittsburgh, Pittsburgh, PA, United States, <sup>3</sup>Center for Disease Control and Protection, Atlanta, GA, United States, <sup>4</sup>Universidade Federal de Juiz de Fora, Juiz de Fora, Brazil, <sup>5</sup>Emory University, Atlanta, GA, United States

[\(ACMCIP Abstract\)](#)

## Scientific Session 16

### Global Health: Use of Modeling to Improve Our Understanding of Disease Epidemiology and Implementation of Interventions

Grand Hall J - Ballroom Level (East Tower)  
 Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

#### CHAIR

Michael Wimberly  
 University of Oklahoma, Norman, OK, United States  
 Jeanne Lemant  
 Swiss TPH, Allschwil, Switzerland

10:15 a.m.

5048

### MODELING TO SUPPORT DECISIONS ABOUT THE GEOGRAPHIC AND DEMOGRAPHIC EXTENSION OF SEASONAL MALARIA CHEMOPREVENTION IN BENIN

Jeanne Lemant<sup>1</sup>, Clara Champagne<sup>1</sup>, Cyriaque Affoukou<sup>2</sup>, Julien Aïssan<sup>2</sup>, Rock Aikpon<sup>2</sup>, William Houndjo<sup>2</sup>, Sakariahou Kpanou<sup>2</sup>, Didier Adjakidje<sup>3</sup>, Emilie Pothin<sup>1</sup>  
<sup>1</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland, <sup>2</sup>National Malaria Control Program, Ministry of Health, Cotonou, Benin, <sup>3</sup>Clinton Health Access Initiative, Boston, MA, United States

10:30 a.m.

5049

### USING CAUSAL INFERENCE METHODS TO ACCURATELY ESTIMATE THE EFFECT OF INSECTICIDE TREATED NET USE ON RISK OF MALARIA INFECTION

Noel Patson<sup>1</sup>, Lauren Cohee<sup>2</sup>, Peter Ntenda<sup>1</sup>, Terrie Taylor<sup>3</sup>, Don Mathanga<sup>1</sup>, Clarissa Valim<sup>4</sup>, Eric Tchetchen Tchetchen<sup>5</sup>  
<sup>1</sup>Malaria Alert Center, Kamuzu University of Health Sciences, Blantyre, Malawi, <sup>2</sup>Center for Vaccine Development and Global Health, University of Maryland School of Medicine, Baltimore, MD, United States, <sup>3</sup>Department of Osteopathic Medical Specialties, College of Osteopathic Medicine, Michigan State University, East Lansing, MI, United States, <sup>4</sup>Department of Global Health, Boston University School of Public Health, Boston, MA, United States, <sup>5</sup>Department of Statistics and Data Science, The Wharton School, University of Pennsylvania, Philadelphia, PA, United States

10:45 a.m.

5050

### MATHEMATICAL MODELLING TO SUPPORT STRATEGIC MALARIA PLANNING IN MOZAMBIQUE

Tatiana Alonso Amor<sup>1</sup>, Sophie Diarra<sup>1</sup>, James Colborn<sup>2</sup>, Bradley Didier<sup>2</sup>, Baltazar Candrinho<sup>3</sup>, Emilie Pothin<sup>1</sup>, Branwen Owen<sup>1</sup>  
<sup>1</sup>Swiss Tropical and Public Health Institute, Allschwil, Switzerland, <sup>2</sup>Clinton Health Access Initiative, Boston, MA, United States, <sup>3</sup>Ministry of Health Mozambique, Maputo, Mozambique

11 a.m.

5051

### CAUSES OF UNDER-FIVE DEATH USING A PROBABILISTIC MODEL (INTERVA5) IN QUELIMANE DISTRICT, CENTRAL MOZAMBIQUE

Charfudin Nicos Saco<sup>1</sup>, Ariel Nhacolo<sup>1</sup>, Alberto Chauque<sup>1</sup>, Orvalho Augusto<sup>1</sup>, Helio Amaro<sup>1</sup>, Tonecas Armando<sup>1</sup>, Daniel Massanduzi<sup>1</sup>, Elisio Xerinda<sup>1</sup>, Esperanca Sevens<sup>1</sup>, Solveig Argeseanu<sup>2</sup>, Jonathan Muir<sup>2</sup>, Inacio Mandomando<sup>1</sup>, Quique Bassat<sup>3</sup>  
<sup>1</sup>Manhica Health and Research Centre, Manhica-Maputo, Mozambique, <sup>2</sup>Emory University, Department of Global Health, Atlanta, GA, United States, <sup>3</sup>Barcelona Institute for Global Health (ISGlobal), Hospital Clinic-Universitat de Barcelona, Barcelona, Spain

11:15 a.m.

5052

### INVESTIGATING THE ROLE OF HUMAN MOVEMENT ON DISEASES TRANSMISSION DYNAMIC IN KENYA, A TOOL FOR OUTBREAK PREPAREDNESS

Donal Bisanzio<sup>1</sup>, Francis Mutuku<sup>2</sup>, Said L. Malumbo<sup>3</sup>, Jael S. Amungongo<sup>3</sup>, Charles M. Ng'ang'a<sup>3</sup>, Paul S. Mutuku<sup>3</sup>, Desiree LaBeaud<sup>4</sup>  
<sup>1</sup>RTI International, Washington, DC, United States, <sup>2</sup>Department of Environment and Health Sciences, Technical University of Mombasa, Mombasa, Kenya, <sup>3</sup>Vector Borne Disease Control Unit, Msambweni County Referral Hospital, Msambweni, Kenya, <sup>4</sup>Department of Pediatrics, Division of Infectious Diseases, Stanford University School of Medicine, Stanford, CA, United States

11:30 a.m.

5053

### IMPORTANCE OF COUNTRY PREPAREDNESS IN HANDLING HEALTH EMERGENCY, THE 2023 EBOLA OUTBREAK IN UGANDA

Donal Bisanzio<sup>1</sup>, Sharone Backers<sup>2</sup>, Richard Reithinger<sup>1</sup>  
<sup>1</sup>RTI International, Washington, DC, United States, <sup>2</sup>RTI International, Kampala, Uganda

11:45 a.m.

5054

### THE GLOBALMIX PROJECT: COMPREHENSIVELY PROFILING SOCIAL CONTACT PATTERNS IN RESOURCE POOR COUNTRIES

Moses Chapa Kiti<sup>1</sup>, Obianuju G. Aguolu<sup>2</sup>, Noreen Ahmed<sup>2</sup>, Charfudin Saco<sup>3</sup>, Azucena Bardaji<sup>4</sup>, Ivalda Macicame<sup>5</sup>, Herberth Maldonado<sup>6</sup>, Rajan Srinivasan<sup>7</sup>, Venkata Raghava Mohan<sup>7</sup>, Momin Kazi<sup>8</sup>, Alessia Melegaro<sup>9</sup>, Fauzia Malik<sup>2</sup>, Saad B. Omer<sup>2</sup>, Ben Lopman<sup>1</sup>  
<sup>1</sup>Emory University, Atlanta, GA, United States, <sup>2</sup>Yale University, New Haven, CT, United States, <sup>3</sup>Centro de Investigação em Saúde de Manhiça (CISM), Maputo, Mozambique, <sup>4</sup>ISGlobal, Barcelona, Spain, <sup>5</sup>Instituto Nacional de Saúde, Maputo, Mozambique, <sup>6</sup>Universidad del Valle de Guatemala, Guatemala City, Guatemala, <sup>7</sup>Christian Medical College, Vellore, India, <sup>8</sup>Aga Khan University, Karachi, India, <sup>9</sup>Bocconi University, Milan, Italy



### Symposium 17

### Alan J. Magill Malaria Eradication Symposium: Using Vector Control to Advance Malaria Elimination

Grand Ballroom CDEF - Ballroom Level (East Tower)  
Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

Supported with funding from the Bill & Melinda Gates Foundation



This annual symposium honors the life and work of ASTMH Past President Alan Magill, who at the time of his untimely death in 2015 was promoting the bold goal of global malaria eradication in his role as the Malaria Director at the Bill & Melinda Gates Foundation. The symposium will bring leaders in the malaria field together to summarize the challenges and advances in areas of relevance to the malaria elimination and eradication effort.

Integral to the success of malaria eradication will be vector control. The pillars of treated bed nets and insecticide application, along with newer, complementary measures to fill interventional gaps, have made major impacts. However, challenges continue to arise, requiring reassessments and novel approaches. The speakers at this symposium will take us through a tour of vector control for malaria, both how traditional measures are being implemented and improved, as well as how research and innovation can accelerate our progress toward malaria eradication.

### CHAIR

Michele Spring  
State University of New York, Upstate Medical University, New York, NY, United States  
Helen Jamet  
Bill & Melinda Gates Foundation, Seattle, WA, United States

### 10:15 a.m. INTRODUCTION

### 10:30 a.m. OVERVIEW OF VECTOR CONTROL FOR MALARIA ELIMINATION

David McGuire  
Innovative Vector Control Consortium (IVCC), Liverpool, United Kingdom

10:50 a.m.

### THE MOSQUITO/HUMAN INTERFACE (I.E., VECTOR CONTROL IMPLEMENTATION IN THE COMMUNITY)

Keziah Malm  
Programme Manager for the National Malaria Elimination Programme (NMEP), Accra, Ghana

11:10 a.m.

### INTERVENING AT LARVAL HABITAT LEVEL

Gabriel Carrasco-Escobar  
Institute of Tropical Medicine, Universidad Peruana Cayetano Heredia, Lima, Peru

11:30 a.m.

### INNOVATIONS/NEW HORIZONS FOR VECTOR CONTROL AND MALARIA ELIMINATION

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

## Scientific Session 18

### Kinetoplastida and Other Protozoa: Diagnosis and New Detection Tools

Grand Hall K - Ballroom Level (East Tower)  
Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

#### CHAIR

Omar Hamarsheh  
Al-Quds University, Abu Dies, Palestinian Territory  
Jaime Altcheh  
Hospital de Niños R. Gutierrez, Buenos Aires, Argentina

10:15 a.m.

5055

### TRANSMISSIBILITY OF LEISHMANIA DONOVANI FROM HUMAN TO SAND FLIES IN AN AREA ENDEMIC FOR VISCERAL LEISHMANIASIS IN INDIA

Om Prakash Singh<sup>1</sup>, Puja Tiwary<sup>1</sup>, Anurag Kumar Kushwaha<sup>1</sup>, Shakti Kumar Singh<sup>1</sup>, Dhiraj Kumar Singh<sup>1</sup>, Rahul Chaube<sup>1</sup>, Abhishek Kuamr Singh<sup>1</sup>, Tulika Rai<sup>1</sup>, Edgar Rowton<sup>2</sup>, Jaya Chakravarty<sup>1</sup>, David Sacks<sup>3</sup>, Shyam Sundar<sup>1</sup>  
<sup>1</sup>Banaras Hindu University, Varanasi, India, <sup>2</sup>Walter Reed Army Institute of Research, Silver Spring, MD, United States, <sup>3</sup>National Institute of Allergy and Infectious Diseases, National Institute of Health, Bethesda, MD, United States

10:30 a.m.

5056

### MOLECULAR IDENTIFICATION OF LEISHMANIA STAINED SLIDES FROM PATIENTS WITH CUTANEOUS LEISHMANIASIS IN SANTARÉM, PARÁ, BRAZIL

Lucia Maria Almeida Braz<sup>1</sup>, Vanessa N. Kehdy<sup>1</sup>, Nara Karyne D. Feitosa<sup>2</sup>, Rose Grace B. Marques<sup>3</sup>, José Angelo L. Lindoso<sup>4</sup>, Expedito José A. Luna<sup>5</sup>  
<sup>1</sup>FMUSP - IMT, São Paulo, Brazil, <sup>2</sup>Núcleo Técnico de Vigilância em Saúde, Santarém, Pará, Brazil, <sup>3</sup>Núcleo Técnico de Vigilância em Saúde, Santarém, Pará, Brazil, <sup>4</sup>Instituto de Infectologia Emílio Ribas, São Paulo, Brazil, <sup>5</sup>FMUSP, São Paulo, Brazil

10:45 a.m.

5057

### USEFULNESS OF ANTI ALPHA-GAL ANTIBODIES AS BIOMARKERS OF THERAPEUTIC RESPONSE IN CHAGAS DISEASE

Jaime Altcheh<sup>1</sup>, Manuel Abal<sup>2</sup>, Cintia V. Cruz, MD<sup>3</sup>, Virginia Balouz<sup>4</sup>, Maria E. Giorgi<sup>5</sup>, Maria C. Marino<sup>6</sup>, Rosa M. Muchnik de Lederkremer<sup>6</sup>, Carlos Buscaglia<sup>7</sup>  
<sup>1</sup>Servicio de Parasitología y Chagas- Hospital de Niños Ricardo Gutierrez, Instituto

Multidisciplinario de Investigaciones en Patologías Pediátricas (IMPP) CONICET, CABA, Argentina, <sup>2</sup>Instituto de Investigaciones Biotecnológicas "Dr. Rodolfo A. Ugalde" (UNSAM-CONICET), San Martín - Provincia de Buenos Aires, Argentina, <sup>3</sup>Mahidol Oxford Research Unit, Bangkok, Thailand, <sup>4</sup>Instituto de Investigaciones Biotecnológicas "Dr. Rodolfo A. Ugalde" (UNSAM-CONICET), Buenos Aires, Argentina, <sup>5</sup>Universidad de Buenos Aires. CONICET. Centro de Investigaciones en Hidratos de Carbono (CIHIDECAR). Facultad de Ciencias Exactas y Naturales. Departamento de Química Orgánica, Buenos Aires, Argentina, CABA, Argentina, <sup>6</sup>Universidad de Buenos Aires. Consejo Nacional de Investigaciones Científicas y Técnicas. Centro de Investigaciones en Hidratos de Carbono (CIHIDECAR). Facultad de Ciencias Exactas y Naturales. Departamento de Química Orgánica, Buenos Aires, Argentina, CABA, Argentina, <sup>7</sup>Instituto de Investigaciones Biotecnológicas "Dr. Rodolfo A. Ugalde" (UNSAM-CONICET), Buenos Aires., CABA, Argentina

(ACMCIP Abstract)

11 a.m.

5058

### CUTANEOUS LEISHMANIASIS DISEASE AWARENESS IN HIGH ENDEMIC, RURAL SRI LANKA: NEED FOR IMPROVED HEALTH PROMOTION

Sonali Dinushika Gunasekara<sup>1</sup>, Nuwan Darshana Wickramasinghe<sup>1</sup>, Manjula Weerasinghe<sup>1</sup>, Manoj Sanjeeva Fernando<sup>2</sup>, Helen Philippa Price<sup>3</sup>, Thilini Chanchala Agampodi<sup>1</sup>, Suneth Buddhika Agampodi<sup>4</sup>  
<sup>1</sup>Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Saliyapura, Sri Lanka, <sup>2</sup>Faculty of Applied Sciences, Rajarata University of Sri Lanka, Mihinthale, Sri Lanka, <sup>3</sup>Centre for Applied Entomology and Parasitology, School of Life Sciences, Keele University, Newcastle-under-Lyme, Staffordshire, United Kingdom, <sup>4</sup>International Vaccine Institute, Seoul, Republic of Korea

11:15 a.m.

5059

### A COST-EFFECTIVE LAMP-PCR FOR SCREENING AND MONITORING CHAGAS DISEASE

Sneider Alexander Gutierrez Guamizo<sup>1</sup>, Anshule Takyar<sup>1</sup>, Siena Defazio<sup>1</sup>, Monica Mugnier<sup>1</sup>, Robert Gilman<sup>1</sup>, Juan Ramirez<sup>2</sup>, Monica Pajuelo<sup>3</sup>  
<sup>1</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Universidad del Rosario, Bogotá, Colombia, <sup>3</sup>Universidad Peruana Cayetano Heredia, Lima, Peru

(ACMCIP Abstract)

11:30 a.m.

5060

### A SET OF DIAGNOSTIC TESTS USEFUL FOR THE DETECTION AND IDENTIFICATION OF LEISHMANIA PARASITES CAUSING CUTANEOUS LEISHMANIASIS

Yusr Saadi<sup>1</sup>, Ahmed Chakroun<sup>1</sup>, Hamed Chouaieb<sup>2</sup>, Hejer Souguir<sup>1</sup>, Insaf Bel Haj Ali<sup>1</sup>, Alia Yaacoub<sup>2</sup>, Moncef Ben Said<sup>2</sup>, Akila Fathallah-Mili<sup>2</sup>, Ikram Guizani<sup>1</sup>  
<sup>1</sup>Molecular Epidemiology & Experimental Pathology, Institut Pasteur de Tunis, Tunisia, <sup>2</sup>Parasitology department, Farhat Hached University Hospital, Sousse, Tunisia

11:45 a.m.

5061

### THE PATHWAY TO SUSTAINABLE ELIMINATION OF HUMAN AFRICAN TRYPANOSOMIASIS IN DEMOCRATIC REPUBLIC OF CONGO

Crispin Lumbala wa Mbuyi<sup>1</sup>, Pascal Lutumba<sup>2</sup>, Jean-Pierre Van geertruyden<sup>1</sup>  
<sup>1</sup>University of Antwerp, Wilrijk, Belgium, <sup>2</sup>University of Kinshasa, Kinshasa, Democratic Republic of the Congo

Thursday  
October 19

## Symposium 19

### Overcoming the Lymphatic Filariasis and Onchocerciasis Cliff to Accelerate the Elimination of Two Filarial Diseases

Grand Hall L - Ballroom Level (East Tower)

Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

Lymphatic filariasis (LF) and Onchocerciasis (OV) are two major filarial diseases targeted by Act to End | NTD West program. In most endemic countries, the LF and OV mass drug administration (MDA) represents the largest platform for the control and elimination of neglected tropical diseases as it often involves millions of people to be treated or surveyed. The two conditions share many programmatic features for program implementation, drug usage (both using Ivermectin) and community-based platforms for mass drug administration. In several countries, the LF and OV programs are under the same leadership and management of one coordinator, which in many instances, facilitates the coordination and collaboration with donors, partners, and stakeholders, as well as the interactions with the Mectizan Donation Program (MDP). Within the countries supported by the Act to End NTD | West program, Niger and Senegal have stopped MDA for both diseases, respectively in 5 and 8 formally co-endemic districts. The two countries urgently need to develop novel strategies for joint surveillance. In Burkina Faso, where the LF MDA is one of the two rounds of a bi-annual OV MDA, stopping the LF MDA following successful transmission assessment survey (TAS) implementation yields a gap in OV programming. OV/LF endemic districts implementing MDA and planning for entomological assessments or skin snip microscopy should necessarily stop MDA with ivermectin for 6 to 11 months before the evaluations. Other challenges include the need for more valid and reliable integrated field serological tools (bi-plex) capable of detecting the antigens for the two diseases altogether. Currently, Cote D'Ivoire, Nigeria, Benin, and Uganda have successfully stopped MDA for one of the two filarial diseases in part of their countries and to continue MDA for the remaining single disease. Implementing confirmatory mapping for LF in Ghana and onchocerciasis elimination mapping in Guinea and Ghana yield a problematic prospect of starting MDA for one program while stopping MDA for the other. Likewise, the integrated TAS (I-TAS) tool, which combines the assessments of the two filarial diseases, has helped evaluate the presence or absence of a signal of OV endemicity in Tanzania. However, the issue of the focality of OV and the age group remains a challenge for the I-TAS. A panel of implementing partners, endemic country program managers, and scientists will share experiences discuss the OV/LF cliff co-investigations, and joint surveillance for LF and OV.

#### CHAIR

Ernest K O. Mensah  
FHI 360, Accra, Ghana

Katherine Gass  
Task Force for Global Health, Decatur, GA, United States

10:15 a.m.  
INTRODUCTION

10:25 a.m.  
LYMPHATIC FILARIASIS AND ONCHOCERCIASIS CO-ENDEMICITY IN A COMPLEX CONTEXT OF LOASIS

Georges Nko'Ayissi  
Directorate of Control of Malaria and Neglected Tropical Diseases, Yaounde, Cameroon

10:40 a.m.  
THE LYMPHATIC FILARIASIS - ONCHOCERCIASIS CLIFF IN COTE D'IVOIRE - CONTINUING IVERMECTIN DISTRIBUTION IN AN INCREASING NUMBER OF LYMPHATIC FILARIASIS AND ONCHOCERCIASIS CO-ENDEMIC DISTRICTS THAT ARE STOPPING LF MDA

Aboulaye Méité  
Ministry of Health Cote D'Ivoire, Abidjan, Côte D'Ivoire

10:55 a.m.  
LYMPHATIC FILARIASIS AND ONCHOCERCIASIS DIAGNOSTIC TOOLS FOR SURVEILLANCE

Kimberly Won  
CDC, Atlanta, GA, United States

11:10 a.m.  
THE IMPORTANCE OF INTEGRATED POST-VALIDATION SURVEILLANCE FOR LYMPHATIC FILARIASIS AND ONCHOCERCIASIS

Katherine Gass  
Task Force for Global Health, Decatur, GA, United States

## Scientific Session 20

### Bacteriology: Salmonella, Shigella, and Other Enteric Infections

Plaza Ballroom - Lobby Level (East Tower)

Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

#### CHAIR

Kesia da Silva  
Stanford University, Stanford, CA, United States

Kawsar Talaat  
Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

10:15 a.m.

5062

DETECTION OF SALMONELLA TYPHI BACTERIOPHAGES IN SURFACE WATERS AS A SCALABLE APPROACH TO ENVIRONMENTAL SURVEILLANCE

Kesia da Silva<sup>1</sup>, Sneha Shrestha<sup>2</sup>, Jivan Shakya<sup>3</sup>, Alexander T. Yu<sup>1</sup>, Nishan Katuwal<sup>2</sup>, Rajeev Shrestha<sup>2</sup>, Mudita Shakya<sup>2</sup>, Sabin B. Shahia<sup>2</sup>, Shiva R. Naga<sup>2</sup>, Christopher LeBoa<sup>4</sup>, Kristen Aiemjoy<sup>5</sup>, Isaac I. Bogoch<sup>6</sup>, Senjuti Saha<sup>7</sup>, Dipesh Tamrakar<sup>2</sup>, Jason R. Andrews<sup>1</sup>

<sup>1</sup>Department of Medicine, Division of Infectious Diseases and Geographic Medicine, Stanford University, Stanford, CA, United States, <sup>2</sup>Center for Infectious Diseases, Dhulikhel Hospital Kathmandu University Hospital, Dhulikhel, Nepal, <sup>3</sup>Institute for Research in Science and Technology, Kirtipur, Nepal, <sup>4</sup>University of California Berkeley, Department of Environmental Health Sciences, Berkeley, CA, United States, <sup>5</sup>University of California Davis, School of Medicine, Department of Public Health Sciences, Davis, CA, United States, <sup>6</sup>Department of Medicine, Division of Infectious Diseases, University of Toronto, Toronto, ON, Canada, <sup>7</sup>Child Health Research Foundation, Dhaka, Bangladesh



10:30 a.m.

5063

**SEROINCIDENCE OF SALMONELLA ENTERICA SEROVARS TYPHI AND PARATYPHI IN CHILDREN IN KENYA**

Aslam Khan<sup>1</sup>, Izabela Rezende<sup>1</sup>, Richelle Charles<sup>2</sup>, Francis Mutuku<sup>3</sup>, Bryson Ndenga<sup>4</sup>, Zainab Jembe<sup>5</sup>, Priscilla Maina<sup>5</sup>, Philip Chebii<sup>5</sup>, Charles Ronga<sup>4</sup>, Laura Mwambingu<sup>4</sup>, Victoria Okuta<sup>4</sup>, Donal Bisanzio<sup>6</sup>, Jason Andrews<sup>1</sup>, Angelle D. LaBeaud<sup>1</sup>

<sup>1</sup>Stanford University, Stanford, CA, United States, <sup>2</sup>Massachusetts General Hospital, Boston, MA, United States, <sup>3</sup>Technical University of Mombasa, Mombasa, Kenya, <sup>4</sup>Kenya Medical Research Institute (KEMRI), Kisumu, Kenya, <sup>5</sup>Vector Borne Disease Control Unit, Msambweni, Kenya, <sup>6</sup>RTI International, Washington, DC, United States

10:45 a.m.

5064

**EFFICACY AND SAFETY OF A TYPHOID CONJUGATE VACCINE: FINAL ANALYSIS OF A FOUR-YEAR, PHASE 3 TRIAL IN MALAWIAN CHILDREN**

Priyanka D. Patel<sup>1</sup>, Yuanyuan Liang<sup>2</sup>, James E. Meiring<sup>1</sup>, Nginache V. Nampota-Nkomba<sup>3</sup>, Theresa Misiri<sup>1</sup>, Felistas Mwakiseghile<sup>1</sup>, Leslie P. Jamka<sup>4</sup>, J. Kathleen Tracy<sup>4</sup>, Oswald Nyirenda<sup>3</sup>, Richard Wachepa<sup>1</sup>, Robert S. Heyderman<sup>5</sup>, Matthew B. Laurens<sup>4</sup>, Melita A. Gordon<sup>1</sup>, Kathleen M. Neuzil<sup>4</sup>

<sup>1</sup>Malawi-Liverpool-Wellcome Trust Clinical Research Programme, Blantyre, Malawi, <sup>2</sup>Department of Epidemiology and Public Health, University of Maryland School of Medicine, Baltimore, MD, United States, <sup>3</sup>Blantyre Malaria Project, Blantyre, Malawi, <sup>4</sup>Center for Vaccine Development and Global Health, University of Maryland School of Medicine, Baltimore, MD, United States, <sup>5</sup>Division of Infection and Immunity, University College London, London, United Kingdom

11 a.m.

5065

**CROSS PROTECTION OF HETEROLOGOUS SHIGELLA FLEXNERI 2A AND S. SONNEI CHALLENGE IN HEALTHY ADULTS IN THE UNITED STATES**

Kawsar R. Talaat<sup>1</sup>, Chad K. Porter<sup>2</sup>, Subhra Chakraborty<sup>1</sup>, Bridgett Finley<sup>1</sup>, Arthi Rameshkumar<sup>1</sup>, Jessica L. Brubaker<sup>1</sup>, Sandra D. Isidean<sup>3</sup>, Courtney M. Swisher<sup>1</sup>, Madison M. Billingsley<sup>1</sup>, Brittany L. Feijoo<sup>1</sup>, Katherine J. DeTizio<sup>3</sup>, Kamal Dhanjani<sup>1</sup>, Barbara DeNearing<sup>1</sup>, Akamol E. Suvarnapunya<sup>4</sup>, Nicole Maier<sup>5</sup>, Patricia Njuguna<sup>6</sup>, Calman MacLennan<sup>7</sup>

<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>2</sup>Naval Medical Research Command, Silver Spring, MD, United States, <sup>3</sup>Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc., Bethesda, MD, United States, <sup>4</sup>Walter Reed Army Institute of Research, Silver Spring, MD, United States, <sup>5</sup>PATH Center for Vaccine Innovation and Access, Washington, DC, United States, <sup>6</sup>PATH Center for Vaccine Innovation and Access, Seattle, WA, United States, <sup>7</sup>Bill & Melinda Gates Foundation, Seattle, WA, United States

11:15 a.m.

5066

**DEVELOPMENT OF A SHIGELLA MULTIVALENT BIOCONJUGATE VACCINE: A PHASE I/II RANDOMIZED, CONTROLLED AND AGE DESCENDING STUDY INCLUDING DOSE FINDING IN KENYAN INFANTS**

Chinaza Ezirim<sup>1</sup>, Cristina Alaimo<sup>1</sup>, Mainga Hamaluba<sup>2</sup>, Josphat Kosgei<sup>3</sup>, Jane Adetifa<sup>2</sup>, Patricia Martin<sup>1</sup>

<sup>1</sup>LimmaTech Biologics, Schlieren, Switzerland, <sup>2</sup>KEMRI-CGMRC, Kilifi, Kenya, <sup>3</sup>KEMRI-USAMRD-K, Kericho, Kenya

11:30 a.m.

5067

**HUMAN MILK OLIGOSACCHARIDES AND CAMPYLOBACTER JEJUNI INFECTION RISK IN NICARAGUAN CHILDREN**

Rebecca J. Rubinstein<sup>1</sup>, Roberto Herrera<sup>2</sup>, Christian Toval-Ruiz<sup>2</sup>, Nadja Vielot<sup>1</sup>, Lester Gutiérrez<sup>2</sup>, Yaoska Reyes<sup>1</sup>, Fredman González<sup>2</sup>, Patricia Blandón<sup>2</sup>, Natalie Bowman<sup>1</sup>, Lars Bode<sup>3</sup>, Filemón Bucardo<sup>1</sup>, Sylvia Becker-Dreps<sup>1</sup>, Samuel Vilchez<sup>2</sup>

<sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>2</sup>Universidad Nacional Autónoma de Nicaragua-León, León, Nicaragua, <sup>3</sup>University of California San Diego, San Diego, CA, United States

11:45 a.m.

5068

**PREDICTING SEROCONVERSION FAILURE AFTER ORAL POLIO VACCINATION IN CHILDREN IN LOW- AND MIDDLE-INCOME COUNTRIES**

Sharia M. Ahmed<sup>1</sup>, Ben J. Brintz<sup>1</sup>, Patricia B. Pavlinac<sup>2</sup>, James A. Platts-Mills<sup>3</sup>, Daniel T. Leung<sup>1</sup>

<sup>1</sup>University of Utah, Salt Lake City, UT, United States, <sup>2</sup>University of Washington, Seattle, WA, United States, <sup>3</sup>University of Virginia, Charlottesville, VA, United States

**Symposium 21****Kidney Disease of Unknown Etiology and Other Challenges to Renal Health in the Tropics**

Crystal Ballroom A - Lobby Level (West Tower)

Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

Epidemics of chronic kidney disease of unknown etiology (CKDu) in recent years in Central America, Sri Lanka, and other tropical regions have shined a spotlight on the changing clinical and epidemiologic picture of kidney disease, worldwide. Kidney disease in the tropical context does not mirror what is observed elsewhere. Opportunities for prevention and therapeutic intervention are hindered by, among other things, limited resources and access to advanced renal care. This panel of nephrology and tropical medicine experts will discuss the epidemiology of tropical kidney disease - including CKDu, provide some insight into infectious, toxic, and other environmental exposures contribute to the mounting renal morbidity and mortality, and address some of the challenges to preserving and improving renal health in the tropics.

**CHAIR**

Rebecca SB Fischer  
Texas A&M University, College Station, TX, United States

Anna Strasma  
Duke University, Durham, NC, United States

10:15 a.m.

**INTRODUCTION**

10:25 a.m.

**GLOBAL PERSPECTIVES ON RENAL HEALTH**

Vivekanand Jha  
The George Institute for Global Health, Delhi, India

10:50 a.m.

**GLOBAL OVERVIEW OF CKDU, A TROPICAL MEDICINE MYSTERY**

Marvin A. Gonzalez Quiroz  
University College London, London, United Kingdom

Thursday  
October 19

**11:10 a.m.**

**KIDNEY DISEASE IN HIV, MALARIA, LEPTOSPIROSIS, AND OTHER TROPICAL INFECTIONS**

Christina M. Wyatt

*Duke University School of Medicine, Durham, NC, United States*

**11:30 a.m.**

**SPOTLIGHT ON KIDNEY DISEASE IN CENTRAL AMERICA – CHALLENGES TO PREVENTION, DIAGNOSIS, AND MANAGEMENT**

Ramón García Trabanino

*Emergency Social Fund for Health of Tierra Blanca, Usulután, El Salvador*

**11:55 a.m.**

**MODERATOR, PANEL DISCUSSION**

Anna Strasma

*Duke University, Durham, NC, United States*

## Symposium 22

### Antimicrobial Stewardship in LMIC: Impact of Research, Training, Biomarkers, and Digital Health Tools

*Crystal Ballroom B - Lobby Level (West Tower)*

**Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone**

Antimicrobial resistance (AMR) is a major global health issue that is associated with deaths of more people than HIV and malaria each year. Inappropriate antibiotic prescription is among the biggest drivers of AMR. This symposium will bring together a diverse group of experts implementing antimicrobial stewardship initiatives at the primary care health facility level in low- and middle- income countries (LMICs). A wide range of antimicrobial stewardship initiatives will be presented including digital health tools, point-of-care biomarkers, AMR research, education, and training. Attendees will learn about why some digital health tools have reduced antibiotic prescription by 3-fold, while others have had little to no impact on antibiotic prescriptions. The impact of point of care inflammatory markers such as C-reactive protein and procalcitonin in combination with digital health tools or alone will be explored, dissecting how such biomarkers can have the greatest impact on antibiotic prescription. Finally, sustainable research platforms, education and training programs to tackle AMR will be reviewed. This symposium will provide valuable insights and practical solutions to help understand what antibiotic stewardship initiatives can best address the challenge of inappropriate antibiotic prescription, and antimicrobial resistance.

**CHAIR**

Janak Koirala

*Patan Academy of Health Sciences, Lalitpur, Nepal*

Rainer Tan

*Unisanté / SwissTPH / Ifakara Health Institute, Lausanne, Switzerland*

**10:15 a.m.**

**INTRODUCTION**

**10:25 a.m.**

**AN EDUCATION AND TRAINING PROGRAM TO IMPLEMENT AN ANTIMICROBIAL STEWARDSHIP PROGRAM IN NEPAL**

Andrew Trotter

*University of Illinois at Chicago, Chicago, IL, United States*

**10:45 a.m.**

**DIGITAL HEALTH TOOLS FOR ANTIBIOTIC STEWARDSHIP**

Rainer Tan

*Unisanté / SwissTPH / Ifakara Health Institute, Lausanne, Switzerland*

**11:05 a.m.**

**AMR DIAGNOSTICS USE ACCELERATOR**

Juvenal Nkeramahame

*FIND, the global alliance for diagnostics, Geneva, Switzerland*

**11:25 a.m.**

**AMR RESEARCH: SUSTAINABLE RESEARCH PARTNERSHIPS AND GLOBAL HEALTH EQUITY**

Abhilasha Karkey

*Oxford University Clinical Research Unit Nepal, Lalitpur, Nepal*

## Scientific Session 23

### Viruses - Evolution and Genomic Epidemiology

*Regency Ballroom A - Ballroom Level (West Tower)*

**Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone**

**CHAIR**

Rafael Kroon Campos

*University of Texas Medial Branch at Galveston, Galveston, TX, United States*

Emily Gallichotte

*Colorado State University, Fort Collins, CO, United States*

**10:15 a.m.**

**5069**

**ASSESSING THE CONTRIBUTION OF NUCLEOTIDE VARIATIONS IN THE MAYARO VIRUS GENOME TO ITS ADAPTIVE LANDSCAPE IN A. AEGYPTI AND A. ALBOPICTUS MOSQUITOES**

Rafael Kroon Campos<sup>1</sup>, Sasha R. Azar<sup>2</sup>, Tina Nguyen<sup>1</sup>, Judy Ly<sup>3</sup>, Ruimei Yun<sup>1</sup>, Bilal Khan<sup>1</sup>, Shannan L. Rossi<sup>4</sup>, Scott C. Weaver<sup>5</sup>

<sup>1</sup>Department of Microbiology and Immunology, University of Texas Medial Branch at Galveston, Galveston, TX, United States, <sup>2</sup>Department of Surgery, Houston Methodist Research Institute, Houston, TX, United States, <sup>3</sup>Department of Pathology, University of Texas Medial Branch at Galveston, Galveston, TX, United States, <sup>4</sup>Department of Pathology and the Institute for Human Infections and Immunity, University of Texas Medial Branch at Galveston, Galveston, TX, United States, <sup>5</sup>Department of Microbiology and Immunology and the Institute for Human Infections and Immunity, University of Texas Medial Branch at Galveston, Galveston, TX, United States

**10:30 a.m.**

**5070**

**USING BARCODED WEST NILE VIRUS TO QUANTIFY THE IMPACT OF TISSUE-ASSOCIATED BOTTLENECKS ON VIRUS POPULATIONS IN ENZOOTIC AND BRIDGE VECTORS OF WNV**

Emily Anne Fitzmeyer, Emily N. Gallichotte, Kyra Pyron, Marylee Kapuscinski, Gregory D. Ebel

*Colorado State University, Fort Collins, CO, United States*

**10:45 a.m.**

**5071**

**INTRA-HOST DIVERSITY IN VACCINATED COVID-19 PATIENTS INFECTED WITH DIFFERENT SARS-COV-2 VARIANTS**

Beatriz de Carvalho Marques<sup>1</sup>, Cecília Banho<sup>1</sup>, Renan Souza<sup>2</sup>, Nikos Vasilakis<sup>3</sup>, Lívia Sacchetto<sup>1</sup>, Maurício Nogueira<sup>1</sup>

<sup>1</sup>Faculdade de Medicina de São José do Rio Preto, São José do Rio Preto, Brazil, <sup>2</sup>Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, <sup>3</sup>The University of Texas Medical Branch, Galveston, TX, United States

11 a.m.

5072

**VIRAL SEQUENCE DATA FOR EPIDEMIOLOGICAL CHARACTERIZATION OF GLOBAL DENGUE VIRUS OUTBREAKS**

**Sindiso Nyathi**, Izabella Mauricio Rezende, A. Desiree LaBeaud  
Stanford University, Stanford, CA, United States

11:15 a.m.

5073

**THE IMPACT OF TEMPERATURE ON WEST NILE VIRUS MOSQUITO BOTTLENECKS AND ANTIVIRAL IMMUNITY**

**Emily Gallichotte**, Emily Fitzmeyer, Gregory Ebel  
Colorado State University, Fort Collins, CO, United States

11:30 a.m.

5074

**GENOMIC SURVEILLANCE DURING THE FIRST-EVER HYPERENDEMIC TRANSMISSION OF ALL FOUR DENGUE VIRUS SEROTYPES IN NICARAGUA IN 2022 REVEALS NEW VIRAL INTRODUCTIONS POST-PANDEMIC**

**Gerald Vasquez**<sup>1</sup>, Cristhiam Cerpas<sup>2</sup>, Hanny Moerira<sup>1</sup>, Jose Soto<sup>1</sup>, Mabel Hernandez<sup>1</sup>, Jose Juarez<sup>1</sup>, Josefina Coloma<sup>3</sup>, Shannon Bennett<sup>4</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, <sup>4</sup>California Academy of Sciences, San Francisco, CA, United States

11:45 a.m.

5075

**METAGENOMICS IDENTIFIES EMERGING AND RE-EMERGING VIRUSES IN NIGERIAN COHORTS WITH ACUTE FEBRILE ILLNESSES, INCLUDING PATHOGENS OF GLOBAL CONCERN**

**Judith Uche OGUZIE**<sup>1</sup>, Brittany A. Petros<sup>2</sup>, Paul E. Oluniji<sup>1</sup>, Samar B. Mehta<sup>3</sup>, Philomena E. Eromon<sup>1</sup>, Opeoluwa Adewale-Fasoro<sup>1</sup>, Peace D. Ifoga<sup>1</sup>, Ikponmwosa Odiá<sup>4</sup>, Andrzej Pastusiak<sup>5</sup>, Otitoola S. Gbemisola<sup>1</sup>, John O. Aiyepada<sup>4</sup>, Eghosasere A. Uyigwe<sup>4</sup>, Akhilomen P. Edamhande<sup>4</sup>, Osiemi Blessing<sup>4</sup>, Michael Airende<sup>4</sup>, Parvathy Nair<sup>2</sup>, Christopher Tomkins-Tinch<sup>2</sup>, James Qu<sup>2</sup>, Liam Stenson<sup>2</sup>, Nicholas Oyejide<sup>1</sup>, Nnenna A. Ajayi<sup>6</sup>, Kingsley Ojide<sup>6</sup>, Onwe Ogah<sup>6</sup>, Chukwuyem Abejegah<sup>7</sup>, Nelson Adedosu<sup>7</sup>, Oluwafemi Ayodeji<sup>7</sup>, Sylvanus Okogbenin<sup>4</sup>, Peter O. Okokhere<sup>4</sup>, Onikepe A. Folarin<sup>1</sup>, Isaac O. Komolafe<sup>1</sup>, Chikwe Ihekweazu<sup>8</sup>, Simon D.W. Frost<sup>5</sup>, Ethan K. Jackson<sup>5</sup>, Katherine J. Siddle<sup>2</sup>, Pardis C. Sabeti<sup>2</sup>, Christian T. Happi<sup>1</sup>  
<sup>1</sup>Redeemer's University, Ede, Nigeria, <sup>2</sup>Broad Institute of Harvard and MIT, Cambridge, MA, USA, MA, United States, <sup>3</sup>University of Maryland Medical Center, Baltimore, MA, USA, MD, United States, <sup>4</sup>ISTH, Irrua, Nigeria, <sup>5</sup>Microsoft Premonition, Redmond, Washington, USA, WA, United States, <sup>6</sup>FETHA, Abakaliki, Nigeria, <sup>7</sup>FMC, Owo, Nigeria, <sup>8</sup>NCDC, Abuja, Nigeria

**Scientific Session 24**

**One Health I: The Interconnection Between People, Animals, Plants and Their Shared Environment**

Regency Ballroom B - Ballroom Level (West Tower)

Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

**CHAIR**

Ahmed Abd El Wahed  
Leipzig University, Leipzig, Germany

Kelly Baker  
University of Iowa, Iowa City, IA, United States

10:15 a.m.

5076

**ASSESSING RISK FACTORS FOR MALARIA AND SCHISTOSOMIASIS AMONG CHILDREN IN MISUNGWU, TANZANIA, AN AREA OF CO-ENDEMICITY: A MIXED METHODS STUDY**

**Claudia Duguay**<sup>1</sup>, Jacklin Mosha<sup>2</sup>, Natacha Protopopoff<sup>3</sup>, Franklin Mosha<sup>4</sup>, Charles Thickestun<sup>1</sup>, Eliud Lukole<sup>2</sup>, Elizabeth Mallya<sup>4</sup>, Tatu Aziz<sup>2</sup>, Cindy Feng<sup>5</sup>, Alphaxard Manjurano<sup>2</sup>, Alison Krentel<sup>1</sup>, Manisha A. Kulkarni<sup>1</sup>  
<sup>1</sup>University of Ottawa, Ottawa, ON, Canada, <sup>2</sup>National Institute for Medical Research Tanzania, Mwanza Research Centre, Mwanza, United Republic of Tanzania, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>4</sup>Kilimanjaro Christian Medical University College, Moshi, United Republic of Tanzania, <sup>5</sup>Dalhousie University, Halifax, NS, Canada

10:30 a.m.

5077

**ONE HEALTH APPROACH TO NIPAH VIRUS OUTBREAK INVESTIGATION AMIDST OF COVID-19 PANDEMIC IN BANGLADESH, 2021-2022**

**Ariful Islam**<sup>1</sup>, Shariful Islam<sup>2</sup>, Shusmita Dutta Choudhury<sup>2</sup>, Sarah Munro<sup>1</sup>, Md Abu Sayeed<sup>2</sup>, Md Mehedi Hasan<sup>2</sup>, Md. Zulqarnine Ibne Noman Noman<sup>2</sup>, Abdul Khaleque Md. Dawlat Khan<sup>2</sup>, Nabila Nujhat Chowdhury<sup>2</sup>, Sharmin Sultana<sup>2</sup>, Ahmad Raihan Sharif<sup>2</sup>, Mohammad Enayet Hossain<sup>3</sup>, Maryska Kaczmarek<sup>1</sup>, Md Ziaur Rahman<sup>3</sup>, Tahmina Shirin<sup>2</sup>, Jonathan H Epstein<sup>1</sup>  
<sup>1</sup>EcoHealth Alliance, New York, NY, United States, <sup>2</sup>Institute of Epidemiology, Disease Control and Research (IEDCR), Dhaka, Bangladesh, <sup>3</sup>One Health laboratory, International center for diarrheal disease research (icddr), Dhaka, Bangladesh

10:45 a.m.

5078

**DELINEATING THE ROLE OF RATS, CLIMATE AND ENVIRONMENT AS DRIVERS OF LEPTOSPIRA SPILLOVER TRANSMISSION USING ECO-EPIDEMIOLOGICAL GEOSTATISTICS IN AN URBAN BRAZILIAN INFORMAL SETTLEMENT**

**Max Eyre**<sup>1</sup>, Fábio N. Souza<sup>2</sup>, Pablo R. Cuenca<sup>3</sup>, Nivison Nery Jr.<sup>2</sup>, Daiana de Oliveira<sup>2</sup>, Jaqueline S. Cruz<sup>2</sup>, Marbisa NR das Virgens<sup>2</sup>, Juliet O. Santana<sup>2</sup>, Mayara C. de Santana<sup>2</sup>, Gielson A. Sacramento<sup>2</sup>, Hussein Khalil<sup>4</sup>, Kathryn P. Hacker<sup>5</sup>, Elsie A. Wunder Jr<sup>6</sup>, James E. Childs<sup>5</sup>, Mitermayer G. Reis<sup>7</sup>, Mike Begon<sup>8</sup>, Peter J. Diggle<sup>3</sup>, Albert I. Ko<sup>6</sup>, Emanuele Giorgi<sup>3</sup>, Federico Costa<sup>2</sup>  
<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Institute of Collective Health, Federal University of Bahia, Salvador, Brazil, <sup>3</sup>Centre for Health Informatics, Computing, and Statistics, Lancaster University Medical School, Lancaster, United Kingdom, <sup>4</sup>Swedish University of Agricultural Sciences, Umea, Sweden, <sup>5</sup>University of Pennsylvania, Philadelphia, PA, United States, <sup>6</sup>Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT, United States, <sup>7</sup>Oswaldo Cruz Foundation, Brazilian Ministry of Health, Salvador, Brazil, <sup>8</sup>Department of Evolution, Ecology and Behaviour, University of Liverpool, Liverpool, United Kingdom

11 a.m.

5079

**BREAKING TRANSMISSION: A TRANSDISCIPLINARY ONE HEALTH APPROACH TO IMPROVE HOOKWORM CONTROL**

**Vito Colella**<sup>1</sup>, Patsy A. Zendejas-Heredia<sup>1</sup>, Virak Khieu<sup>2</sup>, Susana Vaz Nery<sup>3</sup>, Robin B. Gasser<sup>1</sup>, Rebecca J. Traub<sup>1</sup>, Martin Walker<sup>4</sup>  
<sup>1</sup>The University of Melbourne, Melbourne, Australia, <sup>2</sup>Ministry of Health, Phnom Penh, Cambodia, <sup>3</sup>The University of New South Wales, Sydney, Australia, <sup>4</sup>Royal Veterinary College, Melbourne, Australia

Thursday  
October 19

11:15 a.m.

5080

### BARRIERS AND ENABLERS TO THE IMPLEMENTATION OF THE ANTIMICROBIAL RESISTANCE NATIONAL ACTION PLAN IN MALAWI

Elias Rejice Maynard Phiri<sup>1</sup>, Jessie Mphande<sup>2</sup>, Tumaini Malenga<sup>2</sup>, Nicholas Feasey<sup>3</sup>, Russell Dacombe<sup>3</sup>

<sup>1</sup>Malawi-Liverpool-Wellcome Programme, Blantyre, Malawi, <sup>2</sup>Africa Institute for Development Policy, Lilongwe, Malawi, <sup>3</sup>Liverpool School of Tropical Medicine, Liverpool, United Kingdom

11:30 a.m.

5081

### A PLANETARY HEALTH INNOVATION FOR DISEASE, SUSTAINABILITY, FOOD, WATER, & POVERTY CHALLENGES IN WEST AFRICA

Jason R. Rohr<sup>1</sup>, Alexandra Sack<sup>1</sup>, Sidy Bakhom<sup>1</sup>, Christopher B. Barrett<sup>2</sup>, David Lopez-Carr<sup>3</sup>, Andrew Chamberlin<sup>4</sup>, David J. Civitello<sup>5</sup>, Molly J. Doruska<sup>2</sup>, Giulio A. De Leo<sup>4</sup>, Christopher J E Haggerty<sup>1</sup>, Isabela J. Jones<sup>4</sup>, Nicolas Jouanard<sup>6</sup>, Andrea J. Lund<sup>3</sup>, Amadou T. Ly<sup>7</sup>, Raphael A. Ndione<sup>7</sup>, Justin V. Remais<sup>8</sup>, Gilles Riveau<sup>9</sup>, Momy Seck<sup>6</sup>, Simon Senghor<sup>7</sup>, Susanne H. Sokolow<sup>4</sup>, Caitlin Wolfe<sup>10</sup>

<sup>1</sup>University of Notre Dame, Notre Dame, IN, United States, <sup>2</sup>Cornell University, Ithaca, NY, United States, <sup>3</sup>UC Santa Barbara, Santa Barbara, CA, United States, <sup>4</sup>Stanford University, Stanford, CA, United States, <sup>5</sup>Emory University, Atlanta, GA, United States, <sup>6</sup>SIA, St Louis, Senegal, <sup>7</sup>EPLS, St Louis, Senegal, <sup>8</sup>UC Berkeley, Berkeley, CA, United States, <sup>9</sup>EPLA, St Louis, Senegal, <sup>10</sup>University of South Florida, Tampa, FL, United States

11:45 a.m.

5082

### APPLYING A ONE HEALTH DISPARITIES FRAMEWORK TO ADDRESS THE SOCIAL GRADIENT AND HEALTH DISPARITIES OF BLASTOCYSTIS SP. INFECTION IN NORTHEAST MADAGASCAR

Alma Solis<sup>1</sup>, Angela Anaeme<sup>1</sup>, Georgia Titcomb<sup>2</sup>, Mark Janko<sup>1</sup>, Michelle Pender<sup>1</sup>, Jean Y. Rabezara<sup>3</sup>, Tyler Barrett<sup>1</sup>, Randy Kramer<sup>1</sup>, Hillary Young<sup>4</sup>, Charles Nunn<sup>1</sup>

<sup>1</sup>Duke University, Durham, NC, United States, <sup>2</sup>Colorado State University, Fort Collins, CO, United States, <sup>3</sup>Centre Universitaire Régional de la SAVA, Antalaha, Madagascar, <sup>4</sup>University of Santa Barbara, Santa Barbara, CA, United States

## Scientific Session 25

### Ectoparasite-Borne Diseases I

Regency Ballroom C - Ballroom Level (West Tower)

Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

#### CHAIR

Kristen Aiemjoy

University of California Davis, Davis, CA, United States

J. Stephen Dumler

Uniformed Services University of the Health Sciences, Bethesda, MD, United States

10:15 a.m.

5083

### EMERGENCE AND SPREAD OF HEARTLAND AND BOURBON VIRUSES IN NEW YORK STATE

Alan P. Dupuis II<sup>1</sup>, Rachel Elizabeth Lange<sup>2</sup>, Melissa Prusinski<sup>3</sup>, Joseph G. Maffei<sup>4</sup>, Cheri A. Koetzer<sup>4</sup>, Lindsey Tomaszek<sup>4</sup>, Bryon Backenson<sup>3</sup>, Laura D. Kramer<sup>4</sup>, Alexander T. Ciota<sup>4</sup>

<sup>1</sup>Arbovirus Laboratory, Wadsworth Center NYSDOH, Slingerlands, NY, United States, <sup>2</sup>University at Albany School of Public Health and Wadsworth Center, Albany, NY, United States, <sup>3</sup>Bureau of Communicable Disease Control, New York State Department of Health, Albany, NY, United States, <sup>4</sup>Arbovirus Laboratory, Wadsworth Center NYSDOH, Albany, NY, United States

10:30 a.m.

5084

### INTERSPECIES CO-FEEDING TRANSMISSION OF HEARTLAND VIRUS BETWEEN A NATIVE TICK SPECIES, AMBLYOMMA AMERICANUM, AND THE INVASIVE EAST ASIAN TICK, HAEMAPHYSALIS LONGICORNIS

Parker D. Norman, Clemence Obellianne, Meghan E. Hermance  
University of South Alabama College of Medicine, Mobile, AL, United States

10:45 a.m.

5085

### BORRELIA BURGDOFFERI ENZOOTIC CYCLE IN CONSTANT FLUX

Heidi Goethert<sup>1</sup>, Richard Johnson<sup>2</sup>, Patrick Roden-Reynolds<sup>2</sup>, Sam Telford<sup>1</sup>

<sup>1</sup>Tufts Cummings School of Veterinary Medicine, Grafton, MA, United States, <sup>2</sup>Martha's Vineyard Tick Initiative, West Tisbury, MA, United States

11 a.m.

5086

### SPATIOTEMPORAL EVOLUTION OF LYME DISEASE IN NORTH CAROLINA FROM 2010 TO 2020

Neha V. Mokashi, Amanda Brown Marusiak, Dana Giandomenico, Annie Green Howard, Paul L. Delamater, Ross M. Boyce

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

11:15 a.m.

5087

### ECO-EPIDEMIOLOGY OF RICKETTSIA SPP. IN RURAL ANDEAN COMMUNITIES: FIRST REPORT OF R. MONACENSIS AND R. RAOULTII-LIKE ORGANISMS IN SOUTH AMERICA AND THEIR POTENTIAL VECTORS

Winnie Contreras<sup>1</sup>, Cusi Ferradas<sup>1</sup>, Marco Risco<sup>1</sup>, Luis Mosto<sup>1</sup>, Oliver Bocanegra<sup>1</sup>, Laura Backus<sup>2</sup>, Victor Pacheco<sup>3</sup>, Evan M. Bloch<sup>4</sup>, Andrés G. Lescano<sup>1</sup>

<sup>1</sup>Emerging Diseases and Climate Change Research Unit, School of Public Health and Administration, Universidad Peruana Cayetano Heredia (UPCH), Lima, Peru, <sup>2</sup>Department of Medicine and Epidemiology, School of Veterinary Medicine, University of California, Davis, CA, United States, <sup>3</sup>Universidad Nacional Mayor de San Marcos, Natural History Museum, Lima, Peru, <sup>4</sup>Department of Pathology, Johns Hopkins University School of Medicine, Baltimore, MD, United States

(ACMCIP Abstract)

11:30 a.m.

5088

### SCRUB TYPHUS OUTBREAK IN AUSTRALIAN MILITARY PERSONNEL

Rebecca Suhr, Samantha Nind, Fiona McCallum  
ADFMIDI, Brisbane, Australia

11:45 a.m.

5089

### ESTIMATING THE SEROINCIDENCE OF SCRUB TYPHUS USING ANTIBODY DYNAMICS FOLLOWING INFECTION

Kristen Aiemjoy

University of California Davis, Davis, CA, United States

## Symposium 26

### Antimalarials: Tackling *P. falciparum* Resistance Through the Use of Irresistible Compounds

Regency Ballroom D - Ballroom Level (West Tower)

Thursday, October 19, 10:15 a.m. - Noon U.S. Central Time Zone

A major hurdle to successful treatment and control of *Plasmodium falciparum* malaria has been the emergence and spread of parasite resistance to first-line drugs. This is especially concerning with the recent emergence of artemisinin partial resistance in several countries in eastern Africa, placing partner drugs and treatment efficacy at increased risk. This symposium highlights recent evidence that parasites in Uganda appear to be acquiring resistance to both components of the dominant first-line therapy artemether-lumefantrine (Coartem). The symposium then explores the portfolio of compounds, termed "irresistibles", that are being developed by the Medicines for Malaria Venture and its partners and that have not yielded resistance via *in vitro* selection experiments. The next talk highlights recent Insights into *P. falciparum* genetic determinants that can modulate parasite susceptibility to a collection of these samples, using genetic crosses in humanized mice. The fourth talk illustrates proteomic approaches that are providing important insights into the mode of action of irresistible drugs as well as compounds in advanced stages of development. Identifying genetic markers of *P. falciparum* resistance to first-line drugs that historically have been refractory to resistance and developing a pipeline of irresistible drugs are vital components of global efforts to effectively treat *P. falciparum* malaria.

#### CHAIR

Didier Jean Leroy  
Medicines for Malaria Venture, Geneva, Switzerland

Susan Wyllie  
School of Life Sciences in Dundee University, Dundee, United Kingdom

#### 10:15 a.m. INTRODUCTION

#### 10:25 a.m. REDUCED SUSCEPTIBILITY OF FRESH *PLASMODIUM FALCIPARUM* ISOLATES TO LUMEFANTRINE IN NORTHERN UGANDA

Patrick K. Tumwebaze  
Infectious Disease Research Collaboration, Kampala, Uganda

#### 10:50 a.m. DEVELOPING A PIPELINE OF IRRESISTIBLE ANTIMALARIALS

Didier J. Leroy  
Medicines for Malaria Venture, Geneva, Switzerland

#### 11:15 a.m. DEFINING *P. FALCIPARUM* SUSCEPTIBILITY TO IRRESISTIBLE COMPOUNDS USING GENETIC CROSSES

David A. Fidock  
Columbia University Medical Center, New York, NY, United States

#### 11:40 a.m. PROTEOMIC APPROACHES TO DISSECTING THE MODE OF ACTION OF IRRESISTIBLE COMPOUNDS

Susan Wyllie  
School of Life Sciences Dundee University, Dundee, United Kingdom

### American Committee of Medical Entomology (ACME) Trainee Networking Lunch Event

Crystal Ballroom C - Lobby Level (West Tower)

Thursday, October 19, 12:15 p.m. - 1:30 p.m. U.S. Central Time Zone

These lunch table meetings, organized by the ACME subgroup of ASTMH, aims to provide students and postdoctoral fellows an opportunity to interact with established medical entomologists to discuss job opportunities, related scientific work and receive valuable career guidance and direction.

### Exhibit Hall Open

Riverside Center - Exhibit Level (East Tower)

Thursday, October 19, Noon- 1:30 p.m. U.S. Central Time Zone

## Poster Session 27

### Poster Session A Presentations

Riverside Center - Exhibit Level (East Tower) and Grand Hall  
GHI – Ballroom Level (East Tower)  
Thursday, October 19, Noon - 1:45 p.m.

### Poster Session A Directory

Global Health - Information/Communication/Technologies Solutions  
in Global Health including Modeling: 5091-5109  
Global Health – Other: 5110-5137  
Global Health - Security/Emerging Infection Preparedness,  
Surveillance and Response(s): 5138-5164  
Arthropods/Entomology – Other: 5165-5175  
Mosquitoes - Biology and Genetics of Insecticide Resistance:  
5176-5188  
Mosquitoes - Bionomics, Behavior and Surveillance: 5189-5208  
Mosquitoes - Epidemiology and Vector Control: 5209-5238  
Ectoparasite-Borne Disease - Babesiosis and Lyme Disease 5239-5241  
Ectoparasite-Borne Disease – Other: 5242-5252  
Viruses - Emerging Viral Diseases: 5253-5269  
Viruses – Epidemiology: 5270-5285  
Viruses - Evolution and Genomic Epidemiology: 5286-5296  
Viruses – Immunology: 5297-5311  
Viruses - Pathogenesis and Animal Models: 5312-5327  
Viruses - Therapeutics and Antiviral Drugs: 5328-5342  
Malaria - Antimalarial Resistance and Chemotherapy: 5343-5360  
Malaria - Diagnosis - Challenges and Innovations: 5361-5379  
Malaria - Drug Development and Clinical Trials: 5380-5391  
Malaria – Elimination: 5392-5407  
Malaria – Epidemiology: 5408-5435  
Malaria - Genetics, Genomics and Evolution: 5436-5452  
Malaria – Immunology: 5453-5463  
Malaria – Pathogenesis: 5464-5474  
Malaria – Prevention: 5475-5499  
Malaria – Surveillance and Data Utilization: 5500-5519  
Malaria - Vaccines and Immunotherapeutics: 5520-5532  
Bacteriology - Enteric Infections: 5533-5543  
Bacteriology - Other Bacterial Infections: 5544-5561  
Clinical Tropical Medicine: 5562-5578  
Helminths – Nematodes – Filariasis (Epidemiology): 5579-5591  
Helminths – Nematodes – Filariasis (Genetics/Genomics):  
5592-5593  
Helminths – Nematodes – Filariasis (Immunology): 5594-5598  
Integrated Control Measures for Neglected Tropical Diseases (NTDs):  
5599-5609  
Kinetoplastida and Other Protozoa - Diagnosis and New Detection  
Tools (Including Leishmania and Trypanosomes): 5610-5622  
Kinetoplastida and Other Protozoa - Genomics, Proteomics and  
Metabolomics, Molecular Therapeutic Targets (Including  
Leishmania and Trypanosomes): 5623-5629  
One Health: The Interconnection between People, Animals, Plants  
and Their Shared Environment: 5630-5641  
Pneumonia, Respiratory Infections and Tuberculosis: 5642-5657  
Schistosomiasis and Other Trematodes – Diagnostics and Treatment:  
5658-5667  
Schistosomiasis and Other Trematodes – Epidemiology and Control:  
5668-5677  
Water, Sanitation, Hygiene and Environmental Health: 5678-5687

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

5091

### A CONTENT REVIEW OF COVID-19 RELATED APPS USED IN VIETNAM

Linh Tran<sup>1</sup>, Nguyen Thanh An<sup>1</sup>, Federica Cucé<sup>2</sup>, Kadek Agus Dila<sup>3</sup>, Nguyen Hai Nam<sup>4</sup>,  
Doan Le Nguyet Cat<sup>5</sup>, Lee Wei Jun<sup>6</sup>, Farrukh Ansari<sup>7</sup>, Fatima Abdallah<sup>8</sup>, Au Vo<sup>9</sup>, Nguyen  
Tien Huy<sup>10</sup>

<sup>1</sup>Duy Tan University, Da Nang, Vietnam, <sup>2</sup>University hospital of Verona, Verona, Italy, <sup>3</sup>Giri  
Emas Hospital, Bali, Indonesia, <sup>4</sup>Johns Hopkins University School of Medicine, Baltimore,  
MD, United States, <sup>5</sup>Fleetwood Park Secondary School, Surrey, BC, Canada, <sup>6</sup>International  
Medical University, Kuala Lumpur, Malaysia, <sup>7</sup>Khyber Medical University, Peshawar,  
Pakistan, <sup>8</sup>Hashemite University, Zarqa, Jordan, <sup>9</sup>University of California, Los Angeles,  
CA, United States, <sup>10</sup>School of Tropical Medicine and Global Health, Nagasaki University,  
Nagasaki, Japan

5092

### COMPREHENSIVE COST-EFFECTIVENESS ANALYSIS OF A NEW COMPARTMENTAL MODEL FOR BACTERIAL MENINGITIS CONSIDERING THE INFLUENCE OF THE MEDIA

Yarhands Dissou Arthur<sup>1</sup>, Joshua Kiddy K Asamoah<sup>2</sup>, Alexander Kwarteng<sup>2</sup>

<sup>1</sup>AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL  
DEVELOPMENT, Kumasi, Ghana, <sup>2</sup>KWAME NKURUMAH UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, Kumasi, Ghana

5094

### COST-EFFECTIVENESS ANALYSIS OF 4TH GENERATION RAPID DIAGNOSTIC TESTING FOR HIV AMONG MEN WHO HAVE SEX WITH MEN IN NIGERIA

David Wastlund<sup>1</sup>, Rebecca Sim Shu Yu<sup>1</sup>, Michelle Sotak<sup>2</sup>

<sup>1</sup>Vista Health Pte Ltd, Singapore, Singapore, <sup>2</sup>Abbott, Abbott Park, IL, United States

5096

### DIGITIZATION OF THE NATIONAL LONG ACTING INSECTICIDE TREATED MOSQUITO NET MASS DISTRIBUTION CAMPAIGN IN GUINEA: PROCESS, CHALLENGES AND LESSONS LEARNED

Abdourahmane Diallo<sup>1</sup>, Moustapha Camara<sup>1</sup>, Fatoumata Battouly Diallo<sup>2</sup>, Mamadou  
Sitan Keita<sup>3</sup>, Agossa Charles Lebon LAWSON<sup>2</sup>, Mohamed Saran CONDE<sup>2</sup>, Mamadou  
Bhoye Diallo<sup>3</sup>, Alioune Camara<sup>1</sup>

<sup>1</sup>National Program for Malaria Control, Conakry, Guinea, <sup>2</sup>Catholic Relief Services, Conakry,  
Guinea, <sup>3</sup>Notre Santé / RTI, Conakry, Guinea

5097

### SYSTEMATIC REVIEW AND META ANALYSIS ON PREVALENCE OF ORAL SUBMUCOUS FIBROSIS

Savitha Satish

Johns Hopkins Bloomberg School of Public Health, South Windsor, CT, United States

5098

### WHO ESPEN COUNTRY HEALTH INFORMATION PLATFORM (CHIP)

Alexandre Laurent Pavluck

Sightsavers, Covington, GA, United States

5099

**HEALTH AND ECONOMIC IMPACTS OF SUBSTANDARD UTEROTONICS IN GHANA AND NIGERIA**

Yi-Fang (Ashley) Lee<sup>1</sup>, Colleen R. Higgins<sup>1</sup>, Petra Procter<sup>2</sup>, Sara Rushwan<sup>2</sup>, A. Metin Gülmezoglu<sup>2</sup>, Lester Chinery<sup>2</sup>, Sachiko Ozawa<sup>1</sup>  
<sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>2</sup>Concept Foundation, Geneva, Switzerland

5100

**SPATIOTEMPORAL ANALYSIS OF THE RELATIVE RISK OF POST-INFECTIOUS VERSUS NON-POST-INFECTIOUS HYDROCEPHALUS AND ITS RELATIONSHIP WITH ENVIRONMENTAL FACTORS**

Lucinda Hadley  
 Lancaster University, Lancaster, United Kingdom

5101

**IS SUB-SAHARAN AFRICA READY FOR DIGITAL CLINICAL TRIALS?**

Dawit Asmamaw Ejigu<sup>1</sup>, Eyasu Makonnen<sup>1</sup>, Thy Pham<sup>2</sup>, Brenda Okech<sup>3</sup>, Kristin Kristin Croucher<sup>4</sup>, Abebaw Fekadu<sup>1</sup>  
<sup>1</sup>CDT-Africa, Addis Ababa, Ethiopia, <sup>2</sup>Bill & Melinda Gates Foundation, Washington, WA, United States, <sup>3</sup>UVRH-IAVI, HIV Vaccine Program, Entebbe, Uganda, <sup>4</sup>Lightship, London, United Kingdom

5102

**SPATIO-TEMPORAL OCCURRENCE, BURDEN, RISK FACTORS AND MODELLING METHODS FOR ESTIMATING SCRUB TYPHUS BURDEN FROM GLOBAL TO SUBNATIONAL RESOLUTIONS: A SYSTEMATIC REVIEW**

Qian Wang<sup>1</sup>, Tian Ma<sup>2</sup>, Fangyu Ding<sup>3</sup>, Kartika Saraswati<sup>1</sup>, Benn Sartorius<sup>4</sup>, Nicholas Philip John Day<sup>1</sup>, Richard James Maude<sup>1</sup>  
<sup>1</sup>Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand, <sup>2</sup>Institute of Geographic Sciences and Natural Resources Research, Beijing, China, <sup>3</sup>Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China, <sup>4</sup>Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom

5103

**MATHEMATICAL MODELS OF PLASMODIUM VIVAX MALARIA: A SYSTEMATIC REVIEW**

Rachel A. Hounsell<sup>1</sup>, Caroline Franco<sup>1</sup>, Sheetal P. Silal<sup>2</sup>  
<sup>1</sup>University of Oxford, Oxford, United Kingdom, <sup>2</sup>University of Cape Town, Cape Town, South Africa

5104

**STRATIFICATION OF MALARIA BURDEN AND SUBNATIONAL TAILORING OF INTERVENTIONS TOWARDS TO INFORM THE DEVELOPMENT OF THE NATIONAL MALARIA ELIMINATION STRATEGIC PLAN IN GHANA**

Samuel K. Oppong<sup>1</sup>, Punam Amratia<sup>2</sup>, Beatriz Galatas Andrade<sup>3</sup>, Abdisalan NOOR<sup>3</sup>, Wahjib Mohammed<sup>1</sup>, Nana Yaw Peprah<sup>1</sup>, Peter Gething<sup>2</sup>, Keziah Malm<sup>1</sup>  
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5105

**MOLECULAR BIOMARKER IDENTIFICATION IN SEASONAL CARDIOVASCULAR COMORBID DISEASES (SCCD) USING NETWORK METANALYSIS**

Apoorv Gupta<sup>1</sup>, Jaichand Patel<sup>2</sup>, Prince Kumar<sup>3</sup>, Kamran Manzoor Waidha<sup>4</sup>, Arun K. Sharma<sup>1</sup>  
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5106

**THE ROLE OF BELIEFS IN MALARIA PREVENTION AND TREATMENT BEHAVIOR: ANALYSIS OF THE 2021 NIGERIA MALARIA INDICATOR SURVEY**

Indrani Saran, Oladoyin Okunoren  
 Boston College, Chestnut Hill, MA, United States

5107

**SYSTEMATIC REVIEW: MATHEMATICAL MODELLING PARAMETERS OF THE NINE WORLD HEALTH ORGANIZATION PRIORITY PATHOGENS**

Gina Maria Cuomo-Dannenburg, Sabine van Elsland, Natsuko Imai, Sangeeta Bhatia, Anne Cori, Imperial College Priority Pathogen Group  
 Imperial College London, London, United Kingdom

5108

**GEOSPATIAL MODELLING OF FEBRILE ILLNESS PREVALENCE AMONG CHILDREN AGED UNDER 5 YEARS IN UGANDA**

Misaki Sasanami<sup>1</sup>, Paddy Ssentongo<sup>2</sup>, Camille Moeckel<sup>2</sup>, Claudio Fronterre<sup>1</sup>  
<sup>1</sup>Lancaster University, Lancaster, United Kingdom, <sup>2</sup>Penn State Health Medical Center, Hershey, PA, United States

5109

**THE ROLE OF COMMUNITY HEALTH WORKERS IN TREATMENT MONITORING OF RADICAL CURE FOR P. VIVAX MALARIA IN PAPUA, INDONESIA: A MIXED METHODS STUDY**

Annisa Rahmalia<sup>1</sup>, Enny Kenangalem<sup>2</sup>, Liony Francisca<sup>2</sup>, Reynold R. Ubra<sup>3</sup>, Ric N. Price<sup>1</sup>, Jeanne R. Poespoprodjo<sup>2</sup>, Koen Peeters Grietens<sup>4</sup>, Charlotte Gryseels<sup>4</sup>  
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**Global Health – Other**

5110

**COVID-19 VACCINATION IN GHANA: THE DISCOURSE OF RELIGION, GENDER, PERCEIVED SAFETY OF VACCINE AND GHANAISANS' READINESS TO BE VACCINATED**

Perpetual Adjoa Antobam, Alexander Kwarteng  
 Kwame Nkrumah University of Science and Technology, KUMASI, Ghana

5111

**PREVALENCE, RISK FACTORS AND CONSEQUENCES OF MICROCEPHALY IN LOW- AND MIDDLE- INCOME COUNTRIES: A CALL TO ACTION FOR THE GLOBAL MATERNAL AND CHILD HEALTH COMMUNITY**

Molly M. Lamb<sup>1</sup>, Olivia Pluss<sup>1</sup>, Kirsten Fong<sup>1</sup>, Anna Funk<sup>2</sup>, Amy K. Connery<sup>3</sup>, Alison M. Colbert<sup>3</sup>, Thomas Jaenisch<sup>1</sup>  
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Thursday  
October 19

**5112****ASSESSMENT OF DIETARY HABITS AND IODINE STATUS AMONG PREGNANT WOMEN IN SOUTHERN GHANA**

**Nana Yaa Asiedua Appiah**<sup>1</sup>, Frank Hayford<sup>2</sup>, Samuel Antwi-Baffour<sup>2</sup>  
<sup>1</sup>*Noguchi Memorial Institute for Medical Research, Accra, Ghana*, <sup>2</sup>*School of Biomedical and Allied Health Science, University of Ghana, Accra, Ghana*

**5113****EFFECT OF PARTICIPANTS AGE AND OCCUPATION ON PERCEIVED SAFETY OF COVID-19 VACCINE AND PARTICIPANTS WILLINGNESS TO BE VACCINATED WITH COVID-19 VACCINE IN GHANA**

**Barbara Botwe**<sup>1</sup>, Alexander Kwarteng<sup>2</sup>  
<sup>1</sup>*Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, KUMASI, Ghana*, <sup>2</sup>*KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI, Ghana*

**5114****EVALUATION OF THE CLINICAL TRIAL OPERATION TRAINING CONDUCTED BY CENTER FOR INNOVATIVE DRUG DEVELOPMENT AND CLINICAL TRIALS FOR AFRICA**

**Eyasu Makonnen Eshetu**  
*Addis Ababa University, Addis Ababa, Ethiopia*

**5115****THE RELATIONSHIP BETWEEN DISTANCE TO PRIMARY HEALTH CENTER, CHILD MORTALITY, AND AZITHROMYCIN MASS DISTRIBUTION IN NIGER: A SUBGROUP ANALYSIS OF THE MORDOR I CLUSTER-RANDOMIZED TRIAL**

**Ahmed M. Arzika**<sup>1</sup>, Dennis Chao<sup>2</sup>, Elisabeth Root<sup>2</sup>, Anu Mishra<sup>2</sup>, Abdou Amza<sup>3</sup>, Ramatou Maliki<sup>1</sup>, Karamba Alio<sup>1</sup>, Diallo Beidi<sup>1</sup>, Elodie Lebas<sup>4</sup>, Ben F. Arnold<sup>4</sup>, Jeremy D. Keenan<sup>4</sup>, Thomas M. Lietman<sup>4</sup>, Kieran S. O'Brien<sup>4</sup>  
<sup>1</sup>*Centre de Recherche et Interventions en Sante Publique, Niamey, Niger*, <sup>2</sup>*Bill & Melinda Gates Foundation, Seattle, WA, United States*, <sup>3</sup>*Programme Nationale de Sante Oculaire, Niamey, Niger*, <sup>4</sup>*UCSF Proctor Foundation, San Francisco, CA, United States*

**5116****SPILLOVER EFFECT OF AZITHROMYCIN MASS DRUG ADMINISTRATION ON ANTIMICROBIAL RESISTANCE IN NIGER**

**Brittany Peterson**<sup>1</sup>, Ahmed Arzika<sup>2</sup>, Ramatou Maliki<sup>2</sup>, Amza Abdou<sup>3</sup>, Eric Houpt<sup>4</sup>, Tom Lietman<sup>1</sup>, Kieran O'Brien<sup>1</sup>, Jeremy Keenan<sup>1</sup>, Jie Liu<sup>5</sup>  
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**5117****TAKING BLOOD FROM CHILDREN FOR RESEARCH PURPOSES- WHAT DO PEOPLE THINK ABOUT IT? A QUALITATIVE STUDY TO EXPLORE THE FACILITATORS AND BARRIERS FROM A CLINICAL TRIAL CONDUCTED IN LALITPUR, NEPAL**

**Ashata Dahal**  
*OXFORD UNIVERSITY CLINICAL RESEARCH UNIT AND UNIVERSITY OF OXFORD, PATAN, Nepal*

**5118****EPIDEMIOLOGY OF LEPROSY IDENTIFIED THROUGH ACTIVE CASE DETECTION IN SIX DISTRICTS OF NEPAL**

**Ram Kumar Mahato**  
*Epidemiology and Disease Control Division, Kathmandu, Nepal*

**5119****ADDRESSING PROVIDERS' DISTRUST OF MALARIA RAPID DIAGNOSTIC TESTS THROUGH PEER-TO-PEER ENGAGEMENT**

**Eno'bong Idiong**<sup>1</sup>, Angela Acosta<sup>2</sup>, Bolatito Aiyenigba<sup>1</sup>, Jeroh Oghenevwogaga<sup>1</sup>, Chika Aboh<sup>1</sup>, Nnenna Ogbulafor<sup>3</sup>, Foye Oyedokun-Adebago<sup>4</sup>, Ian Tweedie<sup>1</sup>  
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**5120****LIVED EXPERIENCES AND COPING STRATEGIES ADOPTED BY ADOLESCENTS IN THE MANAGEMENT OF ONCHOCERCIASIS IN A RESOURCE LIMITED SETTING OF GHANA**

**Sitsfoe Gbogbo**, Hubert Amu, Robert Dowou, Martin Ayanore  
*University of Health and Allied Sciences, Ho, Ghana*

**5121****SPATIAL INEQUALITY IN CHILDHOOD IMMUNIZATION COVERAGE IN NIGERIA: A GEOSTATISTICAL APPROACH**

**Ezra Gayawan**<sup>1</sup>, Osafu Egbon<sup>2</sup>, Olamide Orunmoluji<sup>1</sup>  
<sup>1</sup>*Federal University of Technology, Akure, Nigeria*, <sup>2</sup>*University of Sao Paulo, Sao Carlos, Brazil*

**5122****UNDERSTANDING COVID19 VACCINE HESITANCY IN THE JOHNSONVILLE, PEPPER WULU TOWN COMMUNITY LIBERIA: A QUALITATIVE STUDY**

**James Douglas Sinnatwah Jr.**  
*University of Liberia School of Public Health, Monrovia, Liberia*

**5123****AN ETHNOBOTANICAL STUDY ON MEDICINAL PLANTS USED AS ANTIDOTES FOR SNAKEBITE AND AS SNAKES REPELLENTS IN THE HAUTS BASSINS AND SOUTHWEST REGIONS OF BURKINA FASO**

**Rabila Bamogo**<sup>1</sup>, Achille Sindimbasba Nikiema<sup>1</sup>, Mamounata Belem<sup>2</sup>, Youssouph Diatta<sup>3</sup>, Roch Kounbobr Dabiré<sup>1</sup>  
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**5124****MIXED EFFECTS MODELS IN THE ANALYSIS OF EPSTEIN BARR VIRUS SEROLOGICAL RESPONSES IN CHILDREN FROM CHULAIMBO WESTERN KENYA**

**Onditi Ian Arao**<sup>1</sup>, Arieria Bonface<sup>1</sup>, Koech Emily<sup>1</sup>, Waomba Kevin<sup>1</sup>, Stella Chumbe<sup>1</sup>, Jackson Conner<sup>2</sup>, Samayoa-Reyes Gabriela<sup>2</sup>, Katherine R. Sabourin<sup>2</sup>, Sidney Ogolla<sup>1</sup>, Rosemary Rochford<sup>2</sup>  
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**5125****MOLECULAR CHARACTERIZATION OF THE RHESUS D (RHD) GENE IN BLOOD DONORS WITH THE DEL PHENOTYPE AT THE NATIONAL BLOOD TRANSFUSION CENTER (CNTS) OF BAMAKO, MALI**

**Ramatoulaye Diallo**<sup>1</sup>, Dramane Diallo<sup>2</sup>, Amadou Kone<sup>2</sup>, Tenin Aminatou Coulibaly<sup>2</sup>, Alhassane BA<sup>1</sup>, Moussa Cisse<sup>1</sup>, Boubacar Maiga<sup>3</sup>  
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5126

**ACADEMIC ACHIEVEMENT AMONG CHILDREN WITH SICKLE CELL ANAEMIA IN UGANDA**

Shubaya K. Naggayi<sup>1</sup>, Paul Bangirana<sup>2</sup>, Robert O. Opoka<sup>1</sup>, Deogratias Munube<sup>1</sup>, Phillip Kasirye<sup>1</sup>, Ezekiel Mupere<sup>1</sup>, Betty Nyangoma<sup>3</sup>, Annet Birabwa<sup>4</sup>, Grace Nambatya<sup>1</sup>, Maxencia Kabatabaazi<sup>1</sup>, Ann Jacqueline Nakitende<sup>2</sup>, Dennis Kalibbala<sup>5</sup>, John Ssenkusu<sup>6</sup>, Chandy C. John<sup>7</sup>, Nancy S. Green<sup>8</sup>, Richard Idro<sup>1</sup>

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5127

**HEALTH DETERMINANTS AMONG INDIVIDUALS WORKING AT AMAZONIAN GOLD MINING SITES: A MULTICENTRIC CROSS-SECTIONAL SURVEY**

Maylis Douine<sup>1</sup>, Yann Lambert<sup>1</sup>, Lorraine Plessis<sup>1</sup>, Irene Jimeno<sup>1</sup>, Teddy Bardon<sup>1</sup>, Carlotta Carboni<sup>1</sup>, Antoine Adenis<sup>1</sup>, Stephen Vreden<sup>2</sup>, Martha Suarez-Mutis<sup>3</sup>, Alice Sanna<sup>1</sup>

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5128

**DXCONNECT TEST DIRECTORIES: GLOBAL IMPACT THROUGH ACCESSIBLE DATA ON DIAGNOSTIC ASSAYS**

Victoria O. Aroworade, Anna Mantsoki, Stefano Ongarello, Devy Emperador, Sarah Nogaro, Sophie Crettaz, Dounia Cherkaoui, Daniel G. Bausch, Sarah-Jane Loveday, Kavi M. Ramjeet

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5129

**PSYCHOSOCIAL PROBLEMS AFFECTING GIRLS IN SELECTED SCHOOLS IN POST CONFLICT LIBERIA**

Juah T Karpeh

Cuttington University, Gbarnga, Liberia

5130

**ANTHROPOMETRIC DIFFERENCES IN COMMUNITY- VERSUS CLINIC-RECRUITED INFANTS PARTICIPATING IN A TRIAL OF AZITHROMYCIN FOR PREVENTION OF INFANT MORTALITY**

Mamadou Ouattara<sup>1</sup>, Ali Sie<sup>1</sup>, Mamadou Bountogo<sup>1</sup>, Valentin Boudo<sup>1</sup>, Elodie Lebas<sup>2</sup>, Huiyu Hu<sup>2</sup>, Benjamin F. Arnold<sup>2</sup>, Thomas M. Lietman<sup>2</sup>, Catherine Oldenburg<sup>2</sup>

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5131

**VACCINE MANAGEMENT PRACTICES AMONG HEALTHCARE WORKERS IN NORTHWESTERN STATE, NIGERIA: A COMPARATIVE STUDY**

Adefisoye Oluwaseun Adewole<sup>1</sup>, Ndakilnasiya Waziri<sup>1</sup>, Idriss Bomo<sup>1</sup>, Simple Edwin<sup>1</sup>, Babatunde Amoo<sup>1</sup>, Gideon Ugbenyo<sup>1</sup>, Rhoda Fadahunsi<sup>1</sup>, Elizabeth Adedire<sup>1</sup>, Aishat Usman<sup>2</sup>, Belinda Uba<sup>1</sup>, Patrick Nguku<sup>1</sup>

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5132

**THE PREVALENCE OF UNDIAGNOSED HYPERTENSION AMONG RESIDENTS OF THE DUPORT ROAD COMMUNITY**

Jeapolor Nutai Kolleh

E and J Medical Center, Ganta City, Liberia

5133

**INTEGRATED SKIN DISEASE TRAINING IN VANUATU: PEER-SUPPORTED CAPACITY BUILDING TRANSFORMING HEALTH WORKER CONFIDENCE**

George Taleo<sup>1</sup>, Thyna Orelly<sup>2</sup>, Fasihah Taleo<sup>3</sup>, Isis Umbelino-Walker<sup>1</sup>, Alan Brooks<sup>4</sup>, Anastasia Pantelias<sup>1</sup>, Julie Jacobson<sup>1</sup>

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5134

**"I BELIEVE BECAUSE THE VACCINE IS NOT COMING TODAY" - AN EXPLORATION OF THE SOCIO-BEHAVIORAL FACTORS INFLUENCING CHILDHOOD VACCINATION UPTAKE IN URBAN POOR SETTLEMENTS IN NAIROBI, KENYA**

Judy Gichuki, Ben Ngoye

Strathmore University, Nairobi, Kenya

5135

**AVAILABILITY AND ACCESSIBILITY OF SUICIDE PREVENTION SERVICES: A GLOBAL INVESTIGATION**

Gladson Vaghela<sup>1</sup>, Randa Elsheikh<sup>2</sup>, Nguyen Hai Nam<sup>3</sup>, I-Chun Hung<sup>4</sup>, Mohamed H. Khalil<sup>5</sup>, Zeeshan Khan<sup>6</sup>, Aashish Lamichhane<sup>7</sup>, Abdelrahman Makram<sup>8</sup>, Minh-Hang Nguyen<sup>9</sup>, My Duc Thao Trieu<sup>10</sup>, Nguyen Tien Huy<sup>11</sup>

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5136

**LOW SEROPREVALENCE OF EBOLA VIRUS IN HEALTH CARE PROVIDERS IN AN ENDEMIC REGION (TSHUAPA PROVINCE) OF THE DEMOCRATIC REPUBLIC OF THE CONGO**

Trésor Zola Matuvanga<sup>1</sup>, Ynke Larivière<sup>2</sup>, Gwen Lemey<sup>2</sup>, Joachim Mariën<sup>2</sup>, Bernard Osangir<sup>3</sup>, Patrick Mitashi<sup>4</sup>, Hypolite Muhindo-Mavoko<sup>1</sup>, Junior Matangila<sup>1</sup>, Junior Matangila<sup>1</sup>, Pierre Van Damme<sup>2</sup>, Jean-Pierre Van gertruyden<sup>2</sup>

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5137

**IMPROVED FACILITY BASED INTEGRATED SUPPORTIVE SUPERVISION- GAINS ON HEALTH SYSTEM STRENGTHENING IN OYO STATE**

Esther Ayandipo<sup>1</sup>, Motunrayo Fagbola<sup>1</sup>, Tosin Orhorhamreru<sup>1</sup>, Abimbola Olayemi<sup>2</sup>, Olatayo Abikoye<sup>2</sup>, Uchenna Nwokenna<sup>2</sup>, Foluke Adeyemo<sup>3</sup>, Olatunji Muideen<sup>4</sup>, Gbolahan Abass<sup>5</sup>, Arja Huestis<sup>6</sup>, Allan Were<sup>6</sup>, Thomas Hall<sup>6</sup>, Veronica Momoh<sup>7</sup>, Jules Mihigo<sup>7</sup>

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# Global Health - Security/Emerging Infection Preparedness, Surveillance and Response(s)

5138

## IMPROVED DATA QUALITY FROM AUTOMATED DHIS2 DATA EXCHANGE BETWEEN THE MALARIA RAPID REPORTING SYSTEM AND HEALTH MANAGEMENT INFORMATION SYSTEMS IN ZAMBIA

Japhet Chiwaula<sup>1</sup>, Dingani Chinula<sup>2</sup>, Ronelle Knit<sup>3</sup>, Gift Sitenge<sup>2</sup>, Ignatious Banda<sup>1</sup>, Mercy Mwanza<sup>1</sup>, Isaac Mwase<sup>4</sup>, Celia Tusiime<sup>2</sup>, Busiku Hamainza<sup>1</sup>

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5139

## EXPLORING HEALTHCARE WORKERS' PERCEPTION AND CHALLENGES TO PRACTICING EFFECTIVE INFECTION PREVENTION AND CONTROL IN TERTIARY CARE HOSPITALS: A MULTI-CENTERED STUDY IN BANGLADESH

Md Golam Dostogir Harun<sup>1</sup>, Lisa P Oakley<sup>2</sup>, Shariful Amin Sumon<sup>1</sup>, Aninda Rahman<sup>3</sup>, Syed Abul Hassan Md Abdullah<sup>4</sup>, Md Saiful Islam<sup>5</sup>, Ashley R Styczynski<sup>2</sup>, S. Cornelia Kaydos-Daniels<sup>6</sup>

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5140

## A PHASE I STUDY TO ASSESS THE SAFETY AND IMMUNOGENICITY OF A RECOMBINANT ADENOVIRUS-BASED VACCINE AGAINST PLAGUE

Arabella S V Stuart, Natalie G. Marchevsky, Xinxue Liu, Sagida Bibi, Federica Cappuccini, Christina Dold, Andrew J. Pollard, Christine S. Rollier  
University of Oxford, Oxford, United Kingdom

5141

## SCOPING REVIEW OF ACUTE FEBRILE ILLNESS IN WEST AFRICAN REGION, 2010-2020

Dallas M. Rohraff<sup>1</sup>, Lilith Kazazian<sup>1</sup>, Madeline R. Farron<sup>1</sup>, Rewa K. Choudhary<sup>1</sup>, Casey J. Siesel<sup>1</sup>, Katie R. Hooker<sup>1</sup>, Aishat Usman<sup>2</sup>, Muhammad S. Balogun<sup>2</sup>, Carol Y. Rao<sup>1</sup>  
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5142

## ROOT CAUSE ANALYSIS OF HEALTH SECTOR VIOLENCE IN NEPAL: A QUALITATIVE EXPLORATION OF STAKEHOLDERS' VIEWS

Pradip Lamsal, Bharati Bhetwal sapkota, Rabin Pokharel, Gupta Bahadur Shrestha  
Helping Hands Community Hospital, Kathmandu, Nepal

5143

## A POPULATION-BASED SEROLOGICAL SURVEY OF VIBRIO CHOLERAE ANTIBODY TITERS PRIOR TO THE 2022 CHOLERA OUTBREAK IN HAITI

Christy H. Clutter<sup>1</sup>, Molly B. Klarman<sup>2</sup>, Youseline Cajusma<sup>2</sup>, Emilee T. Cato<sup>2</sup>, Md Abu Sayeed<sup>2</sup>, Lindsey Brinkley<sup>2</sup>, Owen Jensen<sup>1</sup>, Chantale Baril<sup>3</sup>, V Madsen Beau De Rochars<sup>2</sup>, Andrew S. Azman<sup>4</sup>, Maureen T. Long<sup>2</sup>, Derek Cummings<sup>2</sup>, Daniel T. Leung<sup>1</sup>, Eric J. Nelson<sup>2</sup>

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5144

## ANTIBIOTIC USAGE IN LAYER FARMS: POTENTIAL ROLE IN EMERGENCE OF ANTIBIOTIC RESISTANCE

Khushbu Khushbu, Pallavi Moudgil, Vijay J. Jhadav, Deepak Soni  
College of Veterinary Sciences, Lala Lajpat Rai University Of Veterinary And Animal Sciences, Hisar, India

5145

## GLOBAL PUBLIC HEALTH INTELLIGENCE: WORLD HEALTH ORGANIZATION OPERATIONAL PRACTICES

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5146

## EPIDEMIOLOGICAL INVESTIGATION OF GROUPED CASES OF DEATH DUE TO POISONING WITH CLOSTRIDIUM BOTULINUM IN A VILLAGE IN CÔTE D'IVOIRE, AFRICA, DECEMBER 2022 - JANUARY 2023

Damus Paquin Kouassi, Béné Joseph Vroh Bi, Déby Arsène Kouamé, Sory Ibrahim Soumahoro, M'Bégnan Coulibaly, Opri Irika, Fatoumata Bamba, François Brizalékou  
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5147

## THE PREVALENCE AND RISK FACTORS OF PTSD SYMPTOMS AMONG NURSES DURING THE COVID-19 PANDEMIC. A SYSTEMATIC REVIEW AND META-ANALYSIS

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5148

## PERCEPTIONS OF YELLOW FEVER EMERGENCY MASS VACCINATIONS IN UGANDA: A QUALITATIVE STUDY

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5149

## ASSESSMENT OF THE AVAILABLE RESOURCES AND MEASURES TO CONTROL COVID-19 AT THE DISTRICT-LEVEL IN LIBERIA

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## 5150

**ANTIBODY RESPONSE TO DIFFERENT COVID-19 VACCINES AMONG THE MIGRANT WORKERS OF BANGLADESH**Md. Imam Hossain<sup>1</sup>, Protim Sarker<sup>1</sup>, Rubhana Raqib<sup>1</sup>, Md Ziaur Rahman<sup>1</sup>, Rezaul Hasan<sup>1</sup>, Chloe K. Svezia<sup>2</sup>, Mahbubur Rahman<sup>1</sup>, Nuhu Amin<sup>1</sup><sup>1</sup>International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), Dhaka, Bangladesh, <sup>2</sup>Rollins School of Public Health, Emory University, Atlanta, GA, United States

## 5151

**IMPACT OF ARTHROPODS ON THE TRANSMISSION OF DISEASES AND EPIDEMICS IN POPULATIONS WITH POOR HYGIENIC CONDITIONS AND INAPPROPRIATE BEHAVIORAL HABITS IN THEIR HOMES: CASE STUDIES ON POPULATIONS IN THE HEALTH DISTRICTS OF KINYINYA AND GISURU, NOVEMBER 2022 TO FEBRUARY 2023**

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## 5152

**RAPID, LOW-COST, AND PORTABLE LAB-IN-A-BOX 'WHITE LOTUS' FOR POINT OF CARE TESTING OF SARS-COV-2 IN LOW MIDDLE INCOME COUNTRIES**

Hitendra Kumar, Yoonjung Lee, Noah Toppings, Keekyoung Kim, Dylan R. Pillai

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## 5153

**ASSESSMENT OF POINTS OF ENTRY, ISOLATION SITES & COUNTIES PREPAREDNESS & RESPONSE TO EBOLA VIRAL DISEASE OCTOBER 2022, KENYA**Oscar Adidi Gaunya<sup>1</sup>, James Marcomic Maraga<sup>1</sup>, Stephen Antony Okumu<sup>2</sup>, Maurice Owin<sup>3</sup>, Fredrick Odhiambo<sup>3</sup>, Ahmed Abade<sup>4</sup>, Josephine Githaiga<sup>5</sup>, Emmanuel Okunga<sup>6</sup>, Samuel Kadivane<sup>6</sup>, Mitchel Sagala<sup>7</sup><sup>1</sup>Field Epidemiology & Laboratory Training Program Resident-Ministry of Health -Kenya, Nairobi, Kenya, <sup>2</sup>Field Epidemiology & Laboratory Training Program Resident-Ministry of Health -Kenya, Nairobi, Kenya, <sup>3</sup>Field Epidemiology & Laboratory Training Program Lecturer-Ministry of Health -Kenya, Nairobi, Kenya, <sup>4</sup>Field Epidemiology & Laboratory Training Program Resident advisor-Ministry of Health -Kenya, Nairobi, Kenya, <sup>5</sup>Field Epidemiology & Laboratory Training Program Director-Ministry of Health -Kenya, Nairobi, Kenya, <sup>6</sup>Division of Disease surveillance & Response-Ministry of Health -Kenya, Nairobi, Kenya, <sup>7</sup>Points Of Entry -Ministry of Health -Kenya, Nairobi, Kenya

## 5154

**SEROPREVALENCE AND RISK FACTORS ASSOCIATED WITH BRUCELLOSIS AMONGST LIVESTOCK AT KITENGULE RANCH IN KAGERA, TANZANIA**Beatus Lyimo<sup>1</sup>, Charles Mayenga<sup>2</sup>, Zachariah E. Makondo<sup>2</sup>, Samson Lyimo<sup>1</sup>, Lidia Munuo<sup>1</sup>, Waziri Mlewa<sup>3</sup>, Coletha Mathew<sup>3</sup>, Maurice Byukusenge<sup>4</sup>, Isabella M. Cattadori<sup>4</sup>, Jessica A. Radzio-Basu<sup>5</sup>, Rudovick R. Kazwala<sup>3</sup>, Peter J. Hudson<sup>4</sup>, Vivek Kapur<sup>4</sup>, Joram Buza<sup>1</sup>, Robab Katani<sup>4</sup><sup>1</sup>Nelson Mandela African Institution of Science and Technology, Arusha, United Republic of Tanzania, <sup>2</sup>Tanzania Veterinary Laboratory Agency, Dar es Salaam, United Republic of Tanzania, <sup>3</sup>Sokoine University of Agriculture, Morogoro, United Republic of Tanzania, <sup>4</sup>Pennsylvania State University, University Park, PA, United States, <sup>5</sup>Penn State University, University Park, PA, United States

## 5155

**STRATEGIES AND POLICIES FOR SUSTAINABLE PATHOGEN GENOMIC SURVEILLANCE IN AFRICA: PRIORITIES, PROGRESS, AND CHALLENGES**

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## 5156

**A STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE (KAP) ON YELLOW FEVER AMONG COMMUNITY MEMBERS IN FOUR DISTRICTS AFTER AN OUTBREAK IN THE SAVANNAH REGION, GHANA**Millicent Captain-Esoah<sup>1</sup>, Kwadwo K. Frempong<sup>2</sup>, Chrysantus Kubio<sup>3</sup>, Iddrisu Fuseini<sup>4</sup>, Ishmael T. Alhassan<sup>1</sup>, Enoch Arthur<sup>1</sup>, Matthew Gabien<sup>1</sup>, Abigail Mahama<sup>1</sup>, Gloria Y. Deku<sup>1</sup>, Daniel A. Boakye<sup>2</sup>, Samuel K. Dadzie<sup>2</sup><sup>1</sup>Department of Applied Biology, School of Environment and Life Sciences, C. K. Tedam University of Technology and Applied Sciences, Navrongo, Ghana, <sup>2</sup>Department of Parasitology, Noguchi Memorial Institute for Medical Research, College of Health Sciences, University of Ghana, Legon, Accra, Ghana, <sup>3</sup>Ghana Health Service, Regional Health Directorate, Savannah Region, Damongo, Ghana, <sup>4</sup>Department of Statistics, C. K. Tedam University of Technology and Applied Sciences, Navrongo, Ghana

## 5157

**COMMUNITY ENGAGEMENT IN A NEW TRIAL SITE OF THE PARTNERSHIP FOR RESEARCH ON EBOLA VACCINATION IN MALI**

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## 5158

**COVID-19 ATTITUDES AND VACCINE HESITANCY AMONG AN AGRICULTURAL COMMUNITY IN SOUTHWEST GUATEMALA: A CROSS-SECTIONAL SURVEY**Neudy Rojop<sup>1</sup>, Diva M Calvimontes<sup>1</sup>, Edgar Barrios<sup>1</sup>, Molly M. Lamb<sup>2</sup>, Alejandra Paniagua-Avila<sup>3</sup>, Jose C. Carlos<sup>4</sup>, Lindsey M. Duca<sup>4</sup>, Chelsea .. Iwamoto<sup>4</sup>, Anna N. Chard<sup>4</sup>, Melissa Gomez<sup>1</sup>, Kareen Arias<sup>1</sup>, Guillermo A. Bolanos<sup>1</sup>, Emily .. Zielinski-Gutierrez<sup>4</sup>, Eduardo .. Azziz-Baumgartner<sup>4</sup>, Maria R. Lopez<sup>5</sup>, Celia Cordon-Rosales<sup>5</sup>, Edwin J. Asturias<sup>6</sup>, Daniel Olson<sup>6</sup><sup>1</sup>Fundacion para la Salud Integral de los Guatemaltecos, Retalhuleu, Guatemala, <sup>2</sup>Colorado School of Public Health, Aurora, CO, United States, <sup>3</sup>Mailman School of Public Health, Columbia University, New York, NY, United States, <sup>4</sup>Center for Disease Control and Prevention, Atlanta, GA, United States, <sup>5</sup>Universidad del Valle de Guatemala, Guatemala City, Guatemala, <sup>6</sup>University of Colorado School of Medicine, Aurora, CO, United States

## 5159

**DESCRIPTION OF AN ACTIVE SURVEILLANCE SYSTEM CONDUCTED IN OUTPATIENT CLINICS FOR PRIORITY ACUTE INFECTION SYNDROMES IN GUATEMALA**Kailin Chen<sup>1</sup>, Juan Carlos Romero<sup>2</sup>, Maria Renee Lopez<sup>2</sup>, John P. McCracken<sup>1</sup>, Laura M. Grajeda<sup>1</sup>, Celia Cordon<sup>2</sup><sup>1</sup>University of Georgia, Athens, GA, United States, <sup>2</sup>Universidad del Valle de Guatemala, Guatemala City, Guatemala

## 5160

**STRENGTHENING HEALTH SYSTEMS FUNDAMENTALS CAN PROTECT COUNTRIES FROM COVID-19: A RE-EVALUATION OF THE GLOBAL HEALTH SECURITY INDEX (GHSI) AND ITS SUB-DIMENSIONS**Tyler Headley<sup>1</sup>, Sooyoung Kim<sup>2</sup>, Yesim Tozan<sup>2</sup><sup>1</sup>New York University Abu Dhabi Campus, Abu Dhabi, United Arab Emirates, <sup>2</sup>New York University School of Global Public Health, New York, NY, United States

## 5161

**THE SYNERGISTIC IMPACT OF UNIVERSAL HEALTH COVERAGE AND GLOBAL HEALTH SECURITY ON HEALTH SERVICE DELIVERY DURING THE COVID-19 PANDEMIC: A DIFFERENCE-IN-DIFFERENCE-IN-DIFFERENCE STUDY OF CHILDHOOD IMMUNIZATION COVERAGE FROM 192 COUNTRIES**Sooyoung Kim<sup>1</sup>, Tyler Headley<sup>2</sup>, Yesim Tozan<sup>1</sup><sup>1</sup>New York University School of Global Public Health, New York, NY, United States, <sup>2</sup>New York University Abu Dhabi Campus, Abu Dhabi, United Arab Emirates

5162

### WASTEWATER GENOMIC SURVEILLANCE AS AN APPROACH TO TRACK INFECTIOUS DISEASES PATHOGENS IN THE AGADIR REGION OF MOROCCO

Ahmed Belmouden<sup>1</sup>, Maryem Wardi<sup>1</sup>, Mohamed Aghrouh<sup>1</sup>, Fatima Boubrik<sup>1</sup>, Abdellah Lotfy<sup>2</sup>, Zohra Lemkhente<sup>1</sup>  
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5163

### THE VIRTUAL BIORESPOSITORY SYSTEM FOR OPEN ACCESS TO SAMPLES: THE ONLINE DELPHI PRIORITIZATION OUTCOME

Amy Price<sup>1</sup>, Layla Abdulbaki<sup>2</sup>, Judith Giri<sup>3</sup>, Julia Poje<sup>3</sup>, Geoffrey Winstanley<sup>3</sup>, Zoe Steinberg<sup>3</sup>, Thomas Jaenisch<sup>3</sup>, May C. Chu<sup>3</sup>  
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5164

### THE VIROME OF PHLEBOTOMINE SAND FLIES FROM SELECT REGIONS OF KENYA

Jane W. Thiiru<sup>1</sup>, Solomon K. Langat<sup>2</sup>, Stephanie Cinkovich<sup>3</sup>, Santos Yalwala<sup>4</sup>, Sameel Khamadi<sup>2</sup>, Jaree Johnson<sup>5</sup>, Justus Onguso<sup>1</sup>, Eric Gargues<sup>4</sup>, Elly Ojwang<sup>4</sup>, Fredrick Eyase<sup>4</sup>  
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## Arthropods/Entomology - Other

5165

### SYSTEMATIC REVIEW ON TICKS AND TICK-BORNE DISEASES IN ASIA AND AUSTRALIA

Nora G. Cleary<sup>1</sup>, Joanna Pacori<sup>1</sup>, Michael E. von Fricken<sup>1</sup>, David Pecor<sup>2</sup>, Alex Potter<sup>2</sup>, Yvonne-Marie Linton<sup>2</sup>, Cynthia Tucker<sup>2</sup>  
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5166

### MITE-TRANSMITTED INFECTIOUS DISEASES: WIDELY DISTRIBUTED AND NEGLECTED

James Henry Diaz  
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5167

### POPULATIONS STRUCTURE ANALYSIS OF P. PAPTASI POPULATIONS USING TRANSCRIPTOMICROSATELLITES: POSSIBLE IMPLICATIONS ON GENE EXPRESSION

Omar Hamarshah<sup>1</sup>, Mary Ann McDowell<sup>2</sup>  
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5168

### RELATIONSHIP BETWEEN ENVIRONMENTAL FACTORS AND PHYSICO-CHEMICAL PARAMETERS IN THE DISTRIBUTION AND DENSITY OF MOLLUSC INTERMEDIATE HOSTS OF SCHISTOSOMIASIS IN SENEGAL

Cheikh Binetou Fall, Sylla Khadime, Souleye Lelo, Isaac Manga, Roger Tine, Magatte Ndiaye, Doudou Sow, Babacar Faye  
 University Cheikh Anta Diop, Dakar, Senegal

5169

### FIRST RECORD OF MOSQUITO BORNE SINDBIS VIRUS <GENOTYPE I> IN BURKINA FASO, WEST AFRICA

Patindé Didier Alexandre Kabore<sup>1</sup>, Patricia Gil<sup>2</sup>, Philippe Van de Perre<sup>3</sup>, Thierry Baldet<sup>2</sup>, Serafin Gutiérrez<sup>2</sup>, Roch K. Dabiré<sup>1</sup>  
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5170

### CHANGING EPIDEMIOLOGICAL PATTERN OF VISCERAL LEISHMANIASIS IN NEPAL

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5171

### BEHAVIORAL INTERACTIONS OF BED BUGS WITH LONG-LASTING PYRETHROID-TREATED BED NETS: CHALLENGES FOR VECTOR CONTROL

Christopher Hayes, Coby Schal  
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5172

### ISOLATION OF MICROSATELLITE LOCI FROM THE GENOME OF PHLEBOTOMUS ARGENTIPES, THE MAJOR VECTOR OF LEISHMANIASIS IN SRI LANKA: A PRELIMINARY STUDY

Sanduni D. Gunarathne<sup>1</sup>, Nissanka K. De Silva<sup>2</sup>, Nadira D. Karunaweera<sup>1</sup>  
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(ACMCIP Abstract)

5173

### SPECIES COMPOSITION, ACARICIDE RESISTANCE IN AMBLYOMMA VARIEGATUM TICK SPECIES AND KNOWLEDGE, ATTITUDE, AND PRACTICES OF LIVESTOCK OWNERS IN DIFFERENT ECOLOGICAL ZONES OF GHANA

Jane Ansah-Owusu<sup>1</sup>, Christopher Tawiah-Mensah<sup>1</sup>, Seth Offei Addo<sup>1</sup>, John Arko-Mensah<sup>2</sup>, Jewelna Akorli<sup>1</sup>, Samuel Dadzie<sup>1</sup>  
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5174

### PHLEBOTOMINE SANDFLY SPECIES FROM OLD AND NEW LEISHMANIASIS FOCI OF COLOMBIA

Eduar E. Bejarano<sup>1</sup>, Suljey Cochero<sup>1</sup>, Matilde Rivero<sup>1</sup>, Dina Guevara<sup>1</sup>, Melissa Cárdenas<sup>1</sup>, Elis Contreras<sup>1</sup>, Aura Anaya<sup>1</sup>, Luis Urango<sup>2</sup>, Maria F. Yasnot<sup>2</sup>, Liris Yepes<sup>3</sup>, Doris Gómez<sup>3</sup>, Luis E. Paternina<sup>1</sup>  
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5175

### NATION-WIDE VECTOR SURVEILLANCE OF CHAGAS DISEASE IN EL SALVADOR, 2018-2020

Yuko Nitahara<sup>1</sup>, Marvin Stanley Rodríguez<sup>2</sup>, Yu Nakagama<sup>1</sup>, Katherine Candray<sup>1</sup>, Junko Nakajima-Shimada<sup>3</sup>, Carmen Elena Arias<sup>4</sup>, Yasutoshi Kido<sup>1</sup>  
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## Mosquitoes - Biology and Genetics of Insecticide Resistance

5176

### EVOLUTION OF INSECTICIDE RESISTANCE OF AN. GAMBIAE SENSU LATO AND AN. FUNESTUS SENSU LATO IN WESTERN KENYA FROM THE YEARS OF 2019-2022

**Elizabeth Ayoma**<sup>1</sup>, Celestine Wekesa<sup>1</sup>, Benjamin Otieno<sup>1</sup>, Amos Webale<sup>1</sup>, Alphonse Owino<sup>1</sup>, Edward Esalimba<sup>1</sup>, Daisy Abongo<sup>1</sup>, Solomon Karoki<sup>2</sup>, Ismail Abbey<sup>2</sup>, Lenson Kariuki<sup>2</sup>, Charles Chege<sup>2</sup>, John E. Gimnig<sup>3</sup>, Daniel Wacira<sup>4</sup>, Mildred Shieshia<sup>4</sup>, Charity Ngaruro<sup>5</sup>, Rodaly Muthoni<sup>1</sup>, Matthew Kirby<sup>5</sup>, Evelyn Olang<sup>1</sup>, Sheila B. Ogoma<sup>5</sup>  
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5177

### PHENOTYPIC AND MOLECULAR ASSAYS CONFIRM PUTATIVE PYRETHROID RESISTANCE IN ANOPHELES ALBIMANUS IN MALARIA ELIMINATION SETTINGS IN HONDURAS

**Denis Escobar**<sup>1</sup>, Osman Archaga<sup>1</sup>, Oscar Urrutia<sup>2</sup>, Rosa Elena Mejía<sup>3</sup>, Lucrecia Vizcaino<sup>4</sup>, Audrey Lenhart<sup>4</sup>, Gustavo Fontecha<sup>1</sup>  
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5178

### THE GENOMICS BEHIND INSECTICIDE RESISTANCE IN ANOPHELES MOSQUITOES FROM THE BIJAGÓS ARCHIPELAGO

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5179

### PROFILING OF INSECTICIDE RESISTANCE, MICROBIOME AND PATHOGEN PREVALENCE IN Aedes Aegypti IN PUERTO RICO

**Emma Louise Collins**<sup>1</sup>, Joanelis Medina Quintana<sup>2</sup>, Luis Marrero Ortiz<sup>2</sup>, Julieanne Miranda-Bermúdez<sup>2</sup>, Taane Clarke<sup>1</sup>, Grayson Brown<sup>2</sup>, Susana Campino<sup>1</sup>  
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5180

### EVALUATION OF THE SUSCEPTIBILITY OF ANOPHELES FUNESTUS POPULATIONS IN THE CENTRE, CENTRE-WEST AND SOUTH-WEST REGIONS OF BURKINA FASO

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5181

### MONITORING INSECTICIDE RESISTANCE STATUS OF Aedes Aegypti & Aedes albopictus POPULATIONS IN FIVE LOCAL GOVERNMENT AREAS IN LAGOS STATE, NIGERIA

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5182

### INSECTICIDE RESISTANCE SPECTRUM AND PREVALENCE OF L1014F KDR TYPE MUTATION IN ANOPHELES GAMBIAE S.L. [DIPTERA: CULICIDAE, GILES 1902] IN ABIA STATE, NIGERIA

**Chukwuebuka Mathias Ekedo**<sup>1</sup>, Onyinye M. Ukpai<sup>1</sup>, Collins N. Ehisianya<sup>1</sup>, Udoka C. Nwangwu<sup>2</sup>, Tolulope A. Oyeniyi<sup>3</sup>, Adedapo O. Adeogun<sup>3</sup>  
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5183

### EPITHELIAL NITRATION RESPONSE TO PLASMODIUM FALCIPARUM IN INSECTICIDE RESISTANT ANOPHELES COLUZZII MOSQUITOES

**Patrick Hoerner**<sup>1</sup>, Moritz Ebeling<sup>2</sup>, Julia Maeurer<sup>1</sup>, Victoria Ingham<sup>1</sup>  
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(ACMCIP Abstract)

5184

### BREEDING WATER EFFECT ON ANOPHELES GAMBIAE SENSU LATO INSECTICIDE SUSCEPTIBILITY DURING LABORATORY COLONIZATION

**Ibrahim Kwaku Gyimah**, Jewelna Akorli, Godwin Kwame Amlalo, Rebecca Pwalia, Samuel Sowah Akporh, Aaron Lartey, Dominic Acquah-Baidoo, Ali Alhassan, Joannitta Joannides, Samuel Darkwa, Godwin Koffa, Akua Danquah, Samuel Kweku Dadzie  
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5185

### NATIONWIDE ASSESSMENT OF MALARIA VECTOR SUSCEPTIBILITY TO CHLORFENAPYR, PYRIPROXYFEN, AND ALPHA-CYPERMETHRIN IN PREPARATION FOR WIDESCALE DEPLOYMENT OF NEW GENERATION NETS (INTERCEPTOR® G2 AND ROYAL GUARD®) IN BENIN

**Rock Aikpon**<sup>1</sup>, Razak Ossè<sup>2</sup>, Gil Padonou<sup>2</sup>, cyriaque affoukou<sup>1</sup>, Virgile Gnaguenon<sup>3</sup>, Patrick Condo<sup>3</sup>, Ahmed Saadani Hassani<sup>3</sup>, Daniel Impoinvil<sup>4</sup>, Martin Akogbéto<sup>2</sup>  
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5186

### ANOPHELES GAMBIAE S.L. KNOCKDOWN RESISTANT MUTANT ALLELES AND SUSCEPTIBILITY TO INSECTICIDES IN 3 SENTINEL SITES OF ZIMBABWE

Brenda B. Makonyere<sup>1</sup>, Trust Nyakun<sup>1</sup>, Tariro P. Chikava<sup>1</sup>, Natasha Mbwana<sup>1</sup>, Lissa Muropa<sup>1</sup>, Petros Kawadza<sup>1</sup>, Funel Toto<sup>1</sup>, Trish Mharakurwa<sup>1</sup>, Waraidzo Mvumi<sup>1</sup>, Wietske Mushonga<sup>1</sup>, Isaac Chikono<sup>2</sup>, Liberty Mutasa<sup>2</sup>, Tanatswa X. Gara<sup>1</sup>, Charmaine R. Matimba<sup>1</sup>, Aramu A. Makuwaza<sup>1</sup>, Hieronymo Masendu<sup>2</sup>, Nobert N. Mudare<sup>1</sup>, Sungano I. Mharakurwa<sup>1</sup>

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5187

### IDENTIFICATION AND INSECTICIDE RESISTANCE PROFILE OF ANOPHELES AZEVEDOI (RIBEIRO, 1969) IN LUANDA PROVINCE, ANGOLA: IMPLICATIONS FOR VECTOR CONTROL

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5188

### MONITORING PYRETHROID RESISTANCE INTENSITY IN POPULATIONS OF ANOPHELES GAMBIAE S.L. ACROSS FIVE ECOLOGICAL ZONES IN NIGERIA AND THE IMPLICATIONS FOR VECTOR CONTROL DECISIONS

Petrus Uchenna Inyama<sup>1</sup>, Adedayo O. Oduola<sup>1</sup>, Lazarus M. Samdi<sup>1</sup>, Joseph I. Okeke<sup>1</sup>, Perpetua Uhomobhi<sup>2</sup>, Adedapo Adeogun<sup>3</sup>, Okefu O. Oyale<sup>2</sup>, Asuquo A. Inyang<sup>4</sup>, Muhammad A. Bunza<sup>5</sup>, Muawiyya U. Ladan<sup>6</sup>, Jesse C. Uneke<sup>7</sup>, Kehinde O. Popoola<sup>8</sup>, Georgina S. Mwansat<sup>9</sup>, Ambrose A. Alaribe<sup>10</sup>, Kelley Ambrose<sup>11</sup>, Jules Jules Mihigo<sup>12</sup>, John Rogers<sup>13</sup>, Melissa Yoshimizu<sup>14</sup>, Aklilu Seyoum<sup>11</sup>

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## Mosquitoes - Bionomics, Behavior and Surveillance

5189

### HIGH ENTOMOLOGICAL INOCULATION RATE OF AN. COUSTANI IN THE MALARIA ELIMINATION SETTINGS OF DEMBIYA DISTRICT, NORTH-WESTERN ETHIOPIA

Mihretu Tarekegn Nigatu  
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5190

### NATURAL INFECTION OF NY. DARLINGI AND NY. BENARROCHI B WITH PLASMODIUM DURING THE DRY SEASON IN THE UNDERSTUDIED LOW TRANSMISSION SETTING OF DATEM DEL MARAÑON PROVINCE, AMAZONIAN PERU

Jan E. Conn<sup>1</sup>, Sara A. Bickersmith<sup>1</sup>, Marlon P. Saavedra<sup>2</sup>, Juliana A. Morales<sup>3</sup>, Freddy Alava<sup>4</sup>, Gloria A. Rodriguez<sup>5</sup>, Clara R. del Aguila Morante<sup>6</sup>, Carlos G. Tong<sup>1</sup>, Carlos Alvarez-Antonio<sup>7</sup>, Jesus M. Daza Huanahui<sup>7</sup>, Joseph M. Vinetz<sup>8</sup>, Dionicia Gamboa<sup>9</sup>  
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5191

### HOUSES IMPROVING AS A SUPPLEMENTAL INTERVENTION TOOLS FOR REDUCING INDOOR VECTOR DENSITIES AND MALARIA PREVALENCE IN EMANA, CENTER CAMEROON

Yacouba Poumachu<sup>1</sup>, Joko Tamoufe<sup>1</sup>, Kouamendjougou Djilla<sup>1</sup>, Viviane Ongbassonbem<sup>2</sup>, Awono A. Parfait<sup>1</sup>, Timoleon O. Tchuinkam<sup>3</sup>, Amelia I. Ficham<sup>4</sup>, Ella I. Green<sup>4</sup>, Tamar I. Ghosh<sup>4</sup>, Cyrille Ndo<sup>2</sup>

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5192

### SPATIO-TEMPORAL DISTRIBUTION OF AEDES SPECIES (DIPTERA: CULICIDAE) IN FOUR LOCAL GOVERNMENT AREAS IN LAGOS STATE, NIGERIA

Hala S. Thabet<sup>1</sup>, Reham A. TagEldin<sup>1</sup>, Samuel O. Babalola<sup>2</sup>, Oyeniyi Tolulope<sup>2</sup>, Olanrewaju Adekunle<sup>2</sup>, Oluwakemi Adetunji<sup>2</sup>, Romoke Izeke<sup>2</sup>, Olagundoye Olalekan<sup>2</sup>, Ahmed Omotayo<sup>2</sup>, Olakiigbe Abiodun<sup>2</sup>, Taye Adekeye<sup>2</sup>, Chidinma Isaac<sup>2</sup>, Phillip O. Oyale<sup>3</sup>, Adedapo O. Adeogun<sup>2</sup>, James F. Harwood<sup>1</sup>

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5193

### RESIDUAL MALARIA TRANSMISSION AND THE ROLE OF ANOPHELES ARABIENSIS AND ANOPHELES MELAS IN CENTRAL SENEGAL

Ousmane SY<sup>1</sup>, Pape C. Sarr<sup>1</sup>, Benoit S. Assogba<sup>2</sup>, Mouhamed A. Nouridine<sup>1</sup>, Assane Ndiaye<sup>3</sup>, Lassana Konaté<sup>3</sup>, Martin J. Donnelly<sup>4</sup>, Ousmane Faye<sup>2</sup>, David Weatman<sup>4</sup>, Elhadji Amadou Niang<sup>3</sup>

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5194

### TOWARDS ENVIRONMENTAL SURVEILLANCE OF THE INVASIVE VECTOR SPECIES ANOPHELES STEPHENSI IN SUB-SAHARAN AFRICA

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5195

**DIFFERENTIAL RISK OF EXPOSURE TO AN. GAMBIAE S.L. AND AN. FUNESTUS S.L. BITING ESTIMATED FROM HUMAN BEHAVIOR OBSERVATION ADJUSTED ANALYSIS IN MALAWI**

**Leonard Dandolo<sup>1</sup>**, Yemane Yihdego<sup>2</sup>, Fred Sande<sup>3</sup>, Charlotte Banda<sup>3</sup>, Ganizani Kapito<sup>3</sup>, Medson Kamwana<sup>3</sup>, Lusungu Chamdimba<sup>3</sup>, Luckson Sichone<sup>3</sup>, Martin Chiumia<sup>3</sup>, Abdoulaye Bangoura<sup>1</sup>, Jules Nahimana<sup>1</sup>, Miriam Williams<sup>2</sup>, Pius Masache<sup>4</sup>, Lilia Gerberg<sup>5</sup>, Jenny Donnelly<sup>5</sup>, Themba Mzilahowa<sup>3</sup>  
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5196

**ENTOMOLOGICAL AND MOLECULAR SURVEILLANCE OF MALARIA VECTORS IN A RURAL COMMUNITY IN BENGUELA, ANGOLA: IMPLICATIONS FOR LONG-LASTING INSECTICIDE TREATED NET (LLIN) DISTRIBUTION AND VECTOR CONTROL STRATEGIES**

**Arlete Dina Troco<sup>1</sup>**, Gonçalo Alves<sup>1</sup>, Gonçalo Seixas<sup>2</sup>, Cani Pedro Jorge<sup>3</sup>, José Franco Martins<sup>3</sup>, Alfredo Francisco<sup>4</sup>, Carla Sousa<sup>2</sup>, Teresa Nobrega<sup>1</sup>, Sérgio Lopes<sup>1</sup>  
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5197

**COMPOSITION AND SEASONALITY OF ANOPHELES GAMBIAE S.L. AND ANOPHELES FUNESTUS S.L. IN LIBERIA**

**Ibrahima Baber<sup>1</sup>**, Yemane Yihdego<sup>2</sup>, Chrispin Williams<sup>3</sup>, Odell Kumeh<sup>3</sup>, Tuwuyor Belleh<sup>4</sup>, Georges Gweh<sup>3</sup>, Agnes Nador<sup>3</sup>, Uwem Inyang<sup>5</sup>, Melissa Yoshimizu<sup>6</sup>  
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5198

**THE IMPACT OF FOUR YEARS OF INDOOR RESIDUAL SPRAYING WITH PIRIMIPHOS METHYL AND CLOTHIANIDIN ON ENTOMOLOGICAL DRIVERS OF MALARIA TRANSMISSION IN BURKINA FASO, WEST AFRICA**

**Dieudonné Diloma Soma<sup>1</sup>**, Aristide S. Hien<sup>2</sup>, Adama Koné<sup>3</sup>, Birame Mame Diouf<sup>4</sup>, Sheila Barasa Ogoma<sup>5</sup>, Allison Belemvire<sup>6</sup>, Djenam Jacob<sup>5</sup>, Samson Taiwo Awolola<sup>7</sup>, Roch Kounbobr Dabiré<sup>2</sup>  
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5199

**CIRCUMSPOROZOITE POSITIVE ANOPHELES LONGIPALPIS C MOSQUITO IDENTIFIED IN ZIMBABWE**

**Charmaine C. Matimba<sup>1</sup>**, Nobert Mudare<sup>1</sup>, Tanatswa X. Gara<sup>1</sup>, Brenda Makonyere<sup>1</sup>, Trust Nyakunu<sup>1</sup>, Aramu Makuwaza<sup>1</sup>, David Nyasvisvo<sup>2</sup>, Hieronymo Masendu<sup>2</sup>, Sungano Mharakurwa<sup>1</sup>, Cristina Rafferty<sup>3</sup>, Adeline Chan<sup>4</sup>  
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(ACMCIP Abstract)

5200

**RESURGENCE OF MALARIA IN UGANDA COINCIDES WITH AN INCREASE IN ABUNDANCE OF ANOPHELES FUNESTUS WITH EVIDENCE OF VARIATION IN SUSCEPTIBILITY TO CLOTHIANIDIN**

**Ambrose Oruni<sup>1</sup>**, Jackson Asiimwe<sup>1</sup>, Daniel Ayo<sup>1</sup>, Kyle J. Walker<sup>2</sup>, Hanafy M. Ismail<sup>2</sup>, Mark J I Paine<sup>2</sup>, Henry D. Mawejje<sup>1</sup>, Melissa D. Conrad<sup>3</sup>, Paul Krezanoski<sup>3</sup>, Emmanuel Arinaitwe<sup>1</sup>, Jonathan Kayondo<sup>4</sup>, Charles S. Wondji<sup>5</sup>, Sarah G. Staedke<sup>2</sup>, Teun Bousema<sup>6</sup>, Moses R. Kanya<sup>1</sup>, Grant Dorsey<sup>3</sup>, Martin J. Donnelly<sup>2</sup>  
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5201

**IMPACT OF ENVIRONMENTAL MODIFICATION ON THE DYNAMICS, BEHAVIOR, TRANSMISSION RISK AND INSECTICIDE RESISTANCE OF MALARIA VECTORS: THE CASE OF ARJODIDESSA SUGARCANE IRRIGATION SCHEME, SOUTHWESTERN ETHIOPIA**

**Assalif Demissew<sup>1</sup>**, Abebe Animut<sup>2</sup>, Solomon Kibret<sup>3</sup>, Dawit Hawaria<sup>4</sup>, Arega Tsegaye<sup>5</sup>, Teshome Degefa<sup>5</sup>, Hallelujah Getachew<sup>6</sup>, Ming-Chieh Lee<sup>3</sup>, Guiyun Yan<sup>3</sup>, Delenasaw Yewhalaw<sup>5</sup>  
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5202

**DISTRIBUTION OF ANOPHELES MOSQUITOES AND THEIR ROLE IN MALARIA TRANSMISSION IN SOUTHWESTERN ETHIOPIA**

**Nigatu Eligo<sup>1</sup>**, Teklu Wegayehu<sup>1</sup>, Myrthe Pareyn<sup>2</sup>, Girum Tamiru<sup>1</sup>, Bernt Lindtjorn<sup>3</sup>, Fekadu Massebo<sup>1</sup>  
<sup>1</sup>Arba Minch University, Arba Minch, Ethiopia, <sup>2</sup>Institute of Tropical Medicine, Antwerp, Belgium, <sup>3</sup>University of Bergen, Bergen, Norway

5203

**UPDATED ASSESSMENT OF ANOPHELES STEPHENSI PRESENCE IN SOUTHERN YEMEN**

**Alia Zayed<sup>1</sup>**, Yasser Baheshm<sup>2</sup>, James F. Harwood<sup>3</sup>  
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5204

**CHANGES IN THE BITING BEHAVIOR OF ANOPHELES GAMBIAE S.L. FOLLOWING THE COMBINATION OF MASS-DISTRIBUTION CAMPAIGNS OF INSECTICIDE-TREATED NETS AND INDOOR RESIDUAL SPRAYING OVER FIVE YEARS IN KIREMBA, NORTHERN BURUNDI**

**Denis Sinzinkayo<sup>1</sup>**, Pierre Sinarinzi<sup>2</sup>, Landrine Mugisha<sup>2</sup>, Théogène Ndayishimiye<sup>2</sup>, Darius Habarugira<sup>3</sup>, Louise Mahan<sup>3</sup>, Jenny Carlson<sup>4</sup>, Aklilu Seyoum<sup>5</sup>  
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5205

**SURVEILLANCE OF AEDES-BORNE ARBOVIRUSES IN SELECTED SITES IN THE SAVANNA REGION OF GHANA**

**Mavis Koryo Ofei<sup>1</sup>**, Mufeez Abudu<sup>1</sup>, Helena A. Boakye<sup>1</sup>, Jane Ansah-Owusu<sup>1</sup>, Aaron A. Lartey<sup>1</sup>, Paul K. Botwe<sup>2</sup>, Joseph H.N Osei<sup>1</sup>, Seth O. Addo<sup>1</sup>, Joseph K. Bonney<sup>1</sup>, Jewelna Akorli<sup>1</sup>, Samuel K. Dadzie<sup>1</sup>  
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Thursday  
October 19

**5206****PILOTING THE USE OF TRANSLUTHRIN-TREATED EAVE RIBBONS AS A SUPPORTING VECTOR CONTROL TOOL IN A HIGH TRANSMISSION SETTING IN ZAMBIA****Mary E. Gebhardt<sup>1</sup>**, Mbanga Muleba<sup>2</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***5207****TREATED EAVE SCREENS IN COMBINATION WITH SCREENED DOORS AND WINDOWS, ARE MORE EFFECTIVE THAN UNTREATED EAVE SCREENS IN A SIMILAR COMBINATION IN REDUCING INDOOR AND OUTDOOR ANOPHELES POPULATIONS UNDER SEMI-FILED CONDITIONS IN WESTERN KENYA****Bernard Onyango Abong'o<sup>1</sup>**, Silas O. Agumba<sup>1</sup>, Vincent O. Moshi<sup>1</sup>, Jacob Simwero<sup>2</sup>, Jane Otima<sup>2</sup>, Eric O. Ochomo<sup>1</sup><sup>1</sup>*KEMRI - KENYA, Kisumu, Kenya*, <sup>2</sup>*Habitat For Humanity International, Nairobi, Kenya***5208****IMPACT OF LIVESTOCK MANAGEMENT ON MALARIA TRANSMISSION RISKS IN RURAL TANZANIA****Yohana A. Mwalugelo<sup>1</sup>**, Godfrey C. Katusi<sup>1</sup>, Alfred O. Ochieng<sup>2</sup>, Fred A. Amimo<sup>2</sup>, Emmanuel W. Kaindoa<sup>1</sup><sup>1</sup>*Ifakara Health Institute, Ifakara, United Republic of Tanzania*, <sup>2</sup>*Jaramogi Oginga Odinga University of Science and Technology, Bondo, Kenya*

## Mosquitoes - Epidemiology and Vector Control

**5209****WOLBACHIA-INFECTED Aedes Aegypti TO CONTROL DENGUE IN DHAKA, BANGLADESH****Hasan Mohammad Al-Amin<sup>1</sup>**, Leon E. Hugo<sup>1</sup>, Gordana Rašić<sup>1</sup>, Nigel W. Beebe<sup>2</sup>, Gregor J. Devine<sup>3</sup><sup>1</sup>*QIMR Berghofer Medical Research Institute, Brisbane, Australia*, <sup>2</sup>*University of Queensland, Brisbane, Australia*, <sup>3</sup>*QIMR Berghofer, Brisbane, Australia***5210****3D-SCREENS FOR SUSTAINABLE MALARIA CONTROL: OUTCOMES OF PHASE II SEMI-FIELD EVALUATION AND STUDY DESIGN OF A LARGE-SCALE PHASE III EVALUATION IN NORTHEASTERN TANZANIA****Subam Kathet<sup>1</sup>**, Wema Sudi<sup>2</sup>, Victor Mwingira<sup>2</sup>, Patrick Tungu<sup>2</sup>, Frank Magogo<sup>2</sup>, Robert Malima<sup>2</sup>, Mikko Aalto<sup>3</sup>, Tomi Hakala<sup>4</sup>, Marku Honkala<sup>4</sup>, William Kisinza<sup>2</sup>, Seppo Meri<sup>1</sup>, Ayman Khattab<sup>1</sup><sup>1</sup>*Translational Immunology Research Program Unit and Department of Bacteriology and Immunology, University of Helsinki, Helsinki, Finland*, <sup>2</sup>*National Institute for Medical Research, Amani Medical Research Centre, Muheza, United Republic of Tanzania*, <sup>3</sup>*Bosaso General Hospital, Bosaso, Somalia*, <sup>4</sup>*Department of Materials Science, Tampere University of Technology, Tampere, Finland***5211****EVIDENCE OF TRANSMISSION OF PLASMODIUM VIVAX 210 AND PLASMODIUM VIVAX 247 BY ANOPHELES GAMBIAE AND AN. COLUZZII MAJOR MALARIA VECTORS IN BENIN****Aboubakar Sidick<sup>1</sup>**, Razaki Osse, Filemon T. Tokponnon, Gil Germain Padonou, Zinsou Come Koukpo, Bruno Akinro, Martin Akogbeto*Centre de Recherche Entomologique de Cotonou, Cotonou, Benin***(ACMCIP Abstract)****5212****MOSQUITOCIDAL ACTIVITY OF IVERMECTIN-TREATED NETTINGS AND SPRAYED WALLS ON ANOPHELES GAMBIAE****Majidah Hamid-Adiamoh<sup>1</sup>**, Abdul Khalie Muhammed<sup>2</sup>, Benoit Sessinou Assogba<sup>3</sup>, Harouna Massire Soumare<sup>3</sup>, Lamin Jadama<sup>3</sup>, Moussa Diallo<sup>3</sup>, Mamadou Ousmane Ndiath<sup>3</sup>, Umberto D'Alessandro<sup>3</sup>, Alfred Amambua-Ngwira<sup>3</sup>, Annette Erhart<sup>3</sup><sup>1</sup>*Indiana University school of Medicine, South bend, IN, United States*, <sup>2</sup>*Medical Research Council Unit The Gambia at the London School of Hygiene & Tropical Medicine, Banjul, Gambia*, <sup>3</sup>*Medical Research Council Unit The Gambia at the London School of Hygiene & Tropical Medicine, Banjul, Gambia***5213****IN SILICO ANALYSIS AND DESIGN OF A MOLECULAR CONSTRUCT TO TARGET THE BETA TUBULIN2 GENE IN ANOPHELES GAMBIAE****Odette Nabasongo Zongo<sup>1</sup>**, Roberto Galizi<sup>2</sup>, Tony Nolan<sup>3</sup>, Abdoulaye Diabate<sup>1</sup><sup>1</sup>*Institut de Recherche en Science de la Santé, Bobo-Dioulasso, Burkina Faso*, <sup>2</sup>*Keel University, UK, United Kingdom*, <sup>3</sup>*Liverpool School of tropical medicine (LSTM), UK, United Kingdom***(ACMCIP Abstract)****5214****IDENTIFICATION OF ODORANT CO-RECEPTOR GENE IN ANOPHELES GAMBIAE AND IN SILICO DESIGN OF STRATEGIES TO STUDY ITS FUNCTION IN A VECTOR CONTROL PERSPECTIVE****Grégoire Sawadogo<sup>1</sup>**, Andrew Hammond<sup>2</sup>, Tony Nolan<sup>3</sup>, Abdoulaye Diabate<sup>1</sup><sup>1</sup>*Institut de Recherche en Sciences de la Santé (IRSS), Bobo-Dioulasso, Burkina Faso*, <sup>2</sup>*Imperial College London, London, United Kingdom*, <sup>3</sup>*Liverpool School of Tropical Medicine, Liverpool, United Kingdom***5215****MARK RELEASE CAPTURE EXPERIMENT IN BURKINA FASO DEMONSTRATES REDUCED FITNESS AND DISPERSAL OF GENETICALLY-MODIFIED STERILE MALARIA MOSQUITOES****Adama Franck Yao<sup>1</sup>**, Abdoul-Azize Millogo<sup>1</sup>, Patric Stephane Epopa<sup>1</sup>, Ace North<sup>2</sup>, Florian Noulain<sup>3</sup>, Koulmaga Dao<sup>1</sup>, Mouhamed Drabo<sup>4</sup>, Charles Guissou<sup>1</sup>, Souleymane Kekele<sup>1</sup>, Moussa Namountougou<sup>1</sup>, Robert Kossivi Ouedraogo<sup>1</sup>, Lea Pare<sup>1</sup>, Nourou Barry<sup>1</sup>, Roger Sanou<sup>1</sup>, Haida Wandaogo<sup>1</sup>, Roch K. Dabire<sup>1</sup>, Andrew McKemey<sup>5</sup>, Frederic Tripet<sup>3</sup>, Abdoulaye Diabate<sup>1</sup><sup>1</sup>*IRSS/DRQ, Bobo Dioulasso, Burkina Faso*, <sup>2</sup>*Department of Zoology, University of Oxford, United Kingdom*, <sup>3</sup>*Centre for Applied Entomology and Parasitology, School of Life Sciences, Keele University, Staffordshire, United Kingdom*, <sup>4</sup>*Department of Life Sciences, Imperial College London, London, United Kingdom*, <sup>5</sup>*Department of Life Sciences, Imperial College London, London, United Kingdom***5216****DENGUE VECTOR HABITAT CREATION IN PUBLIC PLACES: AN UNINTENDED CONSEQUENCE OF THE INSTALLATION OF PUBLIC HANDWASHING STATIONS FOR COVID-19 PREVENTION IN OUAGADOUGOU, BURKINA FASO 2020****Wendegoudi Mathias Oueraogo<sup>1</sup>**, Nicolas Zanre<sup>1</sup>, Sylvie Fasine<sup>2</sup>, Julien B.Z. Zahouli<sup>3</sup>, Luc S. Djogbenou<sup>4</sup>, Antoine Sanon<sup>1</sup>, Mafalda Viana<sup>5</sup>, Hirotaka Kanuka<sup>6</sup>, David Weetman<sup>7</sup>, Philip J. McCall<sup>8</sup>, Athanasie Badolo<sup>1</sup><sup>1</sup>*University Joseph Ki-Zerbo, Ouaga, Burkina Faso*, <sup>2</sup>*INRB, Kinshasha, Democratic Republic of the Congo*, <sup>3</sup>*Institut Suisse de Recherche Scientifique, Abidjan, Cote d'Ivoire, Abidjan, Côte D'Ivoire*, <sup>4</sup>*Tropical Infectious Diseases Research Centre (TIDRC), University of Abomey-Calavi, 01BP 526 Cotonou, Cotonou, Benin*, <sup>5</sup>*School of Biodiversity, One Health and Veterinary Medicine, University of Glasgow, UK, Glasgow, United Kingdom*, <sup>6</sup>*Department of Tropical Medicine, The Jikei University School of Medicine, Tokyo, Japan, Tokyo, Japan*, <sup>7</sup>*Department of Vector Biology, Liverpool School of Tropical Medicine, Liverpool, UK, Liverpool, United Kingdom*, <sup>8</sup>*Department of Vector Biology, Liverpool School of Tropical Medicine, Liverpool, UK, Liverpool, United Kingdom*



## 5217

**RETHINKING ITN DISTRIBUTION: A REVIEW OF CURRENT DISTRIBUTIONS SYSTEMS, COSTINGS AND CHALLENGES**Jane E. Miller<sup>1</sup>, Hannah Koenker<sup>2</sup>, Josh Yukich<sup>3</sup>, Keith C. Esch<sup>1</sup>, Lilia Gerberg<sup>4</sup>, Keziah L. Malm<sup>5</sup><sup>1</sup>PSI, Washington, DC, United States, <sup>2</sup>Tropical Health, Baltimore, MD, United States, <sup>3</sup>Tulane University, New Orleans, LA, United States, <sup>4</sup>President's Malaria Initiative, USAID, Washington, DC, USA, Washington, DC, United States, <sup>5</sup>NMEP, Accra, Ghana

## 5218

**ASSESSING INSECTICIDE RESISTANCE IN TWO MALE-BIASED ANOPHELES GAMBIAE S.L. TRANSGENIC STRAINS**Mark Q. Benedict<sup>1</sup>, Katelyn Cavender<sup>1</sup>, Benjamin Lee<sup>1</sup>, Keri O. Harp<sup>1</sup>, John B. Connolly<sup>2</sup>, Priscila Bascunan<sup>1</sup>, Ellen M. Dotson<sup>3</sup><sup>1</sup>CDC Foundation, Atlanta, GA, United States, <sup>2</sup>Department of Life Sciences, Imperial College London, Ascot, United Kingdom, <sup>3</sup>CDC, Atlanta, GA, United States

## 5219

**ASSESSING VECTOR COMPETENCE FOR PLASMODIUM FALCIPARUM AND O'NYONG-NYONG VIRUS IN A MALE-BIASED ANOPHELES COLUZZII TRANSGENIC STRAIN**Keri O. Harp<sup>1</sup>, Vincent Nyasembe<sup>1</sup>, Katelyn Cavender<sup>1</sup>, Claire Schregardus<sup>1</sup>, Benjamin Lee<sup>1</sup>, John B. Connolly<sup>2</sup>, Priscila Bascunan<sup>1</sup>, Ellen M. Dotson<sup>3</sup><sup>1</sup>CDC Foundation, Atlanta, GA, United States, <sup>2</sup>Department of Life Sciences, Imperial College London, Silwood Park, United Kingdom, <sup>3</sup>CDC, Atlanta, GA, United States

## 5220

**MOLECULAR AND BIOINFORMATIC CHARACTERIZATION OF THE INTROGRESSION OF A MALE-BIASED TRANSGENE INTO A UGANDAN LOCAL WILD-TYPE STRAIN**Katelyn Cavender<sup>1</sup>, Keri O. Harp<sup>1</sup>, Benjamin Lee<sup>1</sup>, Priscila Bascunan<sup>1</sup>, Ellen M. Dotson<sup>2</sup><sup>1</sup>CDC Foundation, Atlanta, GA, United States, <sup>2</sup>CDC, Atlanta, GA, United States

## 5221

**MARK, RELEASE AND RECAPTURE EXPERIMENT OF A LABORATORY STRAIN OF ANOPHELES COLUZZII IN TWO VILLAGES IN MALI**Alahaye Mahamane Maiga<sup>1</sup>, Sidy Doumbia<sup>1</sup>, Amadou Guindo<sup>1</sup>, Lakamy Sylla<sup>1</sup>, Mohamed Moumine Traore<sup>1</sup>, Bilkissou Yagoure<sup>1</sup>, Nafomon Sogoba<sup>1</sup>, Frederic Tripet<sup>2</sup>, Mamadou B. Coulibaly<sup>1</sup><sup>1</sup>International Centre for Excellence in Research (ICER-Mali), Bamako, Mali, <sup>2</sup>Centre for Applied Entomology and Parasitology, School of Life Sciences, Keele University, Staffordshire, UK, Bamako, Mali

## 5222

**MOLECULAR STRATEGIES TO DEPLOY SINGLET OXYGEN AS AN UNASSAILABLE BIOCIDES FOR DISEASE PREVENTION AND VECTOR CONTROL**Kwang Poo Chang<sup>1</sup>, Joseph M. Reynolds<sup>1</sup>, Dennis K.P. Ng<sup>2</sup>, Jordy Y.H. Tu<sup>3</sup>, Chia-Kwung Fan<sup>4</sup>, Shin-Hong Shiao<sup>5</sup><sup>1</sup>Chicago Medical School/RFUMS, North Chicago, IL, United States, <sup>2</sup>Department of Chemistry, The Chinese University of Hong Kong, Sha Tin, New Territories, Hong Kong, China, <sup>3</sup>Department of Molecular Parasitology and Tropical Diseases, School of Medicine and Center for International Tropical Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, <sup>4</sup>Department of Molecular Parasitology and Tropical Diseases, School of Medicine and Center for International Tropical Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan, <sup>5</sup>Department of Tropical Medicine and Parasitology National Taiwan University, Taipei, Taiwan

## 5223

**DISCOVERING NATURAL PRODUCT CHEMISTRIES FOR VECTOR CONTROL**Lide Bi<sup>1</sup>, Maria Murgia<sup>1</sup>, Shruti Sharan<sup>1</sup>, Jasleen Kaur<sup>1</sup>, William Austin<sup>1</sup>, Lilly Wu<sup>1</sup>, Lan Chen<sup>1</sup>, Ameya Gondhalekar<sup>1</sup>, Michael Scharf<sup>2</sup>, Catherine Hill<sup>1</sup><sup>1</sup>Purdue University, West Lafayette, IN, United States, <sup>2</sup>University of Florida, Gainesville, FL, United States

## 5224

**IMPACT OF USING DIFFERENT TYPES OF MOSQUITO TRAPS TO ASSESS ENTOMOLOGICAL EFFICACY OF DUAL-ACTIVE INGREDIENT LONG-LASTING INSECTICIDAL NETS (LLINS) IN BENIN**Boulais Yovogan<sup>1</sup>, Arthur Sovi<sup>2</sup>, Constantin Adoha<sup>1</sup>, Bruno Akinro<sup>1</sup>, Manfred Accrombessi<sup>2</sup>, Razaki Ossè<sup>1</sup>, Gil Padonou<sup>1</sup>, Louisa Messenger<sup>3</sup>, Armel Djènontin<sup>1</sup>, Clément Agbangla<sup>4</sup>, Corine Ngufor<sup>2</sup>, Jackie Cook<sup>2</sup>, Natacha Protopopoff<sup>2</sup>, Martin Akogbéto<sup>1</sup><sup>1</sup>Centre de Recherche Entomologique de Cotonou, Cotonou, Benin, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>School of Public Health, University of Nevada, Las Vegas, NV, United States, <sup>4</sup>Faculté des Sciences et Techniques de l'Université d'Abomey-Calavi, Abomey-Calavi, Benin

## 5225

**EFFICACY OF PYRETHROID-PYRIPROXYFEN AND PYRETHROID-CHLORFENAPYR LONG-LASTING IMPREGNATED NETS (LLINS) FOR THE CONTROL OF NON-ANOPHELES MOSQUITOES: SECONDARY ANALYSIS FROM A CLUSTER RANDOMIZED CONTROLLED TRIAL (CRT)**Constantin J. Adoha<sup>1</sup>, Arthur Sovi<sup>2</sup>, Boulais Yovogan<sup>1</sup>, Bruno Akinro<sup>1</sup>, Manfred Accrombessi<sup>2</sup>, Edouard Dangbénon<sup>1</sup>, Gil G. Padonou<sup>1</sup>, Louisa A. Messenger<sup>3</sup>, Clément Agbangla<sup>4</sup>, Corine Ngufor<sup>2</sup>, Jackie Cook<sup>2</sup>, Natacha Protopopoff<sup>2</sup>, Martin C. Akogbéto<sup>1</sup><sup>1</sup>Centre de Recherche Entomologique de Cotonou, Cotonou, Benin, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>University of Nevada, Las Vegas, NV, United States, <sup>4</sup>Université d'Abomey-Calavi, Abomey-Calavi, Benin

## 5226

**EFFICACY OF PIRIKOOL® 300 CS USED FOR INDOOR RESIDUAL SPRAYING ON THREE DIFFERENT SUBSTRATES IN SEMI-FIELD EXPERIMENTAL CONDITIONS**

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## 5227

**MEASUREMENT OF OOCYST AND SPOOROZOITE INFECTION RATES IN AN. GAMBIAE S.L. UNDER NATURAL CONDITIONS IN BANCOUNMANA, MALI**

## 5228

**EVALUATING MOSQUITO BEHAVIOR DURING EXPOSURE TO DIFFERENT INSECTICIDE-TREATED NETS (ITNS) USING VIDEO CONE TEST (VCT)**Aaron Adjin Lartey<sup>1</sup>, Jewelna Efua Birago Akorli<sup>2</sup>, Abigail Serwaa Akoto Bawua<sup>1</sup>, Godwin Kwame Amlalo<sup>2</sup>, Samuel Sowah Akporh<sup>2</sup>, Rebecca Pwalia<sup>2</sup>, Ibrahim Kwaku Gyimah<sup>2</sup>, Samuel Opoku Darkwah<sup>2</sup>, Joannitta Joannides<sup>2</sup>, Dominic Acquah-Baidoo<sup>2</sup>, Akua Obenewaa Yirenskyi Danquah<sup>2</sup>, Eleanore Sternberg<sup>3</sup>, Samuel Kweku Dadzie<sup>2</sup><sup>1</sup>School of Public Health, University of Ghana, Accra, Ghana, <sup>2</sup>Noguchi Memorial Institute for Medical Research, University of Ghana, Accra, Ghana, <sup>3</sup>Tropical Health, Liverpool, United Kingdom

5229

### KEY ENTOMOLOGICAL AND MALARIA INDICATORS DURING THE PERIODS OF INDOOR RESIDUAL SPRAYING WITH PIRIMIPHOS-METHYL AND CLOTHIANIDIN-BASED PRODUCTS IN ZAMBIA

Mohamed Nabie Bayoh<sup>1</sup>, Rebecca Ngwira<sup>1</sup>, Chakulunta Nkweto<sup>1</sup>, Nduka Iwuchukwu<sup>1</sup>, Willy Ngulube<sup>2</sup>, Reuben Zulu<sup>2</sup>, Allison Belemvire<sup>3</sup>, Paul Psychas<sup>4</sup>, Daniel Impoinvil<sup>5</sup>, Sameer Desale<sup>6</sup>, Kelley Ambrose<sup>6</sup>, Aklilu Seyoum<sup>6</sup>

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5230

### MOSQUITO TRAPPING BEDNET (T-NET) FOR INSECTICIDE RESISTANCE MANAGEMENT AND MALARIA CONTROL

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5231

### VALIDATION OF A METHOD FOR DRY PRESERVATION AND REHYDRATION OF AN. GAMBIAE SENSE LATO FOR PARITY ANALYSIS TO ASSESS IMPACT OF VECTOR CONTROL MEASURES IN THE FIELD

Elizabeth Pretorius, Mojca Kristen, John Bradley, James G. Logan, Anna Last, Robert Jones  
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5232

### IN SILICO DESIGN OF MOLECULAR MODEL TO STUDY THE SIFAMIDE GENE FUNCTION IN ANOPHELES GAMBIAE OLFACTORY SYSTEM, IN A PERSPECTIVE OF GENETIC CONTROL OF THE VECTOR

Achaz-Achim Mawugnon Agolinou<sup>1</sup>, Aboulaye Diabaté<sup>1</sup>, Tony Nolan<sup>2</sup>, Andrew Hammond<sup>3</sup>, Roberto Galizi<sup>4</sup>, Diego Giraldo<sup>5</sup>

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(ACMCIP Abstract)

5233

### A SEMI-FIELD EVALUATION OF THE USE OF HUMAN LANDING CATCHES (HLC) VERSUS HUMAN-BAITED DOUBLE NET TRAP (HDN) FOR ASSESSING THE IMPACT OF A VOLATILE PYRETHROID SPATIAL REPELLENT AND PYRETHROID-TREATED CLOTHING ON ANOPHELES MINIMUS LANDING

Elodie Vajda<sup>1</sup>, Manop Saeung<sup>2</sup>, Amanda Ross<sup>3</sup>, David McIver<sup>1</sup>, Allison Tatarsky<sup>1</sup>, Sarah J. Moore<sup>4</sup>, Neil F. Lobo<sup>5</sup>, Theeraphap Chareonviriyaphap<sup>2</sup>

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5234

### FIRST EVIDENCE OF THE PRESENCE OF THE WOLBACHIA AND MICROSPORIDIES MBITA IN NATURAL POPULATIONS OF ANOPHELES GAMBIAE IN SOUTH OF BENIN

Anas Sidick<sup>1</sup>, Juvenal Ahouandjinou<sup>1</sup>, Wilfrid Sewade<sup>1</sup>, Razaki Osse<sup>2</sup>

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5235

### LABORATORY AND SEMI-FIELD EVALUATION OF BIO-EFFICACY AND PHYSICAL INTEGRITY OF OLYSET PLUS AND INTERCEPTOR G2 NETS AFTER 3 YEARS OF FIELD USE IN TANZANIA

Salum Azizi<sup>1</sup>, Njelembo Mbewe<sup>2</sup>, Baltazari Manunda<sup>1</sup>, Amandus Joram<sup>1</sup>, Natacha Prottopopof<sup>2</sup>, Jackline Martin<sup>2</sup>, Franklin Masha<sup>1</sup>, Johnson Matowo<sup>1</sup>  
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5236

### CRYOPRESERVATION AND THE OPTIMIZATION OF THE DEVELOPMENT OF WOLBACHIA IN THE CULEX PIPIENS MOSQUITO CELLS

Bryan King, Cheolho Sim  
Baylor University, Waco, TX, United States

5237

### HOST-FEEDING PREFERENCES AND TEMPERATURE SHAPE THE DYNAMICS OF WEST NILE VIRUS: A MATHEMATICAL MODEL ENDEAVOR

Suman Bhowmick, Dr. Rebecca Lee Smith  
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5238

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

Moussa KEITA, Nafomon SOGOBA, Ibrahim SISSOKO, Alassane dit ASSITOUN, Daouda Ouologuem, Mahamadou DIAKITE, Seydou DOUMBIA  
Malaria Research and Training Center(MRTC), Bamako, Mali

## Ectoparasite-Borne Disease - Babesiosis and Lyme Disease

5239

### PREVALENCE OF BORRELIA BURGDORFERI SENSU LATO-INFECTED IXODES SCAPULARIS TICKS IN THE UNITED STATES AND CANADA: A COMPREHENSIVE REVIEW

Patrick H. Kelly<sup>1</sup>, Ye Tan<sup>2</sup>, Qi Yan<sup>2</sup>, Julie Davis<sup>3</sup>, James H. Stark<sup>4</sup>  
<sup>1</sup>Pfizer, New York City, NY, United States, <sup>2</sup>Pfizer, Collegeville, PA, United States, <sup>3</sup>Clarivate, Cambridge, MA, United States, <sup>4</sup>Pfizer, Cambridge, MA, United States

5240

### THE POSSIBLE MICROBIAL ETIOLOGY OF ALZHEIMER'S DISEASE AND RELATED DEMENTIA

Remi L. Landry, Monica E. Embers  
Tulane University School of Public Health and Tropical Medicine, New Orleans, LA, United States

5241

### EXAMINING THE ROLE OF NYMPHAL IXODES IN THE TRANSMISSION OF B. BURGDORFERI TO DOGS

Amy Schwartz, Angela Toepp, Kurayi Mahachi, Christine Petersen  
University of Iowa, Iowa City, IA, United States

## Ectoparasite-Borne Disease - Other

**5242**

### MULTI-DRUG THERAPY IS REQUIRED TO EFFECTIVELY TREAT BARTONELLA INFECTION IN DIFFERENT ENVIRONMENTS

Emily Olsen, Monica Embers

Tulane National Primate Research Center, COVINGTON, LA, United States

**5243**

### DIVERSITY AND DNA BARCODING OF IXODIDAE AND ARGASIDAE TICKS IN THE US-MEXICO BORDER REGION OF THE MUNICIPALITY OF JUAREZ, CHIHUAHUA

Javier A. Garza-Hernandez<sup>1</sup>, Stephanie V. Laredo-Tiscareño<sup>1</sup>, Jaime R. Adame-Gallegos<sup>2</sup>, Carlos A. Rodríguez-Alarcón<sup>1</sup>, Ezequiel Rubio-Tabarez<sup>1</sup>, Erick de Jesús de Luna-Santillana<sup>3</sup>, Diana M. Beristain-Ruiz<sup>1</sup>, Alejandro Martínez-Martínez<sup>1</sup>, Alejandra Rivera-Martínez<sup>1</sup>, Elisa Díaz-Trejo<sup>1</sup>, Angela N. Polanco-Leyva<sup>1</sup>, Angela G. Sanchez-Rosales<sup>1</sup>, Angel R. Ceballos-Chavéz<sup>4</sup>, Rodolfo González-Peña<sup>5</sup>, Luis M. Hernández-Triana<sup>6</sup><sup>1</sup>Universidad Autonoma de Ciudad Juárez, Ciudad Juarez, Mexico, <sup>2</sup>Universidad Autonoma de Chihuahua, Ciudad Juarez, Mexico, <sup>3</sup>Instituto Politécnico Nacional, Reynosa, Mexico, <sup>4</sup>Universidad Tecnológica de la Tarahumara, Guachochi, Mexico, <sup>5</sup>Universidad Autonoma de Yucatán, Ciudad Juarez, Mexico, <sup>6</sup>Animal and Plant Health Agency, Addlestone, United Kingdom**5244**

### KNOWLEDGE, ATTITUDES, AND PRACTICES OF PARA-VETS ABOUT TICKS AND TICK-BORNE DISEASES IN PAKISTAN

Abrar Hussain, Dr. Rebecca Lee Smith

Department of Pathobiology, College of Veterinary Medicine, University of Illinois Urbana Champaign, Urbana, IL, United States

**5245**

### BODY LICE PATHOGEN SURVEILLANCE AMONG INDIVIDUALS EXPERIENCING HOMELESSNESS IN WINNIPEG, CANADA 2020-2021

Carl Boodman<sup>1</sup>, Robbin L. Lindsay<sup>2</sup>, Antonia Dibernardo<sup>2</sup>, Kathy Kisil<sup>3</sup>, Amila Heendeniya<sup>4</sup>, John Schellenberg<sup>4</sup>, Yoav Keynan<sup>4</sup><sup>1</sup>University of Manitoba (Canada)/ Institute of Tropical Medicine (Belgium), Antwerp, Belgium, <sup>2</sup>Public Health Agency of Canada, Winnipeg, MB, Canada, <sup>3</sup>Winnipeg Regional Health Authority, Winnipeg, MB, Canada, <sup>4</sup>University of Manitoba (Canada), Winnipeg, MB, Canada**5246**

### TICK AND TICK-BORNE DISEASE KNOWLEDGE ACROSS FRONTLINE GROUPS: A KNOWLEDGE, ATTITUDES, AND PRACTICES META-COMPARISON

Rebecca L. Smith

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**5247**

### IDENTIFICATION OF PULEX IRRITANS VERTEBRATE HOSTS IN PLAGUE-ENDEMIC AREAS OF MADAGASCAR USING MULTIPLEX POLYMERASE CHAIN REACTION

Annick O. Raveloson<sup>1</sup>, Nick An<sup>2</sup>, Stephen G. Mugel<sup>2</sup>, Andry Andriamiadanarivo<sup>3</sup>, Romain Girod<sup>1</sup>, Thomas R. Gillespie<sup>2</sup>, Adélaïde Miarinjara<sup>2</sup><sup>1</sup>Institut Pasteur de Madagascar, Antananarivo, Madagascar, <sup>2</sup>Emory University, Atlanta, GA, United States, <sup>3</sup>Centre ValBio Ranomafana, Ranomafana, Madagascar**5248**

### SPATIAL DISTRIBUTION AND MOLECULAR DETECTION OF RICKETTSIA SPP. IN RAT FLEAS IN MADAGASCAR

Soanandrasana Rahelinirina<sup>1</sup>, Rado Jean Luc Rakotonanahary<sup>1</sup>, Marcela Espinaze<sup>2</sup>, Sandra Telfer<sup>2</sup>, Minoarisoa Rajerison<sup>1</sup><sup>1</sup>Institut Pasteur de Madagascar, Antananarivo, Madagascar, <sup>2</sup>University of Aberdeen, Aberdeen, United Kingdom**5249**

### STATUS EPILEPTICUS AND MULTIORGAN INJURY IN A PATIENT WITH MURINE TYPHUS

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**5250**

### MOLECULAR DETECTION, CYTOLOGICAL CHARACTERIZATION, AND GENETIC HETEROGENEITY OF 16S RDNA OF HEMOTROPIC MYCOPLASMAS IN POPULATIONS OF SMALL MAMMALS IN TWO STATES OF BRAZIL

Maristela Peckle Peixoto<sup>1</sup>, Eduarda de Oliveira Machado<sup>1</sup>, Bernardo Rodrigues Teixeira<sup>2</sup>, Tatiana Padua de Freitas<sup>2</sup>, Lais da Silva de Oliveira<sup>1</sup>, Huarrisson Azevedo Santos<sup>1</sup>, Carlos Luiz Massard<sup>1</sup><sup>1</sup>Federal Rural University of Rio de Janeiro, Seropedica, Rio de Janeiro, Brazil, <sup>2</sup>Oswaldo Cruz Foundation, Rio de Janeiro, Brazil

(ACMCIP ABSTRACT)

**5251**

### VIRAL AND BACTERIAL SEQUENCING OF FEBRILE PATIENT PLASMA REVEALS HIGH PREVALENCE OF TICK-BORNE BACTERIAL PATHOGENS IN THIÈS, SENEGAL

Zoe Levine<sup>1</sup>, Aita Sene<sup>2</sup>, Mouhamad Sy<sup>2</sup>, Awa Deme<sup>3</sup>, Amy Gaye<sup>2</sup>, Tolla Ndiaye<sup>2</sup>, Pardis Sabeti<sup>1</sup>, Katherine Siddle<sup>4</sup>, Daouda Ndiaye<sup>2</sup><sup>1</sup>Broad Institute, Cambridge, MA, United States, <sup>2</sup>CIGASS, Dakar, Senegal, <sup>3</sup>CIAGSS, Dakar, Senegal, <sup>4</sup>Brown University, Providence, RI, United States**5252**

### SPOTLIGHT REPORT: HISTORIC TICK SURVEILLANCE OF SIERRA LEONE

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>3</sup>, Regina M. Jobson<sup>1</sup>, Michael E. von Fricken<sup>1</sup>, Yvonne-Marie Linton<sup>2</sup><sup>1</sup>George Mason University, College of Public Health, Fairfax, VA, United States, <sup>2</sup>Walter Reed Biosystematics Unit (WRBU), Smithsonian Institution Museum Support Center, Suitland, MD, United States, <sup>3</sup>James Madison University, Harrisonburg, VA, United States

## Viruses - Emerging Viral Diseases

**5253**

### SARS COV 2 INFECTION AND RISK FACTORS AMONG HEALTH WORKERS IN BAMAKO, MALI: A LONGITUDINAL STUDY

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**2524****IMMUNE-CROSSED REACTIVITY BETWEEN SARS-CoV-2 AND PFALCIPARUM ANTIGENS IN SERA FROM COVID-19 PATIENTS AND PRE-COVID-19 DONORS IN MALI WEST AFRICA**

**Abdouramane Traore**<sup>1</sup>, Saidou Balam<sup>1</sup>, Drissa Konate<sup>1</sup>, Bourama Traore<sup>1</sup>, Merepen Agnès Guindo<sup>1</sup>, Karamoko Tangara<sup>1</sup>, Salimata Kante<sup>1</sup>, Issoufi Maiga<sup>1</sup>, Seidina Aboubacar Samba Diakite<sup>1</sup>, Fatoumata Kasse<sup>1</sup>, Yaya Ibrahim Coulibaly<sup>2</sup>, Ousmane Faye<sup>2</sup>, Giampietro Corradin<sup>3</sup>, Mahamadou Diakite<sup>1</sup>

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**(ACMCIP Abstract)****2525****DEVELOPMENT OF A DIAGNOSTIC IGM-ANTIBODY CAPTURE ELISA FOR DETECTION OF ANTI-CACHE VALLEY VIRUS HUMAN IGM**

**Amanda E. Calvert**<sup>1</sup>, Sierra R. Mikula<sup>1</sup>, Jordan R. Powers<sup>1</sup>, Holly R. Hughes<sup>1</sup>, Brad J. Biggerstaff<sup>1</sup>, Kelly Fitzpatrick<sup>1</sup>, Amanda J. Panella<sup>1</sup>, Carlos Machain-Williams<sup>2</sup>, SeungHwan Lee<sup>3</sup>, Christin Goodman<sup>1</sup>

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**2526****USING REGIONAL SERO-EPIDEMOLOGY SARS-CoV-2 ANTI-S ANTIBODIES IN THE DOMINICAN REPUBLIC TO INFORM TARGETED PUBLIC HEALTH RESPONSE**

**Beatris Mario Martin**<sup>1</sup>, Angela Cadavid<sup>1</sup>, Helen Mayfield<sup>1</sup>, Cecilia Then Paulino<sup>2</sup>, Micheal de St. Aubin<sup>3</sup>, William Duke<sup>4</sup>, Petr Jarolim<sup>3</sup>, Emily Zielinski Gutiérrez<sup>5</sup>, Ronald Skewes Ramm<sup>2</sup>, Devan Dumas<sup>3</sup>, Salome Garnier<sup>3</sup>, Maria Carolina Etienne<sup>3</sup>, Farah Peña<sup>2</sup>, Gabriela Abidalla<sup>3</sup>, Lucia de la Cruz<sup>2</sup>, Bernerda Henriquez<sup>2</sup>, Margaret Baldwin<sup>3</sup>, Adam Kucharski<sup>6</sup>, Eric J. Nilles<sup>3</sup>, Colleen L. Lau<sup>1</sup>

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**2527****DENGUE FEVER OUTBREAK AT THE KENYAN SOUTH COAST INVOLVING SEROTYPE 3, GENOTYPES III AND V**

**Eric Muthanje**<sup>1</sup>, Gathii Kimita<sup>1</sup>, Josphat Nyataya<sup>1</sup>, Beth Mutai<sup>1</sup>, Sarah Kituyi<sup>2</sup>, John Waitumbi<sup>1</sup>

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**2528****DEVELOPMENT OF A DNA HYBRIDIZATION PROBE-BASED SURVEILLANCE ASSAY FOR DETECTION OF ARBOVIRUSES IN ARTHROPOD POOLS**

**Marisa Foster**, Linda Kothera, Emily Davis, Joanie Kenney

Division of Vector-Borne Diseases, Centers for Disease Control and Prevention, Fort Collins, CO, United States

**2529****COLORIMETRIC RT-LAMP ASSAY FOR DETECTION OF LA CROSSE VIRUS IN ARTHROPOD POOLS**

**Joanie Kenney**, Nathaniel Byers

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**2526****HIGH TRANSMISSION OF ENDEMIC HUMAN CORONAVIRUSES DURING THE COVID-19 PANDEMIC IN ADOLESCENTS IN CEBU, PHILIPPINES**

**Ogeneitsega Janet Joseph**<sup>1</sup>, Michelle Ylade<sup>2</sup>, Jeda Veronica Daag<sup>2</sup>, Rosemary Aogo<sup>1</sup>, Maria Vinna Crisostomo<sup>2</sup>, Kristal-An Agrupis<sup>2</sup>, Patrick Mpingabo<sup>1</sup>, Lakshamane Premkumar<sup>3</sup>, Jacqueline Deen<sup>2</sup>, Leah Katzelnick<sup>1</sup>

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**2521****IDENTIFICATION OF IMMUNODOMINANT B AND T-CELL EPITOPES OF KYASANUR FOREST DISEASE VIRUS AND THEIR EXPRESSION FOR DEVELOPING RAPID DIAGNOSTICS AND POTENT SUBUNIT VACCINE**

**Rajeshwara Achur**<sup>1</sup>, Sayad Hafeez<sup>2</sup>, Kiran S.K<sup>3</sup>, Thippeswamy N.B<sup>2</sup>

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**2522****A COHORT-BASED PILOT STUDY OF DETECTION OF LASSA VIRUS INTO THE ODONTOGENIC FIBROUS TUMOR IN KINSHASA, DEMOCRATIC REPUBLIC OF CONGO**

**Marco de Feo**<sup>1</sup>, Frédéric T. Dilu<sup>2</sup>, Anguy M. Makaka<sup>3</sup>, Gracia M. Kashitu<sup>3</sup>, Opiyo S. Odong<sup>4</sup>, Chiara Castellani<sup>5</sup>, Patrick I. Mpingabo<sup>3</sup>, Steve M. Ahuka<sup>3</sup>, Silvia Di Agostino<sup>6</sup>

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**2523****SEVERE FEVER WITH THROMBOCYTOPENIA SYNDROME VIRUS: AN UNDIAGNOSED EMERGING VIRAL INFECTION IN THAILAND**

**Pakpoom Phoompong**<sup>1</sup>, Wilawan Thipmonthree<sup>2</sup>, Julie Julie<sup>3</sup>, Sonja Weiss<sup>3</sup>, Michael G. Berg<sup>3</sup>, Francisco Averhoff<sup>3</sup>, Gavin A. Cloherty<sup>3</sup>, Yupin Suputtamongkol<sup>1</sup>

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**2524****SPATIO TEMPORAL DYNAMICS OF MEASLES IN THE PROVINCE OF WESTERN KASAI IN DEMOCRATIC REPUBLIC OF CONGO FROM 2000 TO 2014**

Divine DILUBENZI SUAMI, Didier bompangue nkoko, Rosine Bigirinama  
URF/University of Kinshasa/INRB, Kinshasa, Democratic Republic of the Congo

**2525****CLINICAL PRESENTATION AND LABORATORY ABNORMALITIES AMONG DENGUE SEROPOSITIVE AND SERONEGATIVE FEBRILE NIGERIAN ADULTS**

**Juliet Ijeoma Mmerem**, Michael O. Iroezindu, Uche Unigwe, Chinedu Michael Chukwubike

University of Nigeria Teaching Hospital, Enugu, Nigeria

5266

**OROPOUCHE VIRUS AS AN EMERGING CAUSE OF ACUTE FEBRILE ILLNESS IN COLOMBIA**

Jorge Osorio<sup>1</sup>, Karl A. Ciuoderis<sup>2</sup>, Michael Berg<sup>3</sup>, Lester J. Perez<sup>4</sup>, Abbas Hadji<sup>3</sup>, Laura S. Perez-Restrepo<sup>5</sup>, Leidi Carvajal Aristizabal<sup>6</sup>, Kenn Forberg<sup>7</sup>, Julie Yamaguchi<sup>7</sup>, Andres Cardona<sup>8</sup>, Sonja Weiss<sup>7</sup>, Xiaoxing Qiu<sup>7</sup>, Juan Pablo Hernandez-Ortiz<sup>5</sup>, Francisco Averhoff<sup>7</sup>, Gavin A. Cloherty<sup>7</sup>

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5267

**IMPACT OF SARS-COV-2 VARIANTS AND VIRAL LOAD DYNAMICS ON SEVERE COVID-19 AND MORTALITY IN HOSPITALIZED KENYAN ADULT PATIENTS**

Evans Raballah<sup>1</sup>, Samuel B. Anyona<sup>2</sup>, Clinton O. Onyango<sup>2</sup>, Qiuying Cheng<sup>3</sup>, Ely O. Munde<sup>4</sup>, Ivy Hurwitz<sup>5</sup>, Philip D. Seidenberg<sup>6</sup>, Samuel O. Oyola<sup>7</sup>, Collins Ouma<sup>2</sup>, Kristan A. Schneider<sup>8</sup>, Douglas J. Perkins<sup>3</sup>

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5268

**DEVELOPMENT OF A FULLY AUTOMATED PCR ASSAY FOR THE DETECTION OF MPOX VIRUS**

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5269

**THE ECONOMIC BURDEN OF ILLNESS (BOI) OF THE GLOBALLY SPREADING CHIKUNGUNYA VIRUS (CHIKV): A SYSTEMATIC LITERATURE REVIEW (SLR)**

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**Viruses - Epidemiology**

5270

**DEVELOPMENT OF AN INTERDISCIPLINARY, MULTIAGENCY COLLABORATION TO COORDINATE LOCAL RAPID RESPONSES TO DENGUE CASE CLUSTERS IDENTIFIED AND MONITORED THROUGH UNIFIED VECTOR AND HUMAN SURVEILLANCE – PUERTO RICO, JANUARY 2021-2023**

Joshua M. Wong<sup>1</sup>, Forrest K. Jones<sup>2</sup>, Velma K. Lopez<sup>1</sup>, Hannah R. Volkman<sup>1</sup>, Kyle R. Ryff<sup>3</sup>, Roberto K. Barrera<sup>1</sup>, Gabriela Paz-Bailey<sup>1</sup>, Grayson C. Brown<sup>4</sup>, Julieanne Miranda<sup>4</sup>, Joanelis Medina Quintana<sup>4</sup>, Nexilliane Borrero<sup>4</sup>, Jomil Torres-Aponte<sup>5</sup>, Mayra Toro Tirado<sup>5</sup>, Melissa Marzan<sup>5</sup>, Laura E. Adams<sup>1</sup>

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5271

**CORRELATION OF DENGUE TRENDS BETWEEN SENTINEL AND PASSIVE SURVEILLANCE SYSTEMS IN PUERTO RICO, 2012 - 2022**

Alfonso C. Hernandez-Romieu<sup>1</sup>, Mark Delorey<sup>2</sup>, Hannah Volkman<sup>1</sup>, Vanessa Rivera-Amil<sup>3</sup>, Diego Sainz<sup>4</sup>, Jorge Beltran<sup>5</sup>, Veronica M. Frsaqueri-Quintana<sup>3</sup>, Jomil Torres<sup>6</sup>, Melissa Marzan-Rodriguez<sup>6</sup>, Aidsa Rivera<sup>1</sup>, Olga Lorenzi<sup>1</sup>, Carla Espinet-Crespo<sup>1</sup>, Yashira Maldonado<sup>1</sup>, Roberta Lugo Robles<sup>1</sup>, Jorge Munoz<sup>1</sup>, Liliana Sánchez-González<sup>1</sup>, Gabriela Paz-Bailey<sup>1</sup>, Laura Adams<sup>1</sup>

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5272

**COMMUNITY - BASED SERO - PREVALENCE OF CHIKUNGUNYA AND YELLOW FEVER IN THE SOUTH OMO VALLEY OF SOUTHERN ETHIOPIA**

Adugna Endale Woldegiorgis

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5273

**SUPERSPREADING OF SARS-COV-2: A SYSTEMATIC REVIEW AND META-ANALYSIS**

Clifton D. McKee<sup>1</sup>, Emma X. Yu<sup>1</sup>, Andrés Garcia<sup>1</sup>, Jules Jackson<sup>1</sup>, Aybüke Koyuncu<sup>1</sup>, Sophie Rose<sup>1</sup>, Andrew S. Azman<sup>1</sup>, Katie Lobner<sup>2</sup>, Emma Sacks<sup>1</sup>, Maria Van Kerkhove<sup>3</sup>, Emily S. Gurley<sup>1</sup>

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5274

**VIRAL ETIOLOGY OF LOWER RESPIRATORY TRACT INFECTIONS IN CHILDREN <5 YEARS OF AGE IN ETHIOPIA: A PROSPECTIVE CASE-CONTROL STUDY**

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(ACMCIP Abstract)

5275

**SEROPREVALENCE OF DENGUE, CHIKUNGUNYA AND ZIKA AT THE EPICENTER OF THE CONGENITAL MICROCEPHALY EPIDEMIC IN NORTHEAST BRAZIL: A POPULATION-BASED SURVEY**

Cynthia Braga<sup>1</sup>, Celina M.T. Martelli<sup>1</sup>, Wayner V. Souza<sup>1</sup>, Carlos F. Luna<sup>1</sup>, Maria de Fatima P.M. Albuquerque<sup>1</sup>, Carolline A. Mariz<sup>1</sup>, Clarice N.L. Moraes<sup>1</sup>, Carlos A.A. Brito<sup>2</sup>, Carlos Frederico C.A. Melo<sup>3</sup>, Roberto D. Lins<sup>1</sup>, Jan F. Drexler<sup>4</sup>, Thomas Jaenisch<sup>5</sup>, Ernesto T. A. Marques<sup>6</sup>, Isabelle F.T. Viana<sup>1</sup>

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**5276****INVESTIGATION OF THE MEASLES OUTBREAK IN DJIBOUTI**

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**5277****MOLECULAR EPIDEMIOLOGY OF ACUTE DENGUE AND CHIKUNGUNYA INFECTIONS AMONG FEBRILE PATIENTS VISITING FOUR HOSPITALS IN BOTH URBAN (YAOUNDÉ) AND RURAL (DIZANGUE) SETTINGS FROM CAMEROON**

**Stella Mariette Nana Ndjangwo**<sup>1</sup>, Borel Djiappi-Tchamen<sup>2</sup>, Ruth Mony<sup>1</sup>, Maurice Demanou<sup>3</sup>, Joyce Keumezeu-Tsafack<sup>4</sup>, Roland Bamou<sup>2</sup>, Parfait Awono-Ambene<sup>5</sup>, Charles Félix Bilong Bilong<sup>1</sup>, Christophe Antonio-Nkondjio<sup>6</sup>

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**(ACMCIP Abstract)****5278****SEROPREVALENCE OF SARS-COV-2 NEUTRALISING ANTIBODIES AMONG TRAVELERS ENTERING GHANA THROUGH THE MAJOR LAND BORDERS, 2022**

**Irene Owusu Donkor**<sup>1</sup>, Elvis S. Lomotey<sup>1</sup>, Daniel A. Odumang<sup>1</sup>, Ivy A. Asante<sup>1</sup>, Cecelia Takyi<sup>1</sup>, Ama Nyansema Sekyi -Yorke<sup>1</sup>, Emmanuel Frimpong Gyekye<sup>1</sup>, Abdul Gafaru Mohammed<sup>2</sup>, Emma E. Kploanyi<sup>2</sup>, Charles L. Noora<sup>2</sup>, Adolphina Addo-Lartey<sup>2</sup>, Yvonne Affram<sup>2</sup>, Joseph A. Frimpong<sup>3</sup>, Magdalene A. Odikro<sup>2</sup>, Ernest Kenu<sup>2</sup>

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**5279****ELIMINATION OF HEPATITIS B VIRUS USING ANTIVIRAL PROPHYLAXIS AND VACCINATION IN REMOTE SETTINGS THROUGH LOCALLY ADAPTED, INTEGRATED SERVICES: A MATHEMATICAL MODEL**

**Belaynew Wasie Taye**<sup>1</sup>, Patricia C. Valery<sup>2</sup>, Sudhamshu K<sup>3</sup>, Ananta Shrestha<sup>4</sup>, Paul J. Clark<sup>5</sup>

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**5280****THE EPIDEMIOLOGY OF INFLUENZA B VIRUS IN GHANA, 2017 TO 2021**

**Stephen O. Nyarko**<sup>1</sup>, Ivy A. Asante<sup>1</sup>, Mildred A. Adusei-Poku<sup>1</sup>, Nana A. Asante Ntim<sup>1</sup>, Richard A. Obeng<sup>1</sup>, Esinam A. Amenuvor<sup>1</sup>, Jennnifer Wutsika<sup>1</sup>, Samuel Ago<sup>1</sup>, Roberta Tackie<sup>1</sup>, Vanessa Magnusen<sup>1</sup>, Linda Boatemaa<sup>1</sup>, Gifty Mawuli<sup>1</sup>, Joseph A. Nyarko<sup>1</sup>, Ama N. Sekyi-Yorke<sup>1</sup>, Joseph A. Quarcoo<sup>1</sup>, Lorretta Kwasa<sup>1</sup>, Yaw Awuku-Larbi<sup>1</sup>, Edward O. Nyarko<sup>2</sup>, William Asiedu<sup>2</sup>, Daniel Mingle<sup>2</sup>, Shirley Nimo-Paintsil<sup>3</sup>, Naiki Attram<sup>3</sup>, Sanders Terrel<sup>3</sup>, William K. Ampofo<sup>1</sup>

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**5281****A PROPOSAL FOR UTILIZATION OF PREGNANCY AS AN OPPORTUNITY FOR HCV ELIMINATION AND ERADICATION**

**Sarah Boudova**, Danielle Tholey, Jonathan Fenkel, Richard Derman, Rupsa Boelig  
*Thomas Jefferson University, Philadelphia, PA, United States*

**5282****ASSESSING JAPANESE ENCEPHALITIS VIRUS RISK IN ASIA USING HIGH-RESOLUTION REMOTELY SENSED DATA AND MACHINE LEARNING**

**Alan Costello**, Sean M. Moore  
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**5283****INVESTIGATION OF SEVERE DENGUE OUTBREAK IN MAUMERE, EAST NUSA TENGGARA, INDONESIA IN 2020: CLINICAL, SEROLOGY, AND VIROLOGICAL FEATURES**

**Marsha Santoso**<sup>1</sup>, R Tedjo Sasmono<sup>2</sup>  
<sup>1</sup>Exeins Health Initiative, Jakarta, Indonesia, <sup>2</sup>Eijkman Center for Molecular Biology, Cibinong, West Java, Indonesia

**5284****PREVALENCE OF ANTI-VZV AMONG SAMPLE OF MEDICAL UNDERGRADUATES IN SRI LANKA: EXPLORING THE VALUE OF 'RECALLED HISTORY OF CHICKENPOX' AS AN INDICATOR OF IMMUNITY**

**Nayani Weerasinghe**<sup>1</sup>, Gaya Wijayaratne<sup>1</sup>, Ajith Nagahawatte<sup>1</sup>, Subodha Wickramasinghe<sup>1</sup>, Harshani Thabrew<sup>1</sup>, Gayani Tillekeratne<sup>2</sup>, Sunethra Gunasena<sup>1</sup>  
<sup>1</sup>Faculty of Medicine, University of Ruhuna, Galle, Sri Lanka, <sup>2</sup>Duke Global Health Institute, Durham, NC, United States

**5285****HIGH RISK OF DENGUE AND CHIKUNGUNYA VIRUS FOUND AMONGST CHILDREN LIVING IN INFORMAL URBAN SETTLEMENTS IN MAKASSAR, INDONESIA**

**Joelle I. Rosser**<sup>1</sup>, John J. Openshaw<sup>2</sup>, Audrie Lin<sup>3</sup>, Fiona Barker<sup>4</sup>, Nursehang Tamodding<sup>5</sup>, Murni Amiruddin<sup>5</sup>, Nurul Pausi Emelia Abdullah<sup>5</sup>, Ansariadi Ansariadi<sup>5</sup>, Karin Leder<sup>1</sup>, Isra Wahid<sup>5</sup>, Stephen Luby<sup>1</sup>  
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## Viruses - Evolution and Genomic Epidemiology

5286

### GENOMIC CHARACTERIZATION OF SARS-COV-2 FROM AN INDIGENOUS RESERVE IN MATO GROSSO DO SUL, BRAZIL

**Izabela Mauricio de Rezende**<sup>1</sup>, Vinicius Navarini<sup>2</sup>, Luis Albuquerque de Oliveira<sup>2</sup>, Silvana Beutinger Marchioro<sup>3</sup>, Alex Jose Leite Torres<sup>3</sup>, Julio Croda<sup>4</sup>, Crhistinne Cavalheiro Maymone Gonçalves<sup>5</sup>, Mariana Garcia Croda<sup>2</sup>, Luiz Henrique Ferraz Demarchi<sup>6</sup>, Joilson Xavier<sup>7</sup>, Emerson de Castro Barbosa<sup>8</sup>, Mauricio Lima<sup>8</sup>, Vagner Fonseca<sup>9</sup>, Felipe Campos de Melo Iani<sup>8</sup>, Talita Adelino<sup>8</sup>, Flávia Figueira Aburjaile<sup>10</sup>, Marta Giovanetti<sup>11</sup>, Luiz Alcantara<sup>12</sup>, Simone Simonatto<sup>2</sup>

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5287

### METAGENOMIC SEQUENCING REVEALS EXTENSIVE DIVERSITY OF RNA VIRUSES IN WESTERN AUSTRALIAN MOSQUITOES

**Binit Lamichhane**<sup>1</sup>, Mang Shi<sup>2</sup>, Craig Brockway<sup>3</sup>, Kimberly Evasco<sup>3</sup>, Jay Nicholson<sup>3</sup>, Peter Neville<sup>3</sup>, Andrew Jardine<sup>3</sup>, Chisha Sikazwe<sup>4</sup>, Avram Levy<sup>4</sup>, John Mackenzie<sup>5</sup>, David Smith<sup>4</sup>, Allison Imrie<sup>1</sup>

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5288

### GENETIC CHARACTERIZATION OF INFLUENZA AND SARS-COV-2 IN DOD BENEFICIARIES DURING THE 2021-2022 SEASON

**William Gruner**, Anthony Fries, Deanna Muehleman, Carol Garrett, Jennifer Meyer, Kelsey Lanter, Padraic Fanning, James Hanson, Peter Wasik, Elizabeth Macias  
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5289

### A UNIQUE AMPLICON SEQUENCING TECHNOLOGY FOR INFECTIOUS DISEASE: LONG AND SHORT-READ SOLUTIONS

**Andrea Spencer**, Tiffany Stedtfeld, Cayley Higbee, Mollie Schubert, Jessica Woodley, Shengyao Chen, Thomas Osborne, Jordan RoseFigura, Laurie Kurihara  
Integrated DNA Technologies, Ann Arbor, MI, United States

5290

### RE-EMERGENCE OF COSMOPOLITAN GENOTYPE OF DENGUE VIRUS SEROTYPE 2 IN SOUTHERN VIETNAM

**Vi Thuy Tran**<sup>1</sup>, Rhys P. D. Inward<sup>2</sup>, Bernardo Gutierrez Granja<sup>2</sup>, Nguyet Minh Nguyen<sup>1</sup>, Phong Thanh Nguyen<sup>3</sup>, Tam Thi Cao<sup>3</sup>, Moritz U. G. Kraemer<sup>2</sup>, Kien Thi Hue Duong<sup>1</sup>, Sophie Yacoub<sup>1</sup>

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(ACMCIP Abstract)

5291

### DENGUESEQ: DEVELOPMENT AND VALIDATION OF A PAN-SEROTYPE WHOLE GENOME AMPLICON SEQUENCING APPROACH FOR DENGUE VIRUS

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5292

### EVOLUTION AND CIRCULATION OF SARS COV2OMICRON SUBVARIANTS IN ODISHA STATE, INDIA, NOVEMBER 2021 TO NOVEMBER 2022

**Ira Praharaj**, Subhra Subhadra, Swatimsita Priyadarshini, Swagatika Panda, Jyotsnamayee Sabat, S. Kombiah, Sanghamitra Pati  
Indian Council of Medical Research Regional Medical Research Centre, Bhubaneswar, India

5293

### DEVELOPING A DENGUE VIRUS LINEAGE CLASSIFICATION SYSTEM TO IMPROVE GENOMIC SURVEILLANCE

**Verity Hill**, Chrispin Chaguza, Chantal Vogels, Nathan Grubaugh  
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5294

### IDENTIFICATION OF GENES INVOLVED IN THE TYPE-I INTERFERON RESPONSE ELICITED BY THE LIVE-ATTENUATED JAPANESE ENCEPHALITIS VIRUS SA14-14-2 VACCINE

**Dana L. Vanlandingham**, Natalia Costa Ball, Joshua Willig  
Kansas State University, Manhattan, KS, United States

5295

### DOES TIME MATTER IN EBOLAVIRUS (EBOV) RESURGENCE? ELUCIDATING TIMEFRAME REQUIRED FOR REACTIVATION OF EBOV WITHIN HUMAN SURVIVORS AND BATS POPULATION

**Ifeanyi Omah**, John T. McCrone, Áine O'toole, Andrew Rambaut  
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5296

### MOLECULAR PHYLOGENY AND SEROTYPE DISTRIBUTION OF DENGUE VIRUS IN THE PHILIPPINES, 2015-2022

**Kristine Joy Ragual Privaldos**, Ava Kristy Lee, Joan Bato, Mary Ann Quinones, Carissa May Enriquez, Frances Anne Caranto, Mary Anne Joy Reyes  
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## Viruses - Immunology

5297

### PERSISTENCE OF SERUM IGM ANTIBODIES ANTI-CHIKUNGUNYA VIRUS FOR MORE THAN 24 MONTHS AFTER THE ONSET OF ACUTE SYMPTOMS

Leile Camila Jacob-Nascimento<sup>1</sup>, Moyra Machado Portilho<sup>1</sup>, Rosangela Oliveira Anjos<sup>1</sup>, Patricia Sousa dos Santos Moreira<sup>1</sup>, Viviane Machicado<sup>2</sup>, Adriane Souza Paz<sup>2</sup>, Lorena Gomes<sup>1</sup>, Uriel Kitron<sup>3</sup>, Scott Weaver<sup>4</sup>, Mitermayer Galvão Reis<sup>5</sup>, Guilherme Sousa Ribeiro<sup>6</sup>

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5298

### CROSS-SECTIONAL EVALUATION OF ANTI-SARS-COV-2 ANTIBODY RESPONSE TO AZD1222 RECOMBINANT VACCINE DEPLOYMENT IN THE BONO REGION, GHANA

Prof Samuel Fosu Gyasi

University of Energy and Natural Resources, Sunyani, Ghana

5299

### TO MODULATE OR NOT TO MODULATE: INCREASING IMMUNOGENICITY AND REDUCING IMMUNE EVASION OF SARS-COV-2 VIA NEXT GENERATION VACCINES

Alexandria Dickson, Andreu Gazquez, Taneesh Makkena, E. Taylor Stone, Elizabeth Geerling, Amelia K. Pinto, James D. Brien

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5300

### SEROPREVALENCE OF HUMAN CORONAVIRUSES IN PEDIATRIC SAMPLES COLLECTED BEFORE COVID-19 PANDEMIC IN THE PHILIPPINES AND JAPAN

Yusuke Sayama<sup>1</sup>, Michiko Okamoto<sup>1</sup>, Mayuko Saito<sup>1</sup>, Mariko Saito-Obata<sup>1</sup>, Raita Tamaki<sup>2</sup>, Christine Dahlia Joboco<sup>3</sup>, Socorro Lupisan<sup>4</sup>, Hitoshi Oshitani<sup>1</sup>

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5301

### ASSESSING THE ROLE OF NON-NEUTRALIZING ANTIBODIES IN ANTIBODY-DEPENDENT CELLULAR CYTOTOXICITY OF DENGUE VIRUS INFECTED CELLS

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5302

### MODULATION OF COMPLEMENT REGULATORY MOLECULES IN INFECTED AND BYSTANDER CELLS DURING DENGUE VIRUS INFECTION

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5303

### THE DIFFERENTIATION OF TREG AND TH17 CELLS IN PATIENTS WITH CHRONIC HEPATITIS B IN DIFFERENT STAGES

Hang TT LE<sup>1</sup>, Tien Huy Nguyen<sup>2</sup>, Hoa PHAM<sup>1</sup>

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5304

### INDIRECT IGG ELISA AND SEROTYPE-SPECIFIC NEUTRALIZING ANTIBODY TITERS ARE ASSOCIATED WITH DENGUE IN CHILDREN IN CEBU, PHILIPPINES

Camila D. Odio<sup>1</sup>, Jeda Veronica Daag<sup>2</sup>, Maria Vinna Crisostomo<sup>2</sup>, Kristal-An Agrupis<sup>2</sup>, Ava Kristy Sy<sup>3</sup>, Cameron Adams<sup>4</sup>, Laura J. White<sup>4</sup>, Jacqueline Deen<sup>2</sup>, Aravinda M. de Silva<sup>4</sup>, Leah C. Katzelnick<sup>1</sup>, Michelle Ylade<sup>2</sup>

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5305

### DETECTION OF ENVELOPE-DIMER EPI TOPE-LIKE BROADLY PROTECTIVE ANTIBODIES IN DENGUE-IMMUNE CHILDREN IN THE PHILIPPINES FOLLOWING VACCINATION AND NATURAL INFECTION

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(ACMCIP Abstract)

5306

### THE MAGNITUDE AND QUALITY OF NEUTRALIZING ANTIBODIES CORRELATE WITH PROTECTION AGAINST SYMPTOMATIC DENGUE VIRUS INFECTION AND DIFFER BY SEROTYPE, IMMUNE STATUS, AND ASSAY CONDITION

Sandra Bos<sup>1</sup>, Aaron Graber<sup>1</sup>, Elias Duarte<sup>1</sup>, Jaime Cardona-Ospina<sup>1</sup>, Jose Victor Zambrana<sup>2</sup>, Reinaldo Hernandez Mercado<sup>1</sup>, Tulika Singh<sup>1</sup>, Aravinda de Silva<sup>3</sup>, Leah Katzelnick<sup>4</sup>, Angel Balmaseda<sup>5</sup>, Eva Harris<sup>1</sup>

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5307

### NEUTRALIZING IGM CONTRIBUTE SUBSTANTIALLY TO BOTH PRIMARY AND SECONDARY DENGUE SEROTYPE 1 IMMUNITY

Tulika Singh<sup>1</sup>, Rohan Shinkre<sup>1</sup>, Aaron Graber<sup>1</sup>, Michael Verdolin<sup>1</sup>, Sandra Bos<sup>1</sup>, José Victor Zambrana<sup>2</sup>, Cesar Narvaez<sup>2</sup>, Sonia Arguello<sup>2</sup>, Federico Narvaez<sup>3</sup>, Angel Balmaseda<sup>4</sup>, Eva Harris<sup>1</sup>

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## 3308

**TYPE-SPECIFIC ENVELOPE-DOMAIN EPITOPES OF NEUTRALIZING ANTIBODIES AFTER PRIMARY DENV2: SUMMARY OF FINDINGS FROM NATURAL INFECTION, HUMAN CHALLENGE MODELS, AND YOUNGER AND OLDER CHILDREN FROM A PEDIATRIC OBSERVATIONAL COHORT**

Deanna R. Zhu<sup>1</sup>, Alecia Rajesh<sup>1</sup>, Rita M. Meganck<sup>2</sup>, Heather M. Froggatt<sup>1</sup>, Meredith Liccione<sup>1</sup>, Ellen F. Young<sup>1</sup>, Longping V. Tse<sup>3</sup>, Jennifer E. Munt<sup>1</sup>, José Victor Zambrana<sup>4</sup>, Boyd L. Yount<sup>1</sup>, Sandra Henein<sup>5</sup>, Angel Balmaseda<sup>6</sup>, Eva Harris<sup>7</sup>, Aravinda M. De Silva<sup>5</sup>, Ralph S. Baric<sup>1</sup>

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## 3309

**NEUTRALIZING ANTIBODY TITERS DIFFER BY STRAIN AND MATURATION STATE AMONG MULTITYPIC CHILDREN IN THE PHILIPPINES**

Charlie J. Voirin<sup>1</sup>, Patrick Mpingabo<sup>1</sup>, Guillermo Raimundi Rodriguez<sup>1</sup>, Ana C. Escoto<sup>1</sup>, Cameron Adams<sup>2</sup>, Long Ping Victor Tse<sup>3</sup>, Michelle Ylade<sup>4</sup>, Jedas Veronica Daag<sup>4</sup>, Maria Vinna Crisostomo<sup>4</sup>, Kristal-An Agrupis<sup>2</sup>, Ralph Baric<sup>2</sup>, Jaqueline Deen<sup>4</sup>, Aravinda de Silva<sup>2</sup>, Laura White<sup>2</sup>, Leah C. Katzelnick<sup>1</sup>

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## 3310

**LINKING MULTIPLE SEROLOGICAL ASSAYS TO INFER DENGUE INFECTION HISTORY ACROSS PAIRED SAMPLES USING MIXTURE MODELS**

Marco Hamins-Puertolas<sup>1</sup>, Daranee Buddhari<sup>2</sup>, Henrik Salje<sup>3</sup>, Derek A.T. Cummings<sup>4</sup>, Stefan Fernandez<sup>2</sup>, Aaron Farmer<sup>2</sup>, Surachai Kaewhirun<sup>5</sup>, Direk Khampaen<sup>5</sup>, Sopon Iamsirithaworn<sup>5</sup>, Stephen J. Thomas<sup>6</sup>, Timothy Endy<sup>6</sup>, Anon Srikiatkachorn<sup>7</sup>, Adam Waickman<sup>5</sup>, Alan L. Rothman<sup>7</sup>, Isabel Rodriguez-Barraquer<sup>1</sup>, Kathryn B. Anderson<sup>6</sup>

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## 3311

**CIRCULATORY T FOLLICULAR HELPER CELL & MEMORY B CELL FREQUENCIES IN A CONVALESCENT DENV IMMUNE COHORT**

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**Viruses - Pathogenesis and Animal Models**

## 3312

**MALARIA ABOLISHES ONNV-INDUCED ARTHRITIS BY ALTERING THE KINETICS OF VIRUS-SPECIFIC CD4 T CELL DEVELOPMENT IN THE FOOTPAD-DRAINING LYMPH NODES**

Anthony Torres-Ruesta, Teck-Hui Teo, Yi-Hao Chan, Siti Naqiah Amrun, Siew-Wai Fong, Fok-Moon Lum, Laurent Renia, Lisa Ng

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(ACMCIP Abstract)

## 3313

**EVALUATING THE CONTRIBUTION OF NS1 ANTIGENEMIA TO DENGUE-ELICITED NEUTROPENIA**

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## 3314

**ARBOVIRUS TRANSMISSION AND DISEASE PATHOGENESIS IN OBESE AND TYPE II DIABETIC MICE**

Natalia I. Oliveira Silva<sup>1</sup>, Sasha R. Azar<sup>2</sup>, Vidyleison N. Camargos<sup>1</sup>, Rumei Yun<sup>1</sup>, Jiehua Zhou<sup>1</sup>, Rafael K. Campos<sup>1</sup>, Alice F. Versiani<sup>1</sup>, Shannan L. Rossi<sup>1</sup>, Nikos Vasilakis<sup>1</sup>

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## 3315

**EXPLORING MICRORNA AS POTENTIAL DIAGNOSTIC BIOMARKER FOR ZIKA VIRUS INFECTION**

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## 3316

**CARDIAC ELECTROMECHANICAL ALTERATIONS DURING CHIKUNGUNYA VIRUS INFECTION**

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## 3317

**SOLUBLE UROKINASE PLASMINOGEN ACTIVATOR RECEPTOR AS PROGNOSTIC BIOMARKER FOR SEVERE DENGUE IN ADULTS**

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## 3318

**ATTENUATED CHIKUNGUNYA VIRUS STRAIN 181 CLONE 25 INFECTION IN IMMUNOSUPPRESSED RHESUS MACAQUES**

Piyanate Sunyakumthorn, Manutsanun Inthawong, Rawiwan Im-erbsin, Sujitra Tayamun, Kesara Chumpolkulwong, Phakorn Wilaisri, Taweewun Hunsawong, Chonticha Klungthong, Stefan Fernandez, Erin E. Ball, Kelly Richard

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5319

### A MACHINE LEARNING AIDED COMPARISON OF LIVER PATHOLOGY AMONG FILOVIRUSES

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5320

### A CONSISTENT NONHUMAN PRIMATE MODEL FOR EARLY ZIKV-ASSOCIATED PREGNANCY LOSS

Christina M. Newman<sup>1</sup>, Jenna R. Rosinski<sup>1</sup>, Lauren E. Raasch<sup>1</sup>, Patrick Barros Tiburcio<sup>1</sup>, Meghan E. Breitbart<sup>1</sup>, Phoenix M. Shepherd<sup>1</sup>, Keisuke Yamamoto<sup>1</sup>, Elaina Razo<sup>1</sup>, Nicholas Krabbe<sup>1</sup>, Mason I. Bliss<sup>1</sup>, Alexander D. Richardson<sup>2</sup>, Morgan A. Einwalter<sup>2</sup>, Andrea M. Weiler<sup>2</sup>, Emily L. Sneed<sup>2</sup>, Kerri B. Fuchs<sup>2</sup>, Xiankun Zeng<sup>3</sup>, Kevin K. Noguchi<sup>4</sup>, Terry K. Morgan<sup>5</sup>, Alexandra J. Alberts<sup>1</sup>, Kathleen M. Antony<sup>1</sup>, Rachel V. Spanton<sup>1</sup>, Sabrina Kabakov<sup>1</sup>, Karla K. Ausderau<sup>1</sup>, Ellie K. Bohm<sup>5</sup>, Julia C. Pritchard<sup>6</sup>, James Ver Hoeve<sup>1</sup>, Charlene Kim<sup>1</sup>, T. Michael Nork<sup>1</sup>, Alex W. Katz<sup>1</sup>, Carol A. Rasmussen<sup>1</sup>, Amy Hartman<sup>1</sup>, Andres Mejia<sup>2</sup>, Puja Basu<sup>2</sup>, Heather A. Simmons<sup>2</sup>, Jens C. Eickhoff<sup>1</sup>, Thomas C. Friedrich<sup>1</sup>, Matthew T. Aliota<sup>6</sup>, Emma L. Mohr<sup>1</sup>, Dawn M. Dudley<sup>1</sup>, David H. O'Connor<sup>1</sup>  
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5321

### GENETIC ANCESTRY DRIVES DIFFERENCES IN THE IMMUNE RESPONSE TO DENGUE VIRUS INFECTION IN HUMAN SKIN

Priscila M. Da Silva Castanha, Michelle Marti, Jocelyn Taddonio, Megan Wallace, Gwenddolen Kettenburg, Simon C. Watkins, Ernesto T A Marques Jr., Jeremy Martinson, Simon M. Barratt-Boyes  
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5322

### HCV LEADING EARLY AGE ONSET OF HCC - MULTIPLE RISK FACTORS ATTRIBUTE

Sarthak Gaur, Avneet Kumar Gupta, Dr Prasan Kumar Panda, Gaurav Karna  
AIIMS RISHIKESH, Rishikesh, India

5323

### RECONSTITUTION OF HUMAN MICROGLIAL CELLS IN BRAIN CEREBRAL CORTEX AND CEREBELLUM OF HUMAN-IMMUNE-SYSTEM HUMANIZED DRAGA MICE

Sounak Ghosh Roy<sup>1</sup>, Ahmad Faisal Karim<sup>1</sup>, Teodor-D. Brumeanu<sup>2</sup>, Sofia A. Casares<sup>1</sup>  
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5324

### EFFICACY OF HUMAN SERA FROM SUBJECTS VACCINATED WITH A CHIKUNGUNYA VIRUS VIRUS-LIKE PARTICLE VACCINE IN CYNOMOLGUS MACAQUES

Ravi Anantha<sup>1</sup>, Jason E. Comer<sup>2</sup>, Lo Vang<sup>1</sup>, Christopher S. Morello<sup>1</sup>, Kelly Warfield<sup>1</sup>  
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5325

### INVESTIGATION OF A SUSPECTED CASE OF MONKEY POX, IBOKE, HEALTH DISTRICT OF TABOU, CÔTE D'IVOIRE, JULY 2022

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5326

### SYLVATIC STRAINS OF DENGUE VIRUS HAVE DISTINCT REPLICATION KINETICS IN HUMAN CELLS

Arturo Barbachano-Guerrero, Sara L. Sawyer  
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5327

### SEVERE DENGUE RISK: SPECIAL POPULATIONS WITH REPEATED HIGH-RISK EXPOSURES: CHARACTERISTICS AND A FRAMEWORK FOR RECOMMENDATIONS

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

## Viruses - Therapeutics and Antiviral Drugs

5328

### HIGH CONFIDENCE AND DEMAND FOR HEPATITIS E VACCINE DURING AN OUTBREAK IN BENTIU, SOUTH SUDAN: A QUALITATIVE STUDY

Aybüke Koyuncu<sup>1</sup>, Kinya Vincent Asilaza<sup>2</sup>, John Rumunu<sup>3</sup>, Joseph Wamala<sup>4</sup>, Priscillah Gitahi<sup>2</sup>, Zelie Antier<sup>2</sup>, Jetske Duncker<sup>2</sup>, Patrick Nkemenang<sup>2</sup>, Primitivo Gakima<sup>5</sup>, Melat Haile<sup>5</sup>, Etienne Gignoux<sup>5</sup>, Manuel Albelá<sup>5</sup>, Kiendende Chong<sup>3</sup>, Monica Rull<sup>5</sup>, Andrew Azman<sup>6</sup>, Iza Ciglencki<sup>5</sup>, Robin Nesbitt<sup>7</sup>  
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5329

### POTENT NEUTRALIZING ANTIBODIES ISOLATED FROM DONORS IMMUNIZED WITH THE 17D YELLOW FEVER VACCINE

Matheus Oliveira de Souza<sup>1</sup>, Danielle Saunders<sup>2</sup>, Ahmed Fahad<sup>1</sup>, Morgan Timm<sup>3</sup>, Yuliya Petrova<sup>3</sup>, Kimberly Dowd<sup>4</sup>, Bharat Madan<sup>5</sup>, Jacy Wolfe<sup>5</sup>, Erica Normandin<sup>3</sup>, Amy Henry<sup>3</sup>, Farida Laboune<sup>3</sup>, John Misasi<sup>3</sup>, Tulio Lima<sup>6</sup>, Renata Alvim<sup>6</sup>, Egan Sanchez<sup>4</sup>, Katherine Burgomaster<sup>4</sup>, Xiaoli Pan<sup>1</sup>, Daniel Douek<sup>3</sup>, Julie Ledgerwood<sup>3</sup>, Barney Graham<sup>3</sup>, John Mascola<sup>3</sup>, Theodore Pierson<sup>4</sup>, Leda Castilho<sup>6</sup>, Yan-Jang Huang<sup>7</sup>, Brandon DeKosky<sup>1</sup>  
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5330

### EXPLORING POTENTIAL INDICATIONS FOR REMDESIVIR BEYOND COVID-19

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5331

### EVOLUTION OF A FUNCTIONALLY INTACT BUT ANTIGENICALLY DISTINCT DENV FUSION LOOP

Rita M. Meganck<sup>1</sup>, Deanna Zhu<sup>2</sup>, Stepahnie Dong<sup>2</sup>, Lisa J. Snoderly-Foster<sup>3</sup>, Yago R. Dalben<sup>3</sup>, Devina Thion<sup>2</sup>, Laura J. White<sup>2</sup>, Aravinda M. DeSilva<sup>2</sup>, Ralph S. Baric<sup>2</sup>, Long Ping Victor Tse<sup>1</sup>  
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5332

**PHARMACODYNAMIC MODELS TO INFORM THE DESIGN OF PHASE 2 ANTIVIRAL THERAPEUTIC TRIALS FOR DENGUE**James A. Watson, Vuong N. Lam, Kien D. Thi Hue, Nguyet N. Minh, Sophie Yacoub  
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5333

**MULTIPLEX ASSAY PERFORMANCE ACROSS VARIED GEOGRAPHICAL AND RESOURCED SETTINGS: DEMOCRATIC REPUBLIC OF THE CONGO, LIBERIA, AND HAWAII**Olivia A. Smith<sup>1</sup>, Teri Ann S. Wong<sup>1</sup>, Varney Kamara<sup>1</sup>, Nicole A. Hoff<sup>2</sup>, Angelica L. Barrall<sup>3</sup>, Sydney Merritt<sup>3</sup>, Davidetta M. Tekah<sup>3</sup>, Peter S. Humphrey<sup>3</sup>, Jean Paul Kompany<sup>4</sup>, Placide Mbala-Kingabeni<sup>4</sup>, Bode Shobayo<sup>5</sup>, Julius Teahon<sup>5</sup>, John Berestecky<sup>6</sup>, Anne Rimoin<sup>2</sup>, Axel T. Lehrer<sup>1</sup><sup>1</sup>University of Hawai i at Mānoa, Department of Tropical Medicine, Medical Microbiology, and Pharmacology, Honolulu, HI, United States, <sup>2</sup>University of California Los Angeles, Fielding School of Public Health, Los Angeles, CA, United States, <sup>3</sup>University of Liberia, TJR Faulkner College of Science and Technology, Department of Biological Sciences, Medical Science, Monrovia, Liberia, <sup>4</sup>National Institute of Biomedical Research (INRB), Kinshasa, Democratic Republic of the Congo, <sup>5</sup>National Public Health Institute of Liberia, Monrovia, Liberia, <sup>6</sup>Kapi'olani Community College, University of Hawai i, Honolulu, HI, United States

5334

**IN VITRO EFFICACY OF SELECTED ANTIMALARIALS AGAINST VARIANTS OF SARS COV 2 VIRUS CIRCULATING IN PANAMA DURING 2020 2022**Nicanor Obaldia<sup>1</sup>, Mario Quijada<sup>1</sup>, Yamilka Diaz<sup>1</sup>, Yaneth Pitti<sup>1</sup>, Marlene Castillo<sup>1</sup>, Danilo Franco<sup>1</sup>, Carolina De la Guardia<sup>2</sup>, Dalkiria Campos<sup>1</sup>, Marlon Nunez<sup>1</sup>, Lariza Mendoza<sup>1</sup>, Eduardo Cornejo<sup>1</sup>, Sandra Lopez<sup>1</sup>, Ariel Magallon<sup>1</sup><sup>1</sup>Instituto Conmemorativo Gorgas, Panama, Panama, <sup>2</sup>Indicasat-AIP, Panama, Panama

5335

**QUERCETIN HYDRATE AS A POTENTIAL ANTIVIRAL AGENT AGAINST ZIKA VIRUS**Marielena Vogel Saivish<sup>1</sup>, Gabriela de Lima Menezes<sup>2</sup>, Roosevelt Alves da Silva<sup>3</sup>, Marina Alves Fontoura<sup>4</sup>, Jacqueline Farinha Shimizu<sup>4</sup>, Gislaine Celestino Dutra da Silva<sup>1</sup>, Igor da Silva Teixeira<sup>1</sup>, Natalia Franco Bueno Mistrão<sup>1</sup>, Victor Miranda Hernandez<sup>1</sup>, Lívia Sacchetto<sup>1</sup>, Carolina Colombelli Pacca<sup>1</sup>, Rafael Elias Marques<sup>4</sup>, Maurício Lacerda Nogueira<sup>1</sup><sup>1</sup>Faculdade de Medicina de São José do Rio Preto, São José do Rio Preto, Brazil, <sup>2</sup>Universidade Federal do Rio Grande do Norte, Natal, Brazil, <sup>3</sup>Universidade Federal de Jataí, Jataí, Brazil, <sup>4</sup>Centro Nacional de Pesquisa em Energia e Materiais, Campinas, Brazil

5336

**A UNIVERSAL PURIFICATION METHOD FOR SARS-COV-2 VARIANT SPIKE ANTIGENS**Isabelle Eiser, Albert To, Ludwig Mayerlen, Troy Odo, Axel Lehrer  
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5337

**DESIGNING THERAPEUTICS BIOSIMILAR OF COMMERCIALIZED MABS TO MINIMIZE LETHAL EFFECTS OF DENGUE HEMORRHAGIC FEVER: IN-SILICO APPROACH**Ayeasha Siddika Lamia, Md. Mahmudul Hasan  
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5338

**NIPAH VIRUS THERAPEUTICS: A SYSTEMATIC REVIEW FOR CLINICAL PRIORITISATION**Xin Hui Chan<sup>1</sup>, Ilsa Haessler<sup>1</sup>, Zakiul Hassan<sup>1</sup>, Junko Takata<sup>1</sup>, Shanghavi Loganathan<sup>1</sup>, Bennett Choy<sup>1</sup>, Tara Hurst<sup>1</sup>, Eli Harriss<sup>2</sup>, Jake Dunning<sup>1</sup>, Miles Carroll<sup>1</sup>, Peter Horby<sup>1</sup>, Piero Olliaro<sup>1</sup><sup>1</sup>Pandemic Sciences Institute, University of Oxford, Oxford, United Kingdom, <sup>2</sup>Bodleian Libraries, University of Oxford, Oxford, United Kingdom

5339

**DENGUE ALLIANCE: ADVANCING DENGUE ANTIVIRALS FROM IN VITRO TO CLINICAL EFFICACY STUDIES OF CONCEPT STUDIES**Peter Sjö<sup>1</sup>, Prasert Auewarakul<sup>2</sup>, Panisadee Avirutnan<sup>3</sup>, Ami Fazlin B. Syed Mohamed<sup>4</sup>, Mohd Ridzuan Mohd Abdul Razak<sup>4</sup>, Ravindran Thayan<sup>5</sup>, Dinesh Mahajan<sup>6</sup>, Guruprasad Medigeshi<sup>6</sup>, Sweetly Samal<sup>6</sup>, Thiago Moreno L. Souza<sup>7</sup>, Mauro M. Teixeira<sup>8</sup>, Vivian M. Vasconcelos Costa<sup>9</sup>, Isabela Ribeiro<sup>1</sup>, Neelika Malavige<sup>9</sup><sup>1</sup>Drugs for Neglected Diseases initiative (DNDi), Geneva, Switzerland, <sup>2</sup>Department of Microbiology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand, Bangkok, Thailand, <sup>3</sup>Division of Dengue Hemorrhagic Fever Research, Research Department, Faculty of Medicine Siriraj Hospital & Siriraj Center of Research Excellence in Dengue and Emerging Pathogens, Mahidol University, Bangkok, Thailand, Bangkok, Thailand, Bangkok, Thailand, <sup>4</sup>Herbal Medicine Research Centre, Institute for Medical Research, National Institutes of Health, Ministry of Health Malaysia, Shah Alam, Malaysia, <sup>5</sup>Infectious Disease Research Centre, Institute for Medical Research, National Institutes of Health, Ministry of Health Malaysia, Shah Alam, Malaysia, <sup>6</sup>Translational Health Science and Technology Institute (THSTI), Faridabad, India, <sup>7</sup>Laboratório de Imunofarmacologia, Oswaldo Cruz Institute, Fundação Oswaldo Cruz (Fiocruz), Rio de Janeiro, Brazil, <sup>8</sup>Departamento de Bioquímica e Imunologia, Instituto de Ciências Biológicas, Universidade Federal de Minas Gerais, Belo Horizonte, Brazil, <sup>9</sup>Drugs for Neglected Diseases initiative (DNDi), New Delhi, India

5340

**DEVELOPMENT OF A PSEUDOTYPED LENTIVIRAL REPORTER VIRUS SYSTEM FOR NIPAH AND HENDRA VIRUSES**Nathan A. Krump, Lewis J. Stafford, Kelly Dew-Budd, Benjamin J. Doranz  
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5341

**MAPPING ANTIBODY EPITOPES USING A COMPREHENSIVE MUTAGENESIS LIBRARY OF SARS-COV-2 S PROTEIN**Edgar Davidson<sup>1</sup>, Shruthi Kannan<sup>1</sup>, Nathan A. Krump<sup>1</sup>, Colleen Fenn<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

5342

**DEVELOPING NOVEL INHIBITORS AGAINST VENEZUELAN EQUINE ENCEPHALITIS VIRUS BY TARGETING VIRUS-HOST INTERACTIONS**Abdullahi Temitope Jamiu<sup>1</sup>, Ivan Akhrymuk<sup>1</sup>, Kenneth Foreman<sup>2</sup>, Dmitri Klimov<sup>2</sup>, Mikell Paige<sup>2</sup>, Kylene Kehn-Hall<sup>1</sup><sup>1</sup>Virginia Tech, Blacksburg, VA, United States, <sup>2</sup>George Mason University, Manassas, VA, United States**Malaria - Antimalarial Resistance and Chemotherapy**

5343

**FACTORS ASSOCIATED WITH ADHERENCE TO MALARIA TREATMENT GUIDELINES IN PRIVATE DRUG OUTLETS - KISUMU COUNTY, KENYA**Fredrick O. Odhiambo<sup>1</sup>, Elvis O. Oyugi<sup>1</sup>, Ahmed M. Abade<sup>2</sup>, Fredrick O. Oluoch<sup>3</sup>, Wendy P. O'Meara<sup>4</sup><sup>1</sup>Ministry of Health, Nairobi, Kenya, <sup>2</sup>Field Epidemiology and Laboratory Training Program, Nairobi, Kenya, <sup>3</sup>Kisumu County Department of Health, Kisumu, Kenya, <sup>4</sup>Moi University, School of Public Health, Eldoret, Kenya

5344

**RETROSPECTIVE STUDY TO DETERMINE ANTIMALARIAL RESISTANCE MARKERS PROFILE USING TAQMAN ARRAY CARD (TAC) IN TAK PROVINCE THAILAND FROM 1998-2001**Sasikanya Thaloengsok<sup>1</sup>, Chaiyaporn Chaisatit<sup>1</sup>, Piyaporn Saingam<sup>1</sup>, Paphavee (Lertsethtakarn) Ketwalha<sup>1</sup>, Michele Spring<sup>1</sup>, Sabaithip Sriwichai<sup>1</sup>, Suporn Pholwat<sup>2</sup>, Jenny Guler<sup>2</sup>, Eric Houpt<sup>2</sup>, Brian Andrew Vesely<sup>1</sup><sup>1</sup>AFRIMS, Bangkok, Thailand, <sup>2</sup>University of Virginia, Charlottesville, VA, United States

5345

**EMERGING *PLASMODIUM FALCIPARUM* WITH REDUCED SUSCEPTIBILITY TO ARTEMISININ AND LUMEFANTRINE IN AFRICA**Colin Sutherland<sup>1</sup>, Don A. van Schalkwyk, Sade Pratt, Lindsay Stewart, Debbie Nolder  
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5346

**SANGER SEQUENCING AND DECONVOLUTION OF POLYCLONAL INFECTIONS: A QUANTITATIVE APPROACH TO MONITOR DRUG RESISTANT *PLASMODIUM FALCIPARUM***Hamma Maiga<sup>1</sup>, Morrisson Robert<sup>2</sup>, Patrick Duffy<sup>2</sup>  
<sup>1</sup>*Institut National de Santé Publique, Bamako, Mali*, <sup>2</sup>*Laboratory of Malaria Immunology and Vaccinology (LMIV), National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Bethesda, MD, United States*

(ACMCIP Abstract)

5347

**IDENTIFICATION OF NEW ANTIMALARIALS TARGETING THE P. FALCIPARUM PROLINE TRNA SYNTHETASE**Benigno Crespo Fernández  
*GlaxoSmithKline, Tres Cantos, Spain*

5348

**SIMPLE, INEXPENSIVE *IN VITRO* DRUG SURVIVAL ASSAY FOR MONITORING ANTIMALARIAL DRUG SENSITIVITY IN MALARIA ENDEMIC REGIONS**Chinedu Ogonnia Egwu, Fatoumata Bojang, Ndey Fatou Drammeh, Aminata Seedy Jawara, Fatou K. Jaitheh, Eniyou Oriero, Alfred Amambua-Ngwa  
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(ACMCIP Abstract)

5349

**ANALYSIS OF THE SUITABILITY OF USE OF MUTATIONS IN THE PVCRT-0 AND PVMDR1 GENES AS MARKERS OF RESISTANCE OF *PLASMODIUM VIVAX* TO CHLOROQUINE IN AMAZONIC BASIN**Rebecca Abreu Fernandes Dos Santos, Natalia Almeida de Oliveira, Patricia BRASIL, Claudio Tadeu Daniel Ribeiro, Maria de Fatima Ferreira-da- Cruz  
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(ACMCIP Abstract)

5350

**IDENTIFICATION OF B-CARBOLINE DERIVATIVES ACTIVE AGAINST QUIESCENT ARTEMISININ-RESISTANT *PLASMODIUM FALCIPARUM***Reagan S. Haney<sup>1</sup>, Jopaul Mathew<sup>2</sup>, Joshua Butler<sup>1</sup>, Emily Bremers<sup>1</sup>, Emilio F. Merino<sup>1</sup>, Victoria Mendiola<sup>1</sup>, Dennis Kyle<sup>1</sup>, Maxim Totrov<sup>3</sup>, Paul R. Carlier<sup>4</sup>, Maria B. Cassera<sup>1</sup>  
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(ACMCIP Abstract)

5351

***PLASMODIUM FALCIPARUM* KELCH13 R561H SPREAD AND EMERGENCE OF OTHER ARTEMISININ PARTIAL RESISTANT MUTATIONS ACROSS RWANDA USING A SITE AND TEMPORAL RAPID POOLING STRATEGY**Neeva Wernsman Young<sup>1</sup>, Gashema Pierre<sup>2</sup>, David Giesbrecht<sup>1</sup>, Tharcisse Munyaneza<sup>3</sup>, Alec Leonetti<sup>1</sup>, Rebecca Crudale<sup>1</sup>, Vincent Iradukunda<sup>2</sup>, Ntwari Jean Bosco<sup>2</sup>, Corine Karema<sup>4</sup>, Jean-Baptiste Mazarati<sup>2</sup>, Jonathan J. Juliano<sup>5</sup>, Jeffrey A. Bailey<sup>1</sup>  
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5352

***PLASMODIUM FALCIPARUM* DRUG RESISTANCE MARKERS AND GENETIC STRUCTURE IN MOZAMBIQUE, 2015-2022**Simone Salvador Boene<sup>1</sup>, Clemente da Silva<sup>1</sup>, Arlindo Chidimatembue<sup>1</sup>, Glória Matambisso<sup>1</sup>, Abel Nhama<sup>1</sup>, Eusebio Macete<sup>1</sup>, Pedro Aide<sup>1</sup>, Francisco Saúte<sup>1</sup>, Eduard Rovira-Vallbona<sup>2</sup>, Debayan Datta<sup>2</sup>, Alfredo Mayor<sup>2</sup>  
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5353

**INADEQUATE ARTEMETHER-LUMEFANTRINE TREATMENT RESPONSE IN A 15-MONTH OLD PATIENT WITH UNCOMPLICATED FALCIPARUM MALARIA IN WESTERN KENYA: A CASE REPORT**Raphael Okoth<sup>1</sup>, Alfred Odindo<sup>1</sup>, Benjamin Opot<sup>1</sup>, Agnes Cheruiyot<sup>1</sup>, Catherine Muriuki<sup>1</sup>, Redemptah Yeda<sup>1</sup>, Gladys Chemwor<sup>1</sup>, Jackline Juma<sup>1</sup>, Edwin Mwakio<sup>1</sup>, Maurine Mwallo<sup>1</sup>, Risper Maisiba<sup>1</sup>, Farid Abdi<sup>1</sup>, Duke Omariba<sup>1</sup>, Dennis Juma<sup>1</sup>, Timothy Egbo<sup>2</sup>, Hoseah M. Akala<sup>1</sup>  
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5354

**PREVALENCE OF MOLECULAR MARKERS OF RESISTANCE TO SP BEFORE AND AFTER COMMUNITY DELIVERY OF INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY: A MULTI-COUNTRY EVALUATION IN SUB-SAHARAN AFRICA**Antía Figueroa-Romero<sup>1</sup>, Daniel Bissombolo<sup>2</sup>, Martin Meremikwu<sup>3</sup>, Arsène Ratsimbaoa<sup>4</sup>, Charfudin Sacoor<sup>5</sup>, Iwara Arikpo<sup>6</sup>, Elisha Lemba<sup>7</sup>, Abel Nhama<sup>8</sup>, Rianasoambolanoro Rakotosaona<sup>9</sup>, Mireia Llach<sup>1</sup>, Clara Pons-Duran<sup>1</sup>, Sergi Sanz<sup>1</sup>, Laurence Ma<sup>7</sup>, Cécile Doderer-lang<sup>8</sup>, Christina Maly<sup>9</sup>, Elaine Roman<sup>9</sup>, Franco Pagnoni<sup>1</sup>, Alfredo Mayor<sup>1</sup>, Didier Menard<sup>9</sup>, Raquel González<sup>1</sup>, Clara Menéndez<sup>1</sup>  
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5355

**ESTIMATING THE IMPACT OF *PLASMODIUM FALCIPARUM* DHFR AND DHPS MUTATIONS ON PROTECTIVE EFFICACY OF SULFADOXINE-PYRIMETHAMINE: EVIDENCE FROM THERAPEUTIC EFFICACY STUDIES AND IMPLICATIONS FOR MALARIA CHEMOPREVENTION**Andria Mousa<sup>1</sup>, Gina Cuomo-Dannenburg<sup>3</sup>, Hayley A. Thompson<sup>3</sup>, David J. Bell<sup>4</sup>, Umberto D'Alessandro<sup>5</sup>, Alain Nahum<sup>6</sup>, Karen I. Barnes<sup>7</sup>, Jaishree Raman<sup>8</sup>, Roly Gosling<sup>1</sup>, Michael Alifrangis<sup>9</sup>, Emma F. Hocke<sup>9</sup>, Helle S. Hansson<sup>9</sup>, Khalid Beshir<sup>1</sup>, R. Matthew Chico<sup>1</sup>, Colin J. Sutherland<sup>1</sup>, Ana Chopo-Pizzaro<sup>1</sup>, Lucy C. Okell<sup>2</sup>, Cally Roper<sup>1</sup>  
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5356

### IMPACT OF SEASONAL MALARIA CHEMOPREVENTION (SMC) ON MOLECULAR MARKERS OF *PLASMODIUM FALCIPARUM* ANTIMALARIAL DRUG RESISTANCE IN KOULIKORO HEALTH DISTRICT, MALI

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(ACMCIP Abstract)

5357

### SYSTEMATIC REVIEW & GEOSPATIAL MODELLING OF MOLECULAR MARKERS OF RESISTANCE TO ARTEMISININS & SULFADOXINE-PYRIMETHAMINE IN *PLASMODIUM FALCIPARUM* IN INDIA

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5358

### PHARE, A BIOINFORMATICS PIPELINE TO DETECT MINORITY HAPLOTYPES IN MULTICLONAL SAMPLES

Philipp Wagner<sup>1</sup>, Salome Hosch<sup>1</sup>, Ulrich Vickos<sup>2</sup>, Christian Nsanzabana<sup>1</sup>, Tobias Schindler<sup>1</sup>, Claudia Daubenberger<sup>1</sup>  
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5359

### MOLECULAR MARKERS OF RESISTANCE TO SULFADOXINE-PYRIMETHAMINE AND AMODIAQUINE IN THE HEALTH DISTRICT OF BOUSSÉ, BURKINA FASO

Cheick Compaore<sup>1</sup>, Craig Bonnington<sup>2</sup>, Kevin Baker<sup>2</sup>, Paul Sondo<sup>3</sup>, Adama Traore<sup>1</sup>, Boulaye Dao<sup>4</sup>, Ambroise Ouedraogo<sup>4</sup>, Sidzabda Kompaore<sup>1</sup>, Gauthier Tougri<sup>5</sup>, Halidou Tinto<sup>3</sup>  
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5360

### RESISTANCE HAPLOTYPES DETECTED IN PREGNANT WOMEN IN BURKINA FASO RECEIVING INTERMITTENT PREVENTIVE TREATMENT WITH SP

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(ACMCIP Abstract)

## Malaria - Diagnosis - Challenges and Innovations

5361

### DIAGNOSTIC PERFORMANCE OF NXTEK™ ELIMINATE MALARIA PF TEST FOR THE DETECTION OF *PLASMODIUM FALCIPARUM* IN SCHOOL CHILDREN WITH ASYMPTOMATIC MALARIA

Abdissa Biruksew Hordofa<sup>1</sup>, Ashenafi Demeke<sup>2</sup>, Prof. Zewdie Birhanu<sup>1</sup>, Estifanos Kebede<sup>1</sup>, Lemu Golassa<sup>3</sup>, Evans M. Mathebula<sup>4</sup>, Prof. Delenasaw Yewhalaw<sup>1</sup>  
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5362

### EVIDENCE OF NON-FALCIPARUM *PLASMODIUM* CIRCULATION IN WESTERN AND EASTERN SENEGAL AND ITS IMPLICATIONS FOR MALARIA CONTROL

Tolla Ndiaye<sup>1</sup>, Amy Gaye<sup>1</sup>, Bassirou Ngom<sup>1</sup>, Aita Sene<sup>1</sup>, Mouhamad Sy<sup>1</sup>, James Campbell<sup>2</sup>, Davis Nwakanma<sup>3</sup>, Jean Langhorne<sup>2</sup>, Daouda Ndiaye<sup>1</sup>, Aida Sadikh Badiane<sup>1</sup>  
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5363

### PERFORMANCE EVALUATION OF NOVEL LDH-BASED RAPID DIAGNOSTIC TESTS FOR *P. FALCIPARUM* AND *P. VIVAX* MALARIA ON FROZEN SPECIMENS: IMPLICATIONS FOR ACCESS TO RADICAL CURE

Marcelo Brito<sup>1</sup>, Dhelio Pereira<sup>2</sup>, Anne Almeida<sup>1</sup>, Gabrielly Santos da Silva<sup>1</sup>, Emmanuelle Lira<sup>3</sup>, Vanessa Castro<sup>3</sup>, Stephanie Zobrist<sup>4</sup>, William Sheahan<sup>4</sup>, Eduardo Garbin<sup>2</sup>, Emily Gerth-Guyette<sup>4</sup>, Sampa Pal<sup>4</sup>, Allison Golden<sup>4</sup>, Marcus VG Lacerda<sup>5</sup>, Gonzalo J. Domingo<sup>1</sup>  
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5364

### LOW PREVALENCE OF PFHRP2 AND PFHRP3 DELETIONS AND NON-FALCIPARUM MALARIA INFECTIONS IN OUTPATIENTS SAMPLED DURING THE 2021 BENIN HEALTH FACILITY SURVEY

Jessica N. McCaffery<sup>1</sup>, Aurore Hounto<sup>2</sup>, Ahmed S. Hassani<sup>3</sup>, Douglas Nace<sup>1</sup>, Patrick Condo<sup>4</sup>, Virgile Nguenou<sup>4</sup>, Hortense Kossou<sup>5</sup>, Virgile Capo-Chichi<sup>6</sup>, Julien Aïssan<sup>2</sup>, Augustin Kpemasse<sup>2</sup>, Mateusz Plucinski<sup>1</sup>, Dean Sayre<sup>1</sup>, Cyriaque Affoukou<sup>2</sup>, Eric Rogier<sup>1</sup>  
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(ACMCIP Abstract)

Thursday  
October 19

5365

### PLASMODIUM FALCIPARUM KELCH13 MUTATIONS IN ERITREA AND ASSOCIATIONS WITH PFHRP2 AND PFHRP3 DELETIONS

Selam Mihreteab<sup>1</sup>, Karen Anderson<sup>2</sup>, Irene Molina de la Fuente<sup>3</sup>, Colin Sutherland<sup>4</sup>, David Smith<sup>2</sup>, Jane Cunningham<sup>5</sup>, Khalid B. Beshir<sup>4</sup>, **Qin Cheng**<sup>6</sup>  
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5366

### SURVEILLANCE OF PLASMODIUM FALCIPARUM HRP23 GENE DELETIONS IN MOZAMBIQUE: A PROSPECTIVE STUDY

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5367

### AVAILABILITY OF FREE MALARIA RAPID DIAGNOSTIC TESTS AT THE LEVEL OF PRIVATE PHARMACIES FOR THE CONFIRMATION OF THE DIAGNOSIS OF MALARIA PRIOR TO ANTIMALARIAL TREATMENT: RESULTS OF A PILOT PROJECT IN BENIN : MARCH TO DECEMBER 2022

**Edgard Mario Badet**<sup>1</sup>, Virgile Nguenon<sup>2</sup>, Eugène Montcho<sup>3</sup>, Patrick Condo<sup>3</sup>, Cyriaque D. Affoukou<sup>1</sup>, Gislaine Loko Djidjoho<sup>3</sup>, Mourchidath Adegbindi<sup>3</sup>, Pascal Fafeh<sup>4</sup>, Vivien Akan<sup>1</sup>  
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5368

### MALARIA PARASITEMIA ESTIMATES BASED ON HRP2 AND PLDH ANTIGEN CONCENTRATIONS FROM A LARGE HOUSEHOLD SURVEY IN NIGERIA: HOW MUCH DIFFERENCE DOES RDT PERFORMANCE MAKE?

**Laura Steinhardt**<sup>1</sup>, Abiodun Ogunniyi<sup>2</sup>, Nwando Mba<sup>2</sup>, Ado Abubakar<sup>3</sup>, Perpetua Uhomoihi<sup>4</sup>, McPaul Okoye<sup>5</sup>, Nnaemeka Iriemenam<sup>5</sup>, Michael Aidoo<sup>1</sup>, Eric Rogier<sup>1</sup>, Chikwe Ihekweazu<sup>2</sup>  
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5369

### MALARIA MISDIAGNOSIS IN THE ROUTINE HEALTH SYSTEM IN ARBA MINCH AREA DISTRICT IN SOUTHWEST ETHIOPIA: AN IMPLICATION FOR MALARIA CONTROL AND ELIMINATION

Engida Yigezu<sup>1</sup>, Biniam Wondale<sup>1</sup>, Daniel Abebe<sup>2</sup>, Girum Tamiru<sup>1</sup>, Nigatu Eligo<sup>1</sup>, Bernt Lindtjörn<sup>3</sup>, Endalamaw Gadisa<sup>2</sup>, Fitsum Girma Tadesse<sup>2</sup>, **Fekadu Massebo**<sup>1</sup>  
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5370

### USER PERCEPTIONS OF A SMARTPHONE-BASED MALARIA RAPID DIAGNOSTIC TEST (RDT) AID FOR COMMUNITY AND PRIVATE CLINIC-BASED HEALTH WORKERS IN WESTERN KENYA

**Wycliffe Waweru**<sup>1</sup>, Shawna Cooper<sup>2</sup>, Christopher Lourenco<sup>3</sup>, Malia Skjefte<sup>4</sup>, Christine Oduor<sup>1</sup>, Sam Smedinghoff<sup>2</sup>, Stephen Poyer<sup>4</sup>  
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5371

### LACK OF MUTANT P. FALCIPARUM PARASITES WITH PFHRP2 AND PFHRP3 GENE DELETIONS IN ANLONG VENG AND KRATIE, CAMBODIA

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5372

### PERFORMANCE AND USABILITY EVALUATION OF NOVEL MALARIA RDTs FOR IMPROVED CASE MANAGEMENT IN KÉDOUGOU, SENEGAL

Stephanie Zobrist<sup>1</sup>, Babacar Souleymane Sambe<sup>2</sup>, **Divya Soni**<sup>3</sup>, Aissatou Diagne<sup>2</sup>, Ibrahima Sarr<sup>2</sup>, Arona Sabene Diatta<sup>2</sup>, William Sheahan<sup>1</sup>, Sampa Pal<sup>1</sup>, Allison Golden<sup>1</sup>, Rebecca Green<sup>1</sup>, Yakou Dieye<sup>4</sup>, Moustapha Cisse<sup>4</sup>, Gonzalo J. Domingo<sup>1</sup>, Makhtar Niang<sup>2</sup>  
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5373

### DEVELOPMENT OF A FIELD-DEPLOYABLE RT-PCR DIAGNOSTIC SYSTEM FOR PLASMODIUM DETECTION IN ANOPHELES SPECIES.

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5374

### EVALUATION OF MALARIA RAPID DIAGNOSTIC TEST SERVICES PERFORMANCE AT HEALTH POSTS IN ETHIOPIA

**Adugna Abera**, Abnet Abebe, Desalegn Nega, Bokretsiion Gidey, Ashenafi Assefa, Geremew Tasew, Adugna Woyessa  
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5375

### A NOVEL COMPETITIVE ELISA ASSAY TO MEASURE AMODIAQUINE CONCENTRATION IN CHILDREN RECEIVING SULFADOXINE-PYRIMETHAMINE PLUS AMODIAQUINE FOR SEASONAL MALARIA CHEMOPREVENTION IN KOULIKORO, MALI.

**Ilo Dicko**<sup>1</sup>, Hawa Boukary Diarra<sup>1</sup>, Daouda Sanogo<sup>1</sup>, Soumba Keita<sup>1</sup>, Fousseyni Kane<sup>1</sup>, Ibrahim Sanogo<sup>1</sup>, Mountaga Diallo<sup>1</sup>, Nadie Coulibaly<sup>1</sup>, Mamadou Wague<sup>1</sup>, Hamady Coulibaly<sup>1</sup>, Jingqi Qian<sup>2</sup>, Baomin Wang<sup>2</sup>, Liwang Cui<sup>2</sup>, Djeneba Dabita<sup>3</sup>, Mahamoudou Toure<sup>1</sup>, Seydou Doumbia<sup>1</sup>  
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5376

### USING DEATH AUDITS TO IMPROVE CLINICAL MANAGEMENT OF SEVERE MALARIA AND MAP KEY NEEDS TO REDUCE MORTALITY IN NORTHERN ANGOLA

**Teresa Nobrega**<sup>1</sup>, David Sunda<sup>1</sup>, Davista Abílio<sup>2</sup>, Gabriel Wangama<sup>2</sup>, José Franco Martins<sup>3</sup>, Ana Direito<sup>1</sup>, Sérgio Lopes<sup>4</sup>  
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5377

**MULTIPLEX LAMP COUPLED TO CARTRIDGE BASED NALFIA DEVICE AS A ONE POT DIAGNOSTIC PLATFORM FOR MALARIA**

**Nabil Royez**, Aysha Wijesinghe, Jack Burke-Gaffney, Hitendra Kumar, Claire Kamaliddin, Shoaib Ashraf, Dylan R. Pillai  
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5378

**MALARIA RDT INTERPRETATION ACCURACY OF HEALTH WORKERS COMPARED TO ARTIFICIAL INTELLIGENCE (AI) AND PANEL READ IN KANO STATE, NIGERIA**

Sasha Frade<sup>1</sup>, **Shawna Cooper**<sup>1</sup>, Sam Smedinghoff<sup>1</sup>, David Hattery<sup>1</sup>, Yongshao Ruan<sup>1</sup>, Paul Isabella<sup>1</sup>, Nirmal Ravi<sup>2</sup>, Barry Finette<sup>3</sup>, Megan McLaughlin<sup>3</sup>, Ezra Mount Finette<sup>3</sup>, Lynn Metz<sup>2</sup>  
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5379

**EVOLUTION OF PFHRP2 AND PFHRP3 DELETIONS IN EQUATORIAL GUINEE BETWEEN THE PRE AND POST RDT INTRODUCTION AND THE IMPACT OF PUBLIC HEALTH STRATEGIES ON THEIR EXPANSION**

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## Malaria - Drug Development and Clinical Trials

5380

**SUPEROXIDE GENERATION AND REDOX CYCLING OF PRIMAQUINE METABOLITES ARE DRIVEN BY BILIVERDIN REDUCTASE B AND N-RIBOSYLDIHYDRONICOTINAMIDE:QUINONE REDUCTASE 2**

Mitasha S. Palha<sup>1</sup>, Eric A. Legenzov<sup>1</sup>, Karolina Dziejulska<sup>2</sup>, Paul Buehler<sup>1</sup>, Derek R. Lamb<sup>1</sup>, Robert Commons<sup>3</sup>, **James C. Zimring**<sup>2</sup>, Joseph P. Y. Kao<sup>1</sup>  
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5381

**POTENT ACYL-COA SYNTHETASE 10 INHIBITORS KILL PLASMODIUM FALCIPARUM BY DISRUPTING TRIGLYCERIDE FORMATION**

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(ACMCIP Abstract)

5382

**FIGHTING MALARIA WITH IRRESISTIBLE DRUGS**

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5383

**LEVERAGING RWANDA'S COMMUNITY HEALTH WORKERS TO CONDUCT A THERAPEUTIC EFFICACY STUDY IN AREAS OF DECLINING MALARIA TRANSMISSION**

**Noella Umulisa**<sup>1</sup>, Aline Uwimana<sup>2</sup>, Katherine Wolf<sup>3</sup>, Jean M. Harerimana<sup>1</sup>, Celestin Ntirandeka<sup>1</sup>, Naomi Lucchi<sup>4</sup>, Kaendi Munguti<sup>5</sup>, Beata Mukarugwiro<sup>6</sup>, Jehan Ahmed<sup>6</sup>, Aimable Mbituyumuremyi<sup>2</sup>  
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5384

**NOVEL MULTIPLE-STAGE ANTIMALARIAL PRODIGININES**

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5385

**ACRIDONES AS NOVEL LIVER STAGE ACTIVE ANTIMALARIAL**

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5386

**SAFETY AND EFFICACY OF PRIMAQUINE IN PATIENTS WITH P. VIVAX MALARIA FROM SOUTH ASIA: A SYSTEMATIC REVIEW AND INDIVIDUAL PATIENT DATA META-ANALYSIS**

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5387

### EFFICACY OF THREE ARTEMISININ-BASED COMBINATIONS FOR THE TREATMENT OF UNCOMPLICATED MALARIA IN CHILDREN IN BURKINA FASO

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5388

### EXPLORING DIMETHYL FUMARATE AS AN ADJUNCTIVE THERAPY FOR CEREBRAL MALARIA IN EXPERIMENTAL CEREBRAL MALARIA MODEL

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5389

### METABOLISM OF TAFENOQUINE AND TAFENOQUINE DRUG COMBINATIONS IN LIVER CELL CULTURES

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5390

### PREDICTION OF ADENYLOSUCCINATE LYASE 3D STRUCTURE A PROMISING THERAPEUTIC TARGET IN *PLASMODIUM FALCIPARUM* AND ITS POTENTIAL INHIBITORS FROM AFRICAN NATURAL COMPOUND DATABASES

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5391

### ARTEMETHER-LUMEFANTRINE VERSUS PYRONARIDINE-ARTESUNATE FOR THE TREATMENT OF MALARIA IN SARS-COV-2 INFECTED PATIENTS IN KENYA AND BURKINA FASO: A RANDOMIZED OPEN-LABEL TRIAL (MALCOV)

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## Malaria - Elimination

5392

### LEVERAGING COMMUNITY OWNED RESOURCE PERSONS (CORPS) TO REACH THE UNDERSERVED POPULATION THROUGH INTEGRATED COMMUNITY CASE MANAGEMENT (ICCM) TO FIGHT MALARIA IN TANZANIA

Onesmo Mwogoha<sup>1</sup>, Goodluck Tesha<sup>2</sup>, Sijenuu Aaron<sup>1</sup>, Abdallah Lusasi<sup>1</sup>, Samwel Lazaro<sup>1</sup>, Hassani Mwaga<sup>1</sup>, Daniel Mbwambo<sup>1</sup>, Katherine Wolf<sup>3</sup>

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5393

### MALARIA AND THE INTERMITTENT PREVENTATIVE TREATMENT FOR FOREST-GOERS IN CAMBODIA: PRELIMINARY RESULTS AND LESSONS LEARNED

Siv Sovannaroth<sup>1</sup>, Bunmeng Chhun<sup>2</sup>, Rafael Jairah Jr. Matoy<sup>2</sup>, Vichka Khy<sup>2</sup>, Elijah Filip<sup>2</sup>, Céline Christiansen-Jucht<sup>3</sup>, Giulia Manzoni<sup>3</sup>, Luciano Tuseo<sup>3</sup>, Huy Rekol<sup>1</sup>

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5394

### PLANT-DERIVED ADJUVANTS PROVIDE A PATH TO THWARTING EMERGING DRUG-RESISTANT MALARIA

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5395

### SPILLOVER EFFECTS OF REACTIVE, FOCAL MALARIA ELIMINATION INTERVENTIONS IN NAMIBIA

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5396

**EFFECTS OF METEOROLOGICAL FACTORS & ELEVATION ON MALARIA TRANSMISSION IN ELIMINATION TARGETED DISTRICT OF ETHIOPIA**

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5397

**PRESENT STATUS OF THE PRIVATE SECTOR ENGAGEMENT IN MALARIA CASE MANAGEMENT IN BANGLADESH**

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5398

**DETERMINANTS OF HIGH NON-REDUCING MALARIA ADMISSION RATES IN GHANA: AN AUDIT OF MALARIA ADMISSIONS IN 13 HEALTH FACILITIES WITH HIGHEST RATES IN 2021**

**Tracy Hanson<sup>1</sup>**, Paul Boateng<sup>2</sup>, George Adu Asumah<sup>2</sup>, Alex Asamoah<sup>2</sup>, Mildred Komey<sup>2</sup>, Ferguson Duvor<sup>2</sup>, Joel Balbaare Naa<sup>2</sup>, Nana Yaw Peprah<sup>2</sup>, Kezia Malm<sup>2</sup>  
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5399

**FORMULATION OF G6PD HEMOGLOBIN CONTROL FOR POINT-OF-CARE G6PD DIAGNOSTICS**

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5400

**INVESTIGATING THE IMPACT OF LARVICIDING AS A SUPPLEMENTARY MALARIA VECTOR CONTROL TOOL IN RURAL SOUTH EASTERN TANZANIA: A SIMULATION STUDY**

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5401

**IMPACT OF MASS DRUG ADMINISTRATION AND INDOOR RESIDUAL SPRAYING ON MALARIA BURDEN IN A HIGH TRANSMISSION SETTING: A QUASI-EXPERIMENTAL STUDY DESIGN**

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5402

**ASSESSMENT ON THE RATIONAL USE OF ANTIMALARIA DRUGS IN HEALTH FACILITIES OF ETHIOPIA, CROSS SECTIONAL STUDY**

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5403

**ASYMPTOMATIC MALARIA AND ITS TREATMENT EFFECTIVENESS IN GIA LAI AND PHU YEN PROVINCES OF VIETNAM FOR THE MALARIA ELIMINATION ROADMAP GIA LAI AND PHU YEN PROVINCES OF VIETNAM FOR THE MALARIA ELIMINATION ROADMAP**

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5404

**EVALUATION OF THE PERFORMANCE OF THE EXTENSION OF INVESTIGATIONS - RESPONSE OF MALARIA CASES IN THE REGION OF FATICK (SÉNÉGAL) FOR THE YEAR 2021**

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5405

**EXPOSURE TO A MULTI-CHANNEL MALARIA SBC PROGRAM AMONG GOLD MINERS IN GUYANA**

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5406

**CONSIDERATIONS FOR MEDICATION SAFETY FOR MASS DRUG ADMINISTRATION FOR PLASMODIUM FALCIPARUM MALARIA ELIMINATION**

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5407

**ELUCIDATING INTERSEASON RESIDUAL PLASMODIUM INFECTION IN HUMANS AND WILD MOSQUITOES TO GUIDE THE SUCCESSFUL IMPLEMENTATION OF INTERVENTIONS FOR MALARIA ELIMINATION**

**Inès G. Pare<sup>1</sup>**, Frédéric Guigma<sup>1</sup>, Bernard M. Somé<sup>1</sup>, Nicaise Djègbè<sup>1</sup>, Thomas S. Churcher<sup>2</sup>, Anna Cohuet Cohuet<sup>3</sup>, Roch K. Dabiré<sup>1</sup>, Dari F. Da<sup>1</sup>  
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Thursday  
October 19

5408

## KNOWLEDGE AND PERCEPTIONS OF NATIONAL GUIDELINES FOR THE CASE MANAGEMENT OF MALARIA IN PREGNANCY AMONG HEALTHCARE PROVIDERS AND DRUG DISPENSERS IN THE CONTEXT OF MULTIPLE FIRST-LINE THERAPIES IN WESTERN KENYA: A MIXED METHODS STUDY

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5409

## WHY DID BLACK SOLDIERS HISTORICALLY HAVE MORE PNEUMONIA THAN WHITE SOLDIERS IN THE US ARMY?

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5410

## ONE OUT OF TWO CHILDREN CARRIES MALARIA PARASITES: HIGH PREVALENCE OF ASYMPTOMATIC MALARIA AMONG CHILDREN IN THE AHANTA WEST DISTRICT, GHANA

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5411

## VIVAX MALARIA IN DUFFY NEGATIVE ETHIOPIAN PATIENTS SHOWS INVARIABLY LOW ASEXUAL PARASITAEMIA

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5412

## EPIDEMIOLOGICAL STUDY TO ESTIMATE MALARIA PREVALENCE AND USE OF CONTROL MEASURES IN AN AREA WITH PERSISTENT TRANSMISSION IN SENEGAL

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5413

## MALARIA TRENDS DURING THE COVID-19 PANDEMIC IN THE CITY PROVINCE OF KINSHASA / DR CONGO

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5414

## FACTORS ASSOCIATED WITH ACTIVE PRIVATE HEALTH PROVIDER FOLLOW-UP OF P. VIVAX PATIENTS TREATED WITH PRIMAQUINE IN MYANMAR

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5415

## DISTRIBUTION OF ANOPHELINES AND MALARIA PREVALENCE ACCORDING TO HOUSE STRUCTURE AND COMMUNITY PRACTICES DURING A LARVICIDING PROGRAM IN THE CITY OF YAOUNDÉ, CAMEROON

Carmène Sandra Ngadjou<sup>1</sup>, Abdou Talipouo<sup>1</sup>, Patricia Doumbe-Belisse<sup>1</sup>, Parfait Awono-Ambene<sup>2</sup>, Sevilor Kekeunou<sup>3</sup>, Charles Sinclair Wondji<sup>4</sup>, Christophe Antonio-Nkondjio<sup>2</sup>  
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5416

## BREAKING THE MALARIA CYCLE; ASSESSMENT OF REPEAT MALARIA INFECTIONS IN LAKE ENDEMIC REGION OF WESTERN KENYA, JUNE 2021-MAY 2022

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5417

## INSIGHTS INTO THE IMPLEMENTATION OF A LIFE-SAVING INTERVENTION: A PROCESS EVALUATION OF PRE-REFERRAL RECTAL ARTESUNATE SUPPOSITORIES ADMINISTRATION IN CHILDREN FROM RURAL ZAMBIA FOR SEVERE MALARIA

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5418

## HELMINTH AND MALARIA CO-INFECTION AMONG PREGNANT WOMEN IN TWO DISTRICTS OF THE VOLTA REGION OF GHANA

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5419

## TARGETING MALARIA CONTROL EFFORTS IN MALAWI: OUTPUTS AND RECOMMENDATIONS FROM A WORKSHOP ON BURDEN STRATIFICATION FOR THE 2023-2030 STRATEGIC PLAN

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5420

**COMMUNITY HEALTH VOLUNTEER CONTRIBUTION TO MALARIA SURVEILLANCE IN SIAYA COUNTY, WESTERN KENYA**

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5421

**MALARIA TEST POSITIVITY RATES IN COMMUNITY SURVEILLANCE AS COMPARED TO HEALTH FACILITY SURVEILLANCE IN MALARIA ENDEMIC AREA RARIEDA SUB-COUNTY, WESTERN KENYA**

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5422

**IMPLEMENTING HIGH QUALITY COMMUNITY CASE MANAGEMENT AND DATA REPORTING: LESSONS FROM THE FIELD IN SIAYA, WESTERN KENYA**

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5423

**NON-RANDOM DISTRIBUTION OF PLASMODIUM SPECIES INFECTIONS AND ASSOCIATED CLINICAL OUTCOMES IN CHILDREN 3-17 YEARS OF AGE IN THE LAKE VICTORIA REGION, KENYA, 2012-2020**

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5424

**DYNAMICS OF SUBMICROSCOPIC MALARIA INFECTION IN SOUTHERN BENIN**

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5425

**HIGH PROPORTION OF LOW PARASITAEMIA AND SUBMICROSCOPIC MALARIA INFECTIONS IN HONDURAN MOSQUITIA**

Gabriela Matamoros<sup>1</sup>, Denis Escobar<sup>1</sup>, Alejandra Pinto<sup>1</sup>, Delmy Serrano<sup>2</sup>, Eliška Ksandrová<sup>1</sup>, Nicole Grimaldi<sup>1</sup>, Gabriel Juárez-Fontecha<sup>1</sup>, Marcela Moncada<sup>1</sup>, Danielle Pannebaker<sup>3</sup>, Hugo Valdivia<sup>3</sup>, Gustavo Fontecha<sup>1</sup>

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(ACMCIP Abstract)

5426

**A PRELIMINARY ANALYSIS OF HEALTH BEHAVIORS AND ACCESS TO CARE FOR SEVERE MALARIA DISEASE AT SUSSUNDENGA-SEDE HEALTH CENTER**

Dominique E. Earland<sup>1</sup>, Albino F. Bibe<sup>2</sup>, Vali Muhiro<sup>3</sup>, Diocleciano Nelio<sup>3</sup>, João Ferrão<sup>4</sup>, Kelly Searle<sup>1</sup>

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5427

**HEAVY SCHISTOSOMA MANSONI INFECTION IS ASSOCIATED WITH REDUCED RISK OF PLASMODIUM INFECTION IN SCHOOLCHILDREN IN LEMFU, DEMOCRATIC REPUBLIC OF THE CONGO**

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5428

**ASYMPTOMATIC AND SUBMICROSCOPIC MALARIA INFECTIONS IN SUGAR CANE AND RICE DEVELOPMENT AREAS OF ETHIOPIA**

Hallelujah Getachew Gebreyohannes<sup>1</sup>, Assalif Demissew<sup>2</sup>, Ashenafi Abossie<sup>1</sup>, Kassahun Habtamu<sup>3</sup>, Xiaoming Wang<sup>4</sup>, Daibin Zhong<sup>4</sup>, Guofa Zhou<sup>4</sup>, Ming Chieh Lee<sup>4</sup>, Elizabeth Hemming-Schroeder<sup>5</sup>, Lauren Bradley<sup>5</sup>, Teshome Degefa<sup>1</sup>, Dawit Hawaria<sup>6</sup>, Arega Tsegaye<sup>1</sup>, James W. Kazura<sup>7</sup>, Cristian Koepfli<sup>8</sup>, Guiyun Yan<sup>4</sup>, Delenasaw Yewhalaw<sup>1</sup>

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5429

**ANTENATAL CARE SURVEILLANCE OF PLASMODIUM FALCIPARUM IN MOZAMBIQUE: FROM MALARIA TRENDS TO GENOMICS**

Glória Graça Ernesto Matambisso<sup>1</sup>, Clemente Silva<sup>1</sup>, Dário Tembisse<sup>1</sup>, Simone Boene<sup>1</sup>, Henriques Mbeve<sup>1</sup>, Nelo Ndimande<sup>1</sup>, Eduard Rovira<sup>2</sup>, Neide Canana<sup>3</sup>, Bernadete Rafael<sup>4</sup>, Sónia Enosse<sup>5</sup>, Maria Rodrigues<sup>5</sup>, Baltazar Candrinho<sup>4</sup>, Francisco Saúte<sup>1</sup>, Alfredo Mayor<sup>1</sup>

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Thursday  
October 19

5430

### SPATIO-TEMPORAL DISTRIBUTION OF MALARIA CASES IN MUTASA DISTRICT FOLLOWING MALARIA CONTROL INTERVENTION BETWEEN 2017 AND 2023

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5431

### SPATIAL DYNAMICS OF MALARIA TRANSMISSION

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5432

### EPIDEMIOLOGICAL PROFILE OF PLASMODIAL SPECIES IN SYMPTOMATIC SUBJECTS IN THE CITIES OF BANDUNDU AND KIKWIT&LT;KWILU PROVINCE&GT;DEMOCRATIC REPUBLIC OF CONGO

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5433

### METHODOLOGY TO ESTIMATE DISTRIBUTION OF MALARIA CASES AMONG CHILDREN IN SUB-SAHARAN AFRICA BY SPECIFIED AGE CATEGORIES

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5434

### PREVALENCE OF ASYMPTOMATIC AND SUBMICROSCOPIC MALARIA INFECTIONS AMONG HIV PATIENTS IN YAOUNDE, CAMEROON

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5435

### EXPLORING THE COST EFFECTIVENESS OF PROACTIVE CASE DETECTION IN HARD-TO-REACH, HIGH INCIDENCE COMMUNITIES FROM A COHORT STUDY IN SOUTHEAST MADAGASCAR

**Joseph Lewinski**<sup>1</sup>, James Hazen<sup>1</sup>, Mahery Rebalih<sup>2</sup>, Virginie Ralisoa<sup>2</sup>, Elanirina Andrianoelivololona<sup>2</sup>, Benjamin Rice<sup>3</sup>

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## Malaria - Genetics, Genomics and Evolution

5436

### GENETIC DIVERSITY AND GENOTYPE MULTIPLICITY OF *PLASMODIUM FALCIPARUM* INFECTION IN PATIENTS WITH UNCOMPLICATED MALARIA IN CHEWAKA DISTRICT, ETHIOPIA

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(ACMCIP Abstract)

5437

### ULTRA-DEEP AMPLICON SEQUENCING OF HIGHLY POLYMORPHIC NOBLE MARKERS OF *PLASMODIUM FALCIPARUM* SHOWS DECLINING OF MALARIA TRANSMISSION IN ETHIOPIA

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5438

### GENETIC DIVERSITY OF *PLASMODIUM FALCIPARUM* AND TRANSMISSION PATTERNS IN FOREST-GOING POPULATIONS IN SOUTHERN LAO PDR

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5439

### GENETIC DIVERSITY OF *PLASMODIUM FALCIPARUM* AND GENETIC PROFILE IN CHILDREN WITH ACUTE UNCOMPLICATED MALARIA IN CAMEROON

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5440

### CYP3A4 GENE VARIANTS IN RESIDENTS OF LAKE VICTORIA REGION, KENYA, 2013

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5441

**PLASMODIUM FALCIPARUM WITH PFHRP2 AND PFHRP3 GENE DELETIONS IN ASYMPTOMATIC MALARIA INFECTIONS IN THE LAKE VICTORIA REGION, KENYA**

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5442

**POPULATION AND EVOLUTIONARY GENETICS OF AMA1 GENE IN CAMEROONIAN PLASMODIUM FALCIPARUM ISOLATES**

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**(ACMCIP Abstract)**

5443

**GENETIC DIVERSITY AND MOLECULAR EVOLUTION OF PLASMODIUM VIVAX DUFFY BINDING PROTEIN AND MEROZOITE SURFACE PROTEIN I IN NORTHWESTERN THAILAND**

Parsakorn Tapaopong  
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**(ACMCIP Abstract)**

5444

**PREDICTING THE GENETIC SIGNATURES OF DRY SEASON AESTIVATION AMONG MALARIA TRANSMITTING MOSQUITOES**

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5445

**TRANSCRIPTOME ANALYSIS REVEAL MOLECULAR TARGETS OF INVASION PHENOTYPE DIVERSITY IN NATURAL PLASMODIUM FALCIPARUM ISOLATES FROM MALARIA ENDEMIC REGIONS OF CAMEROON**

Ines A. Ngoh<sup>1</sup>, Karim Mane<sup>2</sup>, Damian N. Anong<sup>1</sup>, Theresia N. Akenji<sup>1</sup>, Jarrah Manneh<sup>3</sup>, Fatoumata Bojang<sup>3</sup>, Umberto D'Alessandro<sup>3</sup>, Alfred A. Ngwa<sup>3</sup>  
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**(ACMCIP Abstract)**

5446

**NANOPORE SEQUENCING FOR REAL-TIME GENOMIC SURVEILLANCE OF PLASMODIUM FALCIPARUM**

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5447

**GYPB DELETION VARIANTS (DEL1 AND DEL2) DISTRIBUTION AMONG GHANAIAN POPULATIONS AND RELATIONSHIP WITH MALARIA SUSCEPTIBILITY**

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**(ACMCIP Abstract)**

5448

**INCREASED FREQUENCY OF PFHRP2-DELETED PLASMODIUM FALCIPARUM IN THE PERUVIAN AMAZON IS NOT EXPLAINED BY SELECTION OF THE GENE DELETION**

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5449

**HYBRID CAPTURE SEQUENCING OF PLASMODIUM MALARIAE FROM TANZANIA**

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5450

**EXPLORING HOW TRANSMISSION INTENSITY, SAMPLING, AND HUMAN MOBILITY IMPACT OUR ABILITY TO MEASURE GENETIC RELATEDNESS ACROSS PLASMODIUM FALCIPARUM POPULATIONS**

Sophie Berube<sup>1</sup>, Rohan Arambepola<sup>1</sup>, Betsy Freedman<sup>2</sup>, Steve Taylor<sup>3</sup>, Wendy O'Meara<sup>4</sup>, Andrew Obala<sup>5</sup>, Amy Wesolowski<sup>1</sup>  
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5451

**AMPLICON DEEP SEQUENCING REVEALS MULTIPLE GENETIC EVENTS LEAD TO TREATMENT FAILURE WITH ATOVAQUONE-PROGUANIL IN PLASMODIUM FALCIPARUM**

Daniel Castañeda-Mogollón, Noah B. Toppings, Claire Kamaliddin, Dylan R. Pillai  
 University of Calgary, Calgary, AB, Canada

Thursday  
October 19

5452

### A CANDIDATE GENE ANALYSIS OF SEVERE MALARIA VARIANTS IN A COHORT OF MALIAN CHILDREN IDENTIFIES A NOVEL SUSCEPTIBILITY LOCUS IN CSMD1 GENE

Delesa Damena Mulisa<sup>1</sup>, Amadou Barry<sup>2</sup>, Robert Morrison<sup>3</sup>, Santara Gaoussou<sup>2</sup>, Almahamoudou Mahamar<sup>2</sup>, Oumar Attaher<sup>2</sup>, Alassane Dicko<sup>2</sup>, Patrick Duffy<sup>3</sup>, Michal Fried<sup>1</sup>

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## Malaria - Immunology

5453

### PROTECTIVE HUMORAL RESPONSE TO *PLASMODIUM FALCIPARUM* PF27 AND ITS ORTHOLOG *PLASMODIUM VIVAX* PV27 ANTIGENS IN SERA FROM DANGASSA AND KOILA, TWO MALARIA ENDEMIC AREAS IN MALI

Salimata Kante<sup>1</sup>, Saidou Balam<sup>1</sup>, Drissa Konate<sup>1</sup>, Merepen dite Agnes Guindo<sup>1</sup>, Abdouramane Traore<sup>1</sup>, Karamoko Tangara<sup>1</sup>, Issoufi Y Maiga<sup>1</sup>, Seidina AS Diakite<sup>1</sup>, Fatoumata Kasse<sup>1</sup>, Karim Traore<sup>1</sup>, Larissa Denou<sup>1</sup>, Seydou Doumbia<sup>1</sup>, Corradin Giampietro<sup>2</sup>, Mahamadou Diakite<sup>1</sup>

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(ACMCIP Abstract)

5454

### BROADLY REACTIVE ANTIBODIES TARGET SEVERE MALARIAL ANTIGEN TO NEUTRALISE PARASITE SEQUESTRATION

Sai Sundar Rajan Raghavan<sup>1</sup>, Louise Turner<sup>1</sup>, Gregory Martin<sup>2</sup>, Andrew Ward<sup>2</sup>, Evelien Bunnik<sup>3</sup>, Thomas Lavstsen<sup>1</sup>

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(ACMCIP Abstract)

5455

### THE CHEMOKINE RECEPTOR CXCR3 PLAYS A CRITICAL ROLE IN T CELL-MEDIATED PROTECTION FROM LIVER-STAGE *PLASMODIUM* INFECTION

Rebecca Blyn<sup>1</sup>, Laura M. Reynolds<sup>2</sup>, Lisa Wegmair<sup>3</sup>, Patrick Lewis<sup>2</sup>, Amina Sheikh<sup>4</sup>, Vera Okolo<sup>2</sup>, Brandon Wilder<sup>2</sup>, Stefan Kappe<sup>2</sup>, Nana Minkah<sup>2</sup>

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(ACMCIP Abstract)

5456

### IMMUNOLOGICAL PROFILING OF MALARIA PHENOTYPES IN ENDEMIC AREAS OF KENYA: A LONGITUDINAL COHORT STUDY

Laura Barbieri<sup>1</sup>, Wataru Kagaya<sup>1</sup>, Mtakai Ngarai<sup>2</sup>, James B. Wing<sup>3</sup>, James Kongere<sup>1</sup>, Chimu W. Chan<sup>1</sup>, Bernard N. Kanoi<sup>1</sup>, Cedrick Shikoli<sup>2</sup>, Jesse Gitaka<sup>4</sup>, Akira Kaneko<sup>1</sup>

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(ACMCIP Abstract)

5457

### OPSONICPHAGOCYTOSIS IGGs TO ICAM1 BINDING *PLASMODIUM FALCIPARUM* ERYTHROCYTE MEMBRANE PROTEIN 1 ARE ASSOCIATED WITH THE CLINICAL PRESENTATION OF MALARIA IN BENINESE CHILDREN

Jennifer Suurbaar<sup>1</sup>, Azizath Moussiliou<sup>2</sup>, Selorme Aduko<sup>3</sup>, Rebecca W. Olsen<sup>4</sup>, Yvonne Adams<sup>4</sup>, Nanna Dalgaard<sup>4</sup>, Lars Hviid<sup>4</sup>, Kwadwo A. Kusi<sup>5</sup>, Jules Alao<sup>6</sup>, Rachida Tahar<sup>2</sup>, Michael F. Ofori<sup>1</sup>, Nicaise T.G. Ndam<sup>2</sup>, Anja R.T. Jensen<sup>4</sup>

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5458

### COMPOSITION OF PRE-TRANSMISSION SEASON STOOL MICROBIOTA IS ASSOCIATED WITH RESISTANCE TO MALARIA IN OLDER MALIAN CHILDREN

Kristin Van Den Ham<sup>1</sup>, Layne Bower<sup>1</sup>, Morgan Little<sup>1</sup>, Olivia Bednarski<sup>1</sup>, Elizabeth Fusco<sup>1</sup>, Rabintra Mandal<sup>1</sup>, Riten Mitra<sup>2</sup>, Sharping Li<sup>3</sup>, Safiatou Doumbo<sup>4</sup>, Didier Doumtabe<sup>4</sup>, Kassoum Kayentao<sup>4</sup>, Aissata Ongoiba<sup>5</sup>, Boubacar Traore<sup>4</sup>, Peter Crompton<sup>3</sup>, Nathan Schmidt<sup>1</sup>

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5459

### EVALUATING THE IMPACT OF NATURAL KILLER CELL PHENOTYPE, MALARIA DIVERSITY AND TRANSMISSION, AND ERYTHROCYTE POLYMORPHISMS ON ANTIBODY-DEPENDENT CELLULAR CYTOTOXICITY

Savannah N. Lewis<sup>1</sup>, Stephen Tukwasibwe<sup>2</sup>, Yoweri Taremwa<sup>2</sup>, Felistas Namirimu<sup>2</sup>, Kenneth Musinguzi<sup>2</sup>, Martin Chamai<sup>2</sup>, Martin Okitwi<sup>2</sup>, Maureen Ty<sup>1</sup>, Kathleen D. Press<sup>1</sup>, Kattria van der Ploeg<sup>1</sup>, Annetee Nakimuli<sup>2</sup>, Francesco Colucci<sup>4</sup>, Moses R. Kamya<sup>2</sup>, Joaniter I. Nankabirwa<sup>2</sup>, Emmanuel Arinaitwe<sup>2</sup>, Bryan Greenhouse<sup>5</sup>, Grant Dorsey<sup>5</sup>, Philip J. Rosenthal<sup>6</sup>, Prasanna Jagannathan<sup>1</sup>

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5460

### BIOCHEMICAL AND BIOINFORMATIC CHARACTERIZATION OF SURFACE EXPRESSED HYPERVARIABLE PROTEIN FAMILIES (RIFIN AND STEVOR) ASSOCIATED WITH PATHOGENESIS AND ACQUIRED IMMUNITY TO *PLASMODIUM FALCIPARUM* INFECTION

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(ACMCIP Abstract)

5461

### CRYO-EM REVEALS THE STRUCTURAL BASIS OF EPITOPE SELECTIVITY AND PROTECTION FROM MALARIA INFECTION IN A FAMILY OF POTENT ANTI-PFCSP ANTIBODIES

Gregory Martin<sup>1</sup>, Jon Torres<sup>1</sup>, Tossapol Polcharee<sup>2</sup>, Monica Fernandez Quintero<sup>3</sup>, Wen-Hsin Lee<sup>1</sup>, Yevel Flores-Garcia<sup>4</sup>, Daniel Emerling<sup>5</sup>, Randall MacGill<sup>6</sup>, Emily Locke<sup>6</sup>, C. Richter King<sup>6</sup>, Ashley Birkett<sup>6</sup>, Fidel Zavala<sup>4</sup>, Ian Wilson<sup>1</sup>, Andrew Ward<sup>1</sup>

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5462

**ANTIBODY PROFILES AGAINST NON-MALARIA PATHOGENS DISPLAYED IN *P. VIVAX*-INFECTED INDIVIDUALS FROM THE PERUVIAN AMAZON**

Elizabeth Melisa Villasis<sup>1</sup>, Fiona Angrissano<sup>2</sup>, Mitchel Guzman<sup>1</sup>, Julian Torres<sup>1</sup>, Katherine Garro<sup>1</sup>, Stefano Garcia<sup>1</sup>, Caroline Abanto<sup>1</sup>, Luis Cabrera<sup>1</sup>, Herbert Op<sup>2</sup>, James Beeson<sup>2</sup>, Joseph Vinetz<sup>3</sup>, Dionicia Gamboa<sup>1</sup>, Leanne Robinson<sup>2</sup>, Katherine Torres<sup>1</sup>  
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(ACMCIP Abstract)

5463

**PLACENTAL MALARIA MODULATES NEONATAL DENDRITIC CELLS' PHENOTYPE AND FUNCTION: A CROSS SECTIONAL STUDY IN BENIN**

Sebastien Dechavanne<sup>1</sup>, Omar Malade<sup>2</sup>, Simon Akpi<sup>2</sup>, Nadine Fievet<sup>3</sup>, Achille Massougbodji<sup>2</sup>, Elodie Segura<sup>4</sup>, Celia Dechavanne<sup>1</sup>  
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(ACMCIP Abstract)

**Malaria – Pathogenesis**

5464

**THE ROLE OF PFEMP1 IN SICKLE-CELL RESISTANCE TO *PLASMODIUM FALCIPARUM* MALARIA**

Zakaria Seidu<sup>1</sup>, Andrew Oleinikov<sup>2</sup>, Helena Lamptey<sup>1</sup>, Morten Pontoppidan<sup>3</sup>, Michael F. Ofori<sup>1</sup>, Lars Hviid<sup>3</sup>, Mary Lopez-Perez<sup>3</sup>  
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(ACMCIP Abstract)

5465

**ASSESSMENT OF HOST CLINICAL PARAMETERS AND PARASITE DETERMINANTS RESPONSIBLE FOR DISEASE SEVERITY**

Aditi Arya<sup>1</sup>, Shyam Sundar Meena<sup>2</sup>, Monika Matlani<sup>3</sup>, Vineeta Singh<sup>4</sup>  
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(ACMCIP Abstract)

5466

**THE DIRECT BINDING OF *PLASMODIUM VIVAX* AMA1 TO ERYTHROCYTES DEFINES A RON2-INDEPENDENT INVASION PATHWAY**

Seong-Kyun Lee<sup>1</sup>, Leanne Low<sup>1</sup>, John Anderssen<sup>1</sup>, Lee Yeoh<sup>2</sup>, Paola Carolina Valenzuela Leon<sup>1</sup>, Damien Drew<sup>2</sup>, Johannes Doehl<sup>1</sup>, Eric Calvo<sup>1</sup>, Louis Miller<sup>1</sup>, James Beeson<sup>2</sup>, Karthigayan Gunalan<sup>1</sup>  
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5467

**ELEVATED FERRITIN, SEVERE MALARIA, AND ACUTE KIDNEY INJURY**

Kazinga Caroline<sup>1</sup>, Ivan Mufumba<sup>1</sup>, Ruth Namazzi<sup>2</sup>, Anthony Batte<sup>2</sup>, Robert Opoka Opika<sup>3</sup>, Chandy John<sup>4</sup>, Andrea Conroy<sup>5</sup>  
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(ACMCIP Abstract)

5468

**IMPACT OF SEASONAL MALARIA CHEMOPREVENTION ON MALARIA PREVALENCE AND IMMUNITY AMONG CHILDREN IN NORTHERN BENIN**

Azizath Moussiliou<sup>1</sup>, Charles Ahouansou<sup>1</sup>, Blaise Choki<sup>1</sup>, Achille Massougbodji<sup>2</sup>, Adrian Luty<sup>3</sup>, Thierry Adoukonou<sup>1</sup>, Nicaise Georges Tuikue Ndam<sup>3</sup>  
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(ACMCIP Abstract)

5469

**NEUREGULIN 1 DECREASES HEME-INDUCED INFLAMMATION IN INDUCED PLURIPOTENT STEM CELLS-DERIVED ENDOTHELIAL CELLS FROM CHILDREN WITH INTRAVASCULAR HEMOLYSIS**

Cecilia Elorm Lekpor<sup>1</sup>, Adriana Harbuzariu<sup>2</sup>, Andrew A. Adjei<sup>1</sup>, Afua Darkwah Abrahams<sup>1</sup>, Felix A. Botchway<sup>3</sup>, Michael D. Wilson<sup>1</sup>, Kwadwo A. Kusi<sup>1</sup>, Godfred Futagbi<sup>1</sup>, Wesley Solomon<sup>4</sup>, Jonathan K. Stiles<sup>4</sup>  
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5470

**IDENTIFICATION OF BIOMARKERS ASSOCIATED WITH MALARIA IN PREGNANCY AND CLINICAL CORRELATION WITH OUTCOMES**

Ayesha Wijesinghe, Shoaib Ashraf, Ian Lewis, Dylan R. Pillai  
 University of Calgary, Calgary, AB, Canada

5471

**HISTOPATHOLOGICAL CHARACTERISTICS OF DISCRETE BRAIN REGIONS DURING *P. FRAGILE* EXPERIMENTAL CEREBRAL MALARIA IN A NONHUMAN PRIMATE MODEL**

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(ACMCIP Abstract)

5472

**COMPARISON OF *P. FALCIPARUM* GROWTH IN VITRO AND IN VIVO IN HUMANISED MICE**

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5473

### GENERATION OF A *PLASMODIUM BERGHEI* LINE EXPRESSING A HALOTAGGED PARASITOPHOUS-VACUOLE MEMBRANE PROTEIN TO STUDY TARGETED PROTEIN DEGRADATION DURING LIVER STAGE MALARIA

Melanie Lam<sup>1</sup>, Ashley A. Lantigua<sup>1</sup>, Laura Torres<sup>1</sup>, Alexandra Probst<sup>2</sup>, Jyothsna R. Kumar<sup>2</sup>, Allison Torres<sup>2</sup>, Alex Chao<sup>2</sup>, Zacharias Thiel<sup>3</sup>, Maude Patoor<sup>3</sup>, Carole Manneville<sup>3</sup>, Matthew E. Fishbaugher<sup>2</sup>, Erika E. Flannery<sup>2</sup>, Thierry T. Diagona<sup>2</sup>, David Marcellin<sup>3</sup>, Beat Nyfeler<sup>3</sup>, Sebastian A. Mikolajczak<sup>2</sup>, Anke Harupa-Chung<sup>2</sup>, Gabriel Mitchell<sup>1</sup>  
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5474

### PATHWAYS OF MALADAPTIVE REPAIR FOLLOWING SEVERE MALARIA ASSOCIATED ACUTE KIDNEY INJURY

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## Malaria - Prevention

5475

### DRIVERS OF LONG-LASTING INSECTICIDE-TREATED NET UTILIZATION AND PARASITAEMIA AMONG UNDER-FIVE CHILDREN IN 13 STATES WITH HIGH MALARIA BURDEN IN NIGERIA

Perpetua Uhomoihi<sup>1</sup>, Chukwu Okoronkwo<sup>1</sup>, IkeOluwapo Ajayi<sup>2</sup>, Olugbenga Mokuolu<sup>3</sup>, Ibrahim Maikore<sup>4</sup>, Adeniyi Fagbamigbe<sup>2</sup>, Joshua Akinyemi<sup>2</sup>, Festus Okoh<sup>1</sup>, Cyril O. Ademu<sup>1</sup>, Issa Bolakale Kawu<sup>1</sup>, Jo-angelina kalambo<sup>5</sup>, James Ssekitooleko<sup>5</sup>  
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5476

### UPTAKE OF FOUR OR MORE DOSES OF INTERMITTENT PREVENTIVE TREATMENT OF MALARIA DURING PREGNANCY WITH SULFADOXINE PYRIMETHAMINE (IPTP-SP) IN ZAMBIA: A SECONDARY ANALYSIS OF THE 2018 MALARIA IN PREGNANCY SURVEY DATA

Cephas Sialubanje<sup>1</sup>, Danny Sinyange<sup>1</sup>, Lwito S. Mutale<sup>1</sup>, Hudson Mumbole<sup>1</sup>, Busiku Hamainza<sup>2</sup>, Mukumbuta Nawa<sup>1</sup>  
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5477

### PREVALENCE OF MALARIA CLINICAL PHENOTYPES DURING ROUTINE CONSULTATION IN HOSPITAL DISTRICT HEALTH OF COMMUNE 4, MALI

Bourama Keita<sup>1</sup>, Sory Ibrahim Diawara<sup>1</sup>, Salif Coulibaly<sup>2</sup>, Drissa Konaté<sup>1</sup>, Seidina AS Diakité<sup>1</sup>, Karim Traoré<sup>1</sup>, Mariam Goita<sup>2</sup>, Abdoul Razakou Dicko<sup>2</sup>, Bakary Sylla<sup>2</sup>, Abdouramane Traoré<sup>1</sup>, Korotoumou Mallé<sup>1</sup>, Fatoumata Kassé<sup>1</sup>, Salimata Kanté<sup>1</sup>, Abdourhamane Cissé<sup>1</sup>, Khatty Mohamedou<sup>1</sup>, Saidou Balam<sup>1</sup>, Seydou Doumbia<sup>1</sup>, Mahamadou Diakité<sup>1</sup>  
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5478

### ASSOCIATIONS BETWEEN ANOPHELES VECTOR DENSITY AND MALARIA INCIDENCE IN TWO ADJACENT UGANDAN DISTRICTS WITH AND WITHOUT INDOOR RESIDUAL SPRAYING

Jackson Rwatooro Asiimwe<sup>1</sup>, Henry D. Mawejje<sup>1</sup>, Geoffrey Otto<sup>1</sup>, Patrick Kyagamba<sup>1</sup>, James Adiga<sup>1</sup>, Wilfred Odol<sup>1</sup>, Moses Semakula<sup>1</sup>, Ambrose Oruni<sup>1</sup>, John Rek<sup>1</sup>, Moses Kamya<sup>1</sup>, Grant Dorsey<sup>2</sup>, Paul J. Krezanoski<sup>2</sup>  
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5479

### A GEOSTATISTICAL ANALYSIS OF USE OF INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY AMONG PREGNANT WOMEN IN NIGERIA

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5480

### MALARIA PREVALENCE IN CHILDREN WITH A HISTORY OF EXPOSURE TO SEASONAL MALARIA CHEMOPREVENTION & EXIT FROM THE TARGET: RESULTS OF A CROSS-SECTIONAL STUDY IN SOUTHERN SENEGAL

Isaac A. Manga<sup>1</sup>, Abdoukarim Mhadji<sup>1</sup>, Aminata Lam<sup>1</sup>, Marie Pierre Diouf<sup>2</sup>, Fassiath Tairou<sup>1</sup>, Amadou Seck<sup>1</sup>, Ekoue Kouevidjin<sup>1</sup>, Khadime Sylla<sup>1</sup>, Doudou Sow<sup>3</sup>, Magatte Ndiaye<sup>1</sup>, Oumar Gaye<sup>1</sup>, Babacar Faye<sup>1</sup>, Jean Louis Ndiaye<sup>2</sup>  
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5481

### ASSOCIATION BETWEEN BEDNET USE AND MALARIA PREVALENCE BY AGE GROUP IN RARIEDA SUB-COUNTY, WESTERN KENYA, 2015-2020

Oliver Towett<sup>1</sup>, Victoria Seffren<sup>2</sup>, Brian Seda<sup>1</sup>, Kelvin Onoka<sup>1</sup>, Julie Gutman<sup>2</sup>, Simon Kariuki<sup>1</sup>, Feiko O. ter Kuile<sup>1</sup>, Aaron M. Samuels<sup>2</sup>, Titus K. Kwambai<sup>4</sup>  
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5482

### THE PRESS TOUR: AN OUT-OF-THE-BOX APPROACH TO IMPROVE MALARIA MESSAGING IN MADAGASCAR

Joss Razafindrakoto<sup>1</sup>, Anna Bowen<sup>2</sup>, Laurent Kapesa<sup>1</sup>, Solofo Razakamiadana<sup>1</sup>, Jemima Andriamihamina<sup>1</sup>, Mamy Rabesahala<sup>2</sup>, Nathalie Randriamanga<sup>4</sup>, Zoniaina Razafinarivo<sup>4</sup>, Didier Fernando<sup>5</sup>, Célestine Razafiarisoa<sup>6</sup>, Omega Raobela<sup>7</sup>  
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5483

### AN EXAMINATION OF NATIONAL SURVEYS AND PROGRAM REVIEWS TO DOCUMENT ACHIEVEMENT OF ANTENATAL CARE AND IPTP TARGETS IN NIGERIA

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5484

**EFFECT OF BEDNETS USE ON UPTAKE OF INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY; FURTHER ANALYSIS OF THE 2019 GHANA MALARIA INDICATOR SURVEY DATA****Samuel Bernard Ekow Harrison<sup>1</sup>**, Francis Dzabeng<sup>2</sup>, Veronica Agyemang<sup>1</sup>, Paul Milligan<sup>3</sup>, Kwaku Poku Asante<sup>1</sup><sup>1</sup>Kintampo Health Research Centre, Kintampo, Ghana, <sup>2</sup>West Africa Centre for Cell Biology of Infectious Pathogens, University of Ghana, Legon, Accra, Ghana, <sup>3</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom

5485

**POSITIVE EFFECTS OF INDOOR RESIDUAL SPRAYING (IRS) IN MALARIA PREVENTION IN NGOMA DISTRICT****Mugeni Christine**

Legacy Clinic, KIGALI, Rwanda

5486

**MENTORSHIP-BASED TASK-SHIFTING APPROACH FOR COMMUNITY HEALTH OFFICERS IMPROVES ANTENATAL CARE ATTENDANCE AND INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY SERVICES IN LOWER-LEVEL FACILITIES IN GHANA****Felicia Babanawo<sup>1</sup>**, Mildred Komey<sup>2</sup>, Felicia Amoo-Sakyi<sup>1</sup>, Amos Asiedu Asiedu<sup>1</sup>, Wahjib Mohammed<sup>2</sup>, Paul Boateng<sup>2</sup>, Keziah Malm<sup>2</sup>, Raphael Ntunyi<sup>1</sup>, Gladys Tetteh<sup>3</sup>, Lolade Oseni<sup>3</sup><sup>1</sup>U.S. President's Malaria Initiative, Impact Malaria Project, Accra, Ghana, <sup>2</sup>Ghana Health Service, National Malaria Elimination Programme, Accra, Ghana, <sup>3</sup>U.S. President's Malaria Initiative, Impact Malaria project, Jhpiego, Baltimore, MD, United States

5487

**PAYMENT SYSTEM FOR COMMUNITY ACTORS DURING THE 2021 AND 2022 INSECTICIDE-TREATED NET (ITN) MASS DISTRIBUTION CAMPAIGNS IN MADAGASCAR****Andriamarovesatra Soza<sup>1</sup>**, Omega Raobela<sup>2</sup>, Hasina Harinjaka Ramiandrisoa<sup>2</sup>, Mohamed Patrice Diallo<sup>1</sup>, Mickael Randriamanjaka<sup>1</sup>, Sandy Mbolatiana Ralisata<sup>1</sup>, Claudia Rakotonirina<sup>1</sup>, Jocelyn Razafindrakoto<sup>3</sup>, Laurent Kapesa<sup>3</sup><sup>1</sup>USAID-IMPACT project, ANTANANARIVO, Madagascar, <sup>2</sup>National Malaria Program, ANTANANARIVO, Madagascar, <sup>3</sup>U.S. President's Malaria Initiative, USAID, ANTANANARIVO, Madagascar

5488

**IMPACT OF KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING LONG-LASTING IMPREGNATED NETS ON THE PREVALENCE OF MALARIA INFECTION AMONG CHILDREN UNDER 5 YEARS OF AGE IN THE DODJI-BATA DISTRICT OF SOUTHERN BENIN****Tchehoundje Benjamine Sèna**

clinical research institute of Benin, Abomey-calavi, Benin

5489

**DETERMINANTS OF MISSED OPPORTUNITIES FOR PERENNIAL MALARIA CHEMOPREVENTION TAKING CUES FROM INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY, VITAMIN A SUPPLEMENTATION AND VACCINATION DELIVERY AMONG CHILDREN 0-24 MONTHS UNDER PROGRAMMATIC CONDITIONS: A SYSTEMATIC REVIEW****Olusola B. Oresanya<sup>1</sup>**, Seyi Soremekun<sup>1</sup>, Michael Ekhluenetale<sup>2</sup>, James Tibenderana<sup>3</sup>, Joanna Schellenberg<sup>1</sup>, Bilal I. Avan<sup>1</sup><sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Malaria Consortium, Abuja, Nigeria, <sup>3</sup>Malaria Consortium, London, United Kingdom

5490

**LOST TO FOLLOW-UP AND LOW INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY AT ANTENATAL CARE SETTINGS IN LIBERIA****Victor S. S. Koko<sup>1</sup>**, Jethro W.S. Zawolo<sup>2</sup>, Wahdae-mai Harmon-Gray<sup>3</sup>, Mamadou O. Diallo<sup>4</sup>, Jessica M. Kafuko<sup>5</sup>, Gaspar Mbita<sup>2</sup>, Odell Kumeh<sup>1</sup>, Julie R. Gutman<sup>6</sup>, Laura Skrip<sup>3</sup><sup>1</sup>National Malaria Control Program, Ministry of Health, Monrovia, Liberia, <sup>2</sup>USAID Strategic Technical Assistance for Health (STAIH), Jhpiego, Monrovia, Liberia, <sup>3</sup>School of Public Health, University of Liberia, Monrovia, Liberia, <sup>4</sup>U.S. President's Malaria Initiative, U.S. Centers for Disease Control and Prevention, Monrovia, Liberia, <sup>5</sup>U.S. President's Malaria Initiative, U.S. Agency for International Development (USAID), Monrovia, Liberia, <sup>6</sup>Malaria Branch, U.S. President's Malaria Initiative, U.S. Centers for Disease Control and Prevention, Atlanta, GA, United States

5491

**THE ROLE OF COMMUNITY LEADERS IN SEASONAL MALARIA CHEMOPREVENTION: BUILDING STRATEGIES TO COMMUNITY ENGAGEMENT IN NORTHERN MOZAMBIQUE****Mercia A. Siteo<sup>1</sup>**, Albertino Zunza<sup>1</sup>, Ivan Tarquino<sup>2</sup>, Sonia Enosse<sup>2</sup>, Kevin Baker<sup>3</sup>, Regina Passe<sup>4</sup>, Osvaldo Jantar<sup>1</sup>, Jossias Machava<sup>2</sup>, Maria Rodrigues<sup>2</sup><sup>1</sup>Malaria Consortium, Nampula, Mozambique, <sup>2</sup>Malaria Consortium, Maputo, Mozambique, <sup>3</sup>Malaria Consortium, London, United Kingdom, <sup>4</sup>Ministry of Health, Nampula, Mozambique

5492

**COVERAGE AND FACTORS ASSOCIATED WITH UTILIZATION OF PYRETHROID-PIPERONYL BUTOXIDE TREATED NETS IN MALARIA ENDEMIC REGION, WESTERN KENYA****Stephen A. Aricha<sup>1</sup>**, Maurice Owiny<sup>1</sup>, Fredrick Odhiambo<sup>1</sup>, Judy Mangeni<sup>2</sup>, Elvis Oyugi<sup>1</sup><sup>1</sup>Ministry of Health, Kenya, Nairobi, Kenya, <sup>2</sup>Moi University, Kenya, Nairobi, Kenya

5493

**PSYCHOSOCIAL FACTORS INFLUENCING INSECTICIDE-TREATED NET USE AND CARE IN LIBERIA****Joseph Millward<sup>1</sup>**, Victor S. Koko<sup>2</sup>, Odell Kumeh<sup>2</sup>, Ben Kitson<sup>3</sup>, Liwenan Li<sup>1</sup>, Eric Gaye<sup>3</sup>,Vivian Nyankun<sup>3</sup>, Eric Filemyr<sup>1</sup>, Mamadou O. Diallo<sup>4</sup>, Stella Babalola<sup>1</sup>, Catherine Harbour<sup>1</sup>  
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5494

**PREVENTION OF MALARIA IN PREGNANT WOMEN AND ITS EFFECTS ON MATERNAL AND CHILD HEALTH, THE CASE OF CENTRE HOSPITALIER DE KINGASANI II IN THE DEMOCRATIC REPUBLIC OF THE CONGO****Japhet Kabalu Tshiongo**, Trésor Zola Matuvanga, Patrick Mitashi, Hypolite Muhindo Mavoko, Junior Matangila Rika

University of Kinshasa, Kinshasa, Democratic Republic of the Congo

5495

**INCREASED MALARIA INCIDENCE FOLLOWING IRRIGATION PRACTICES IN THE ENDORHEIC RIFT VALLEY BASIN OF SOUTH ETHIOPIA****Dawit Hawaria Logita<sup>1</sup>**, Solomon Kibret<sup>2</sup><sup>1</sup>Hawassa University, Hawassa, Ethiopia, <sup>2</sup>California Department of Public Health, West Valley Mosquito and Vector Control District, Ontario, CA, United States

**5496****UNBOUND PIPERAQUINE EXPOSURE IN CHILDREN AND PREGNANT WOMEN RECEIVING DIHYDROARTEMISININ-PIPERAQUINE AS MALARIA CHEMOPREVENTION**

**Liusheng Huang**<sup>1</sup>, Howard Hong<sup>2</sup>, Xay Pham<sup>1</sup>, Richard Kajubi<sup>3</sup>, Meghan Whalen<sup>1</sup>, Norah Mwebaza<sup>3</sup>, Erika Wallender<sup>1</sup>, Grant Dorsey<sup>1</sup>, Philip J. Rosenthal<sup>1</sup>, Francesca Aweeka<sup>1</sup>  
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**5497****RECEIPT OF SEASONAL MALARIA CHEMOPREVENTION BY AGE-INELIGIBLE CHILDREN AND ASSOCIATED FACTORS IN NINE IMPLEMENTATION STATES IN NIGERIA**

**Taiwo Ibinaiye**<sup>1</sup>, Kunle Rotimi<sup>1</sup>, Chibuzo Oguoma<sup>1</sup>, Adaeze Aidenagbon<sup>1</sup>, Ayodeji Balogun<sup>1</sup>, Kevin Baker<sup>2</sup>, Christian Rassi<sup>2</sup>, Chuks Nnaji<sup>2</sup>, Olabisi Ogunmola<sup>1</sup>, Olusola Oresanya<sup>1</sup>

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**5498****ASSESSMENT OF HEALTH SYSTEM'S FUNCTIONALITY AND READINESS FOR PERENNIAL MALARIA CHEMOPREVENTION (PMC) IMPLEMENTATION IN OSUN STATE, NIGERIA**

**Michael Ekholuenetale**<sup>1</sup>, Yahya Hamzat<sup>2</sup>, Chinazo Ujuju<sup>1</sup>, Semiu Rahman<sup>1</sup>, Mary Aboosed Adekola<sup>2</sup>, Kolawole Maxwell<sup>1</sup>, Olusola Oresanya<sup>1</sup>, James Tibenderana<sup>3</sup>

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**5499****INSECTICIDE TREATED NETS (ITNS) USE AND MALARIA PREVALENCE AMONG CHILDREN UNDER FIVE IN NIGERIA**

**Henrietta O. Owie - Olapeju**<sup>1</sup>, Ibrahim B. Adigun<sup>2</sup>

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**Malaria – Surveillance and Data Utilization****5500****ENTOMOLOGICAL INDICES PREDICT PARASITOLOGICAL MALARIA TRANSMISSION INDICES ACROSS VILLAGES IN WESTERN KENYA**

**Brenda Omala**<sup>1</sup>, David Mburu<sup>2</sup>, Maurice Ombok<sup>1</sup>, Vincent Moshi<sup>1</sup>, John Gimning<sup>3</sup>, John Grieko<sup>4</sup>, Nicole Achee<sup>4</sup>, Benard Abong'o<sup>1</sup>, Eric Ochomo<sup>1</sup>

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**5501****QUANTIFYING SPATIAL HETEROGENEITY OF MALARIA IN THE ENDEMIC PAPUA REGION OF INDONESIA: ANALYSIS OF EPIDEMIOLOGICAL SURVEILLANCE DATA**

**Ihsan Fadilah**<sup>1</sup>, Bimandra Djaafara<sup>2</sup>, Karina Lestari<sup>1</sup>, Sri Fajariyani<sup>3</sup>, Edi Sunandar<sup>4</sup>, Billy Makamur<sup>4</sup>, Berry Wopari<sup>5</sup>, Silas Mabui<sup>5</sup>, Lenny Ekawati<sup>1</sup>, Rahmat Sagara<sup>1</sup>, Rosa Lina<sup>1</sup>, Guntur Argana<sup>3</sup>, Desriana Ginting<sup>3</sup>, Maria Sumiwi<sup>6</sup>, Ferdinand Laihadi<sup>7</sup>, Ivo Mueller<sup>8</sup>, Jodie McVernon<sup>9</sup>, Kevin Baird<sup>1</sup>, Henry Surendra<sup>1</sup>, Iqbal Elyazar<sup>1</sup>

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**5502****IMPROVING EVIDENCE FOR ACTION: LESSONS FROM PANAMA'S SUCCESSFUL EFFORTS TO STRENGTHEN CASE-FINDING AND CASE-REPORTING**

Lizbeth Cerezo-Góndola<sup>1</sup>, **Carmela M. Jackman Smith**<sup>1</sup>, Juan G. Rodríguez<sup>1</sup>, Pastor Muñoz<sup>2</sup>, Rufino Bejarano<sup>1</sup>, Lourdes E. Moreno-Castillo<sup>1</sup>, Justin T. Lana<sup>2</sup>, Christina A. Bradley<sup>2</sup>, Jorge O. Cano-Torres<sup>2</sup>

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**5503****ASSESSING THE QUALITY OF MALARIA DATA REPORTED IN DHIMS2 AND FACILITY REGISTERS IN GHANA**

**Godwin Afenyadu**<sup>1</sup>, Samuel Owusu<sup>1</sup>, Duvor Ferguson<sup>2</sup>, Wahjib Mohammed<sup>2</sup>

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**5504****EARLY EFFECT ASSESSMENT OF MALARIA COMMUNITY CASE MANAGEMENT (MCCM) INTERVENTIONS ON THE BURDEN OF MALARIA IN FACILITIES IN TANZANIA**

**Joseph Joachim Joseph**<sup>1</sup>, Patrick Gulinja<sup>2</sup>, Mwaka Kakolwa<sup>2</sup>, Kanuth Dimoso<sup>2</sup>, Kefas Mugittu<sup>2</sup>, Muhidin Mahende<sup>2</sup>, Happiness Nyanda<sup>3</sup>, Benjamin Winters<sup>1</sup>, Samwel Lazaros<sup>4</sup>, Sijenunu Aaron<sup>4</sup>, Franky Chacky<sup>4</sup>, Abdallah Lusasi<sup>4</sup>, Claud John<sup>5</sup>, Lulu Msangi<sup>6</sup>, Naomi Serbantez<sup>6</sup>, Dunstan Bishanga<sup>2</sup>, Francis Levira<sup>2</sup>, Onesmo Mwegoha<sup>4</sup>

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**5505****USING DATA FROM PREGNANT WOMEN IN MALARIA SURVEILLANCE: WHO IS MISSING?**

**Cameron Taylor**<sup>1</sup>, Lenka Benova<sup>2</sup>, Josefien van Olmen<sup>3</sup>, Roger Tine<sup>4</sup>, Yazoume Ye<sup>5</sup>

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## 5506

**PRIVATE SECTOR INVOLVEMENT IN THE FIGHT AGAINST MALARIA IN MADAGASCAR**

Ilo Andriamanamihaja<sup>1</sup>, Omega RAOBELA<sup>2</sup>, Yvette Razafimaharo<sup>2</sup>, Sandy Mbolatiana Ralisata<sup>1</sup>, Soza Andriamarovesatra<sup>1</sup>

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## 5507

**MALARIA SERVICES SUPERVISIONS ACCELERATE DECLINE IN MALARIA-RELATED DEATHS IN CHILDREN UNDER FIVE YEARS IN TANZANIA: A QUASI-EXPERIMENTAL STUDY**

Dunstan R. Bishanga<sup>1</sup>, Frank Chacky<sup>2</sup>, Abdallah Lusasi<sup>2</sup>, Joseph J. Joseph<sup>3</sup>, Patrick Gulinja<sup>1</sup>, Mwaka Kakolwa<sup>1</sup>, Kanuth Dimosi<sup>1</sup>, Kefas Mugittu<sup>1</sup>, Muhidin K. Mahende<sup>1</sup>, Happiness Nyanda<sup>4</sup>, Samwel Lazaro<sup>2</sup>, Lulu Msangi<sup>5</sup>, Naomi Serbantez<sup>2</sup>, Erik Reaves<sup>6</sup>, Francis Levira<sup>1</sup>

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## 5508

**DIVERSITY, DISTRIBUTION, AND METHODOLOGICAL CONSIDERATIONS OF HAEMOSPORIDIAN INFECTIONS AMONG GALLIFORMES IN ALASKA**

Faith N. De Amaral<sup>1</sup>, Robert E. Wilson<sup>2</sup>, Sarah A. Sonsthagen<sup>3</sup>, Ravinder N. Sehgal<sup>4</sup>

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## 5509

**GEOSPATIAL MODEL OF MOSQUITO BREEDING HABITATS AND SOME PHYSICO-CHEMICAL CHARACTERISTICS IN DELTA STATE, NIGERIA**

Chioma Cynthia Ojianwuna<sup>1</sup>, Victor Ngozi Enwemiwe<sup>1</sup>, Andy Ogochukwu Egwunyenga<sup>1</sup>, Chioma Amajoh<sup>2</sup>

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## 5510

**ANALYSIS OF SENTINEL SURVEILLANCE DATABASES FOR MALARIA AND ITS CLIMATIC FACTORS IN SENEGAL, FROM 2012 TO 2019**

Ibrahima Mamby Keita<sup>1</sup>, Mariama Diouf<sup>2</sup>, Medoune Ndiop<sup>1</sup>, Oumar Konte<sup>2</sup>, Makhtar Sow<sup>1</sup>, Amy Diallo<sup>1</sup>, Yaye Mbor Samba<sup>2</sup>, Boly Diop<sup>1</sup>, Cheikh Mbengue<sup>3</sup>, Samba Thioub<sup>1</sup>, Issa Gueye<sup>1</sup>, Samba Ndiaye<sup>1</sup>, Abdoulaye Diatta<sup>1</sup>, Fatoumata Ly<sup>1</sup>, Aboubacar Diop<sup>1</sup>, Djibril Barry<sup>4</sup>, Khaly Gueye<sup>1</sup>, El Hadji Mamadou Ndiaye<sup>1</sup>, Adjaratou Diakhou Ndiaye<sup>5</sup>

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## 5511

**MALARIA END GAME IN WEST TIMOR: STRATEGY TO FIND AND ELIMINATE MALARIA IN LAST DISEASE POCKETS**

Daniel Perlman<sup>1</sup>, Jenny Kerrison<sup>2</sup>, Rajitha Wickremasinghe<sup>3</sup>, Jeffery Smith<sup>4</sup>, Manel Yapabandara<sup>5</sup>, Drake Zimmerman<sup>6</sup>

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## 5512

**COMPARISON OF ESTIMATES OF MALARIA TRANSMISSION INTENSITY DERIVED FROM THE FACILITY-BASED TEST POSITIVITY RATE VERSUS HOUSEHOLD, MALARIA-INDICATOR STYLE SURVEYS**

Brandon D. Hollingsworth<sup>1</sup>, Emmanuel Baguma<sup>2</sup>, Moses Ntaro<sup>2</sup>, Edgar Mulogo<sup>2</sup>, Ross M. Boyce<sup>3</sup>

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## 5513

**USING EPIDEMIOLOGICAL AND ENTOMOLOGICAL DATA TO ASSESS REMAINING EXPOSURE TO MALARIA VECTORS IN RURAL COMMUNITIES IN THE PERUVIAN AMAZON**

Joaquin Gómez<sup>1</sup>, Carlos Acosta<sup>1</sup>, Mitchel Guzman<sup>2</sup>, Marlon Saavedra<sup>3</sup>, Joseph M. Vinetz<sup>4</sup>, Dionicia Gamboa<sup>2</sup>, Jan E. Conn<sup>5</sup>

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## 5514

**PUBLIC-PRIVATE PARTNERSHIP IN MALARIA CASE REPORTING IN PAPUA PROVINCE, INDONESIA: A FORMATIVE RESEARCH**

Ajib Diptyanusa<sup>1</sup>, Herdiana Hasan Basri<sup>1</sup>, Helen Dewi Prameswari<sup>2</sup>, Minerva Theodora<sup>2</sup>

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## 5515

**USING LOT QUALITY ASSURANCE SAMPLING METHODS TO ASSESS COVERAGE AND QUALITY OF SEASONAL MALARIA CHEMOPREVENTION DELIVERY IN NEW GEOGRAPHIES: FINDINGS AND LESSONS FROM NORTHERN MOZAMBIQUE**

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5516

### NEED TO REDUCE CLIENT WAIT TIMES DURING ANTENATAL CARE VISITS: LESSONS LEARNED FROM MSDQI IN TANZANIA

**Stella Makwaruzi**<sup>1</sup>, Goodluck Tasha<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>3</sup>, Lolade Oseni<sup>8</sup>, Katherine Wolf<sup>8</sup>

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5517

### IDENTIFYING REPORTING AND FOLLOW-UP CHALLENGES IN MALARIA CASE INVESTIGATION USING THE 1,3,7 STRATEGY IN A SUB-SAHARAN AFRICA PRE-ELIMINATION SETTING

**Japhet M. Matoba**<sup>1</sup>, Anne C. Martin<sup>2</sup>, Harry Hamapumbu<sup>1</sup>, Caison Sing'anga<sup>1</sup>, Mukuma Lubinda<sup>1</sup>, Sydney Mweetwa<sup>1</sup>, Ben Katowa<sup>1</sup>, Mary E. Gebhart<sup>3</sup>, Limonty Simubali<sup>1</sup>, Twig Mudenda<sup>1</sup>, Cara Wychgram<sup>2</sup>, Amy Wesolowski<sup>2</sup>, Matthew M. Ippolito<sup>2</sup>, Timothy Shields<sup>2</sup>, Andre Hackman<sup>4</sup>, Edgar Simulundu<sup>1</sup>, Tamaki Kobayashi<sup>2</sup>, Douglas E. Norris<sup>3</sup>, William J. Moss<sup>2</sup>

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5518

### RAPID ASSESSMENT OF MALARIA SURVEILLANCE SYSTEM AT DISTRICT LEVEL IN MOZAMBIQUE

Neide Canana<sup>1</sup>, Ann-Sophie Stratil<sup>2</sup>, Maria Rodrigues<sup>1</sup>, Joaquim Chau<sup>1</sup>, Antonio Buló<sup>1</sup>, Baltazar Candrinho<sup>3</sup>, **Sonia Maria Enosse**<sup>1</sup>

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5519

### A PROTOCOL USING SOCIAL NETWORK SAMPLING AND ANALYSIS TO QUANTIFY HUMAN MOBILITY PATTERNS AND THEIR EFFECTS ON MALARIA TRANSMISSION IN BORDER AREAS OF THE BRAZILIAN, ECUADORIAN, AND PERUVIAN AMAZON

**Mark M. Janko**<sup>1</sup>, Andrea L. Araujo<sup>2</sup>, Edson J. Ascencio<sup>3</sup>, Gilvan R. Guedes<sup>4</sup>, Luis E. Vasco<sup>2</sup>, Perla G. Medrano<sup>1</sup>, Pamela R. Chacon-Uscamaita<sup>3</sup>, Reinaldo Santos<sup>4</sup>, Carolina P. Coombes<sup>3</sup>, Camila Demasceno<sup>4</sup>, Francesco Pizzitutti<sup>2</sup>, Gabriela Salmon-Mulanovich<sup>5</sup>, Andres G. Lescano<sup>3</sup>, Carlos F. Mena<sup>2</sup>, Alisson F. Barbieri<sup>4</sup>, William K. Pan<sup>1</sup>

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## Malaria - Vaccines and Immunotherapeutics

5520

### P. FALCIPARUM - P.VIVAX BIVALENT VACCINE DEVELOPMENT USING LC16M8Δ / AAV VIRAL VECTORS PLATFORM ACHIEVES STERILE PROTECTION AND TRANSMISSION BLOCKING

**Yutaro Yamamoto**<sup>1</sup>, Camila Fabbri<sup>2</sup>, Takuto Katayama<sup>1</sup>, Tetushi Mizuno<sup>1</sup>, Akihiko Sakamoto<sup>1</sup>, Ammar Abdurrahman Hasyim<sup>1</sup>, Shunsuke Okuyama<sup>1</sup>, Sani Hadiyan Rasyid<sup>1</sup>, Mitsuhiro Iyori<sup>3</sup>, Hiroaki Mizukami<sup>4</sup>, Hisatoshi Shida<sup>2</sup>, Stefanie Costa Pinto Lopes<sup>2</sup>, Shigeto Yoshida<sup>1</sup>

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5521

### DELIVERY STRATEGIES FOR MALARIA VACCINATION IN AREAS WITH SEASONAL MALARIA TRANSMISSION

**Jane Grant**<sup>1</sup>, Halimatou Diawara<sup>2</sup>, Seydou Traoré<sup>2</sup>, Fatoumata Koita<sup>2</sup>, Jessica Myers<sup>1</sup>, Issaka Sagara<sup>2</sup>, Daniel Chandramohan<sup>1</sup>, Alassane Dicko<sup>2</sup>, Brian Greenwood<sup>1</sup>, Jayne Webster<sup>1</sup>

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5522

### INFLUENCE OF NATURALLY ACQUIRED P. FALCIPARUM AND S. HAEMATOBIIUM INFECTIONS ON ANTIBODY RESPONSE TO FIVE MALARIA CANDIDATE VACCINES IN PREGNANT GHANAIAI WOMEN

**Naa Adjeley Frempong**<sup>1</sup>, Irene Akosua Larbi<sup>1</sup>, Atikatu Mama<sup>2</sup>, Kwadwo Asamoah Kusi<sup>1</sup>, Charity Ahiabor<sup>3</sup>, Michael Fokuo Ofori<sup>1</sup>, William Kofi Anyan<sup>1</sup>, Bright Adu<sup>1</sup>, Alex Yaw Debrah<sup>4</sup>, Nicaise Tuike Ndam<sup>5</sup>, Abraham Kwabena Anang<sup>6</sup>, David Courtin<sup>7</sup>

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(ACMCIP Abstract)

5523

### COMPUTATIONAL DESIGN OF A NON-GLYCOSYLATED STABILIZED PFS48/45 IMMUNOGEN ENABLES A POTENT MALARIA TRANSMISSION-BLOCKING NANOPARTICLE VACCINE

**Thayne Henderson Dickey**<sup>1</sup>, Richi Gupta<sup>1</sup>, Holly McAleese<sup>2</sup>, Tarik Ouahes<sup>3</sup>, Sachy Orr-Gonzalez<sup>2</sup>, Rui Ma<sup>1</sup>, Olga V. Muratova<sup>2</sup>, Nichole D. Salinas<sup>1</sup>, Jen CC Hume<sup>2</sup>, Lynn E. Lambert<sup>2</sup>, Patrick E. Duffy<sup>3</sup>, Niraj H. Tolia<sup>1</sup>

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5524

**A POTENT AND DURABLE MALARIA TRANSMISSION BLOCKING VACCINE DESIGNED FROM A SINGLE-COMPONENT 60-COPY PFS230D1 NANOPARTICLE**

Nichole Salinas<sup>1</sup>, Rui Ma<sup>1</sup>, Thayne H. Dickey<sup>1</sup>, Holly McAleese<sup>1</sup>, Tarik Ouahes<sup>1</sup>, Carole A. Long<sup>2</sup>, Kazutoyo Miura<sup>2</sup>, Lynn E. Lambert<sup>1</sup>, Niraj H. Tolia<sup>1</sup>  
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5525

**EFFECTIVENESS OF A MULTI-STAGE VACCINE FORMULATION IN MALARIA VIVAX TRANSMISSION-BLOCKING**

Camila Fabbri<sup>1</sup>, Yutaro Yamamoto<sup>2</sup>, Takuto Katayama<sup>2</sup>, Rosa Amélia Gonçalves Santana<sup>1</sup>, Heliana Christy Matos Belchior<sup>1</sup>, Shigeto Yoshida<sup>2</sup>, Stefanie Costa Pinto Lopes<sup>1</sup>  
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5526

**BIOINFORMATIC APPROACH TO DESIGN A PLASMODIUM FALCIPARUM PFRIPR MULTI-EPI TOPE VACCINE CONSTRUCT**

Alexander John Laurenson, Emily Stucke, Ryan Scalsky, Matthew B. Laurens  
 University of Maryland School of Medicine, Baltimore, MD, United States

(ACMCIP Abstract)

5527

**HUMORAL IMMUNE RESPONSES TO THE CENTRAL REPEAT REGION OF PFCSP INDUCED BY A VIAL-VECTORED PLASMODIUM FALCIPARUM VACCINE PLAY CRITICAL ROLES IN PROTECTION IN A MURINE MODEL**

Shunsuke Okuyama<sup>1</sup>, Yutaro Yamamoto<sup>1</sup>, Shunsuke Murai<sup>1</sup>, Mitsuhiro Iyori<sup>2</sup>, Tetsushi Mizuno<sup>2</sup>, Akihiko Sakamoto<sup>1</sup>, Shinya Fukumoto<sup>4</sup>, Hiroaki Mizukami<sup>5</sup>, Hisatoshi Shida<sup>6</sup>, Shigeto Yoshida<sup>1</sup>  
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5528

**DETERMINANTS OF VACCINE COVERAGE AND ACCEPTABILITY OF MALARIA VACCINE IN CHILDREN AGED 6-23 MONTHS IN MALAWI: A HEALTHCARE PROVIDER'S PERSPECTIVE**

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 Training and Research Unit of Excellence, Blantyre, Malawi

5529

**VACCINE-INDUCED PFRH5 HUMAN MONOCLONAL ANTIBODIES SHOW BROADLY NEUTRALIZING ACTIVITY AGAINST P. FALCIPARUM CLINICAL ISOLATES**

Laty Gaye Thiam<sup>1</sup>, Kirsty McHugh<sup>2</sup>, Aboubacar Ba<sup>1</sup>, Rebecca Li<sup>3</sup>, Mariama Nicole Pouye<sup>1</sup>, Dimitra Pipini<sup>2</sup>, Fatoumata Diallo<sup>1</sup>, Seynabou Diouf Sene<sup>1</sup>, Alassane Thiam<sup>1</sup>, Bacary Djilocalisse Sadio<sup>4</sup>, Alassane Mbengue<sup>1</sup>, Simon J. Draper<sup>2</sup>, Amy Kristine Bei<sup>5</sup>  
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(ACMCIP Abstract)

5530

**SUPERIOR FUNCTIONAL ANTIBODY ACTIVITY OF A DELAYED-BOOST VACCINATION REGIMEN WITH THE P. FALCIPARUM BLOOD-STAGE VACCINE RH5.1/MATRIX-M™ IN 5-17 MONTH OLD TANZANIAN INFANTS**

Jo Salkeld<sup>1</sup>, Sarah E. Silk<sup>1</sup>, Wilmina F. Kalinga<sup>2</sup>, Ivanny M. Mtaka<sup>2</sup>, Catherine Mkindi<sup>1</sup>, Florence Milando<sup>2</sup>, Neema Balige<sup>2</sup>, Saumu Ahmed<sup>1</sup>, Jordan R. Barrett<sup>1</sup>, Kazutoyo Miura<sup>3</sup>, Ababacar Diouf<sup>3</sup>, Jenny Reimer<sup>1</sup>, Cecilia Camrot<sup>4</sup>, Fay L. Nugent<sup>1</sup>, Carole A. Long<sup>3</sup>, Rachel Roberts<sup>1</sup>, Jee-Sun Cho<sup>1</sup>, Alison M. Lawrie<sup>1</sup>, Carolyn M. Nielsen<sup>1</sup>, Simon J. Draper<sup>1</sup>, Angela M. Minassian<sup>1</sup>, Ally Olotu<sup>2</sup>  
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5531

**STRUCTURES OF VAR2CSA WITH HOST RECEPTOR REVEALS TARGETABLE INTERFACES FOR NEXT GENERATION PLACENTAL MALARIA VACCINE DESIGN**

Rui Ma, Tengfei Lian, Nichole D. Salinas, Rick Huang, Jonathan P. Renn, Thayne H. Dickey, Jennifer Petersen, Joshua Zimmerberg, Sachy Orr-Gonzalez, Brandi Richardson, Tarik Ouahes, Holly Torano, Bethany J. Jenkins, Justin Y.A. Doritchamou, Lynn E. Lambert, Patrick E. Duffy, Niraj H. Tolia  
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5532

**IMV: INNOVATIONS IN MALARIA VACCINE DEVELOPMENT PROGRAM**

Evangelos Simeonidis<sup>1</sup>, Jenifer Haner<sup>1</sup>, Jessica Harkhani<sup>1</sup>, Emily Locke<sup>1</sup>, Trevor Lutzenhiser<sup>1</sup>, Randall MacGill<sup>1</sup>, Heather Richards<sup>1</sup>, Yimin Wu<sup>1</sup>, Susan Youll<sup>2</sup>, Robin Miller<sup>2</sup>, Lorraine Soisson<sup>2</sup>, Simon J. Draper<sup>3</sup>, C. Richter King<sup>1</sup>, Ashley Birkett<sup>1</sup>  
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**Bacteriology - Enteric Infections**

5533

**TRENDS IN THE PREVALENCE AND COMMUNITY KNOWLEDGE AND PRACTICES WITH REGARDS TO PROBABLE TYPHOID FEVER IN SANTA HEALTH DISTRICT - CAMEROON**

Pensha Joysline  
 Georgetown Center for Global Health, Yaounde, Cameroon

5534

**CHOLERA OUTBREAK IN SPECIAL INSTITUTIONS MACHAKOS COUNTY, KENYA, 2022**

Serah Nairuko Nchoko  
 Field Epidemiology and laboratory Program, Nairobi, Kenya

5535

**SEROPREVALENCE OF VIBRIO CHOLERAEEIN HAITI, 2017**

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5536

**EFFICACY OF TYPHOID CONJUGATE VACCINE AGAINST CULTURE-CONFIRMED SALMONELLA TYPHI - A SYSTEMATIC REVIEW AND META-ANALYSIS**

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Thursday  
October 19

5537

### FECAL PH AS A MARKER OF CHRONIC MALNUTRITION OR STUNTING AMONG CHILDREN HOSPITALIZED FOR DIARRHEA AND OTHER NON-DIARRHEAL PATHOLOGIES

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5538

### IMMUNOGENICITY AND TOLERABILITY OF DIFFERENT DOSE SCHEDULES OF TYPHOID CONJUGATE VACCINE IN NEPAL

Sanjeev M. Bijukchhe<sup>1</sup>, Meeru Gurung<sup>2</sup>, Bishma Pokhrel<sup>2</sup>, Mila Shakya<sup>3</sup>, Dikshya Pant<sup>3</sup>, Merryn Voysey<sup>1</sup>, Yama F. Mujadidi<sup>1</sup>, Young Kim<sup>1</sup>, Sarah Kelly<sup>1</sup>, Buddha Basnyat<sup>3</sup>, Andrew J. Pollard<sup>1</sup>, Shrijana Shrestha<sup>2</sup>

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5539

### DIARRHEA EPIDEMICS IN DHAKA, BANGLADESH BEFORE AND DURING THE COVID-19 PANDEMIC: AN EPIDEMIOLOGICAL INVESTIGATION

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5540

### RISK FACTORS FOR SYMPTOMATIC AND ASYMPTOMATIC INFECTION WITH DIARRHEAGENIC E.COLI IN INFANTS OF PERI-URBAN LIMA, PERU

Lucie Ecker<sup>1</sup>, Claudio F. Lanata<sup>1</sup>, Ana I. Gil<sup>1</sup>, Theresa J. Ochoa<sup>2</sup>

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5541

### FACTORS ASSOCIATED WITH PERSISTENCE OF STUNTING AT THE END OF THE FOLLOW UP PERIOD AMONG BANGLADESHI CHILDREN WITH DIARRHEA

Md. Tanveer Faruk, Md Farhad Kabir, Irin Parvin, Abu Sadat Mohammad Sayeem Bin Shahid, Rumana Sharmin, Deena Sultana, Mohammad Jobayer Chisti

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5542

### COMPARATIVE CHARACTERISTICS OF CHILDREN HOSPITALIZED FOR ACUTE, CHRONIC & WITHOUT MALNUTRITION

Abu Sayem Mirza MD Hasibur Rahman, MD Ahshanul Haque, Sharika Nuzhat, MD Farhad Kabir, Fardaus Ara Begum, Tahmeed Ahmed, Mohammad Jobayer Chisti

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5543

### FACTORS ASSOCIATED WITH MORTALITY IN SEVERELY MALNOURISHED HOSPITALIZED CHILDREN WITH DIARRHOEA WHO DEVELOPED SEPTIC SHOCK

Mehnaz Kamal, Visnu Pritom Chowdhury, Monira Sarmin, Shafiqul Islam, Farzana Afroze, Tahmeed Ahmed, Mohammad Jobayer Chisti

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## Bacteriology - Other Bacterial Infections

5544

### ISOLATION AND WHOLE GENOME SEQUENCING OF A CRONOBACTER SAKAZAKII SEQUENCE TYPE 136 STRAIN, FROM READY-TO-EAT FOOD

Irshad M. Sulaiman, Nancy Miranda, Steven Simpson, Kevin Karem

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5545

### TITANIUM DIOXIDE NANOPARTICLES CAN ACTIVATE HUMAN DENDRITIC CELLS AGAINST MYCOBACTERIUM LEPRAE INFECTION: A PROMISE FOR DENDRITIC CELL IMMUNOTHERAPY AGAINST LEPROMATOUS LEPROSY

Jorge Cervantes

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5546

### CHARACTERIZATION OF MULTIDRUG-RESISTANT ESKAPE PATHOGENS ISOLATED FROM A PUBLIC HOSPITAL IN HONDURAS IN 2021

Faviola A. Reyes Quan<sup>1</sup>, Melissa Montoya<sup>1</sup>, Patricia Perez<sup>2</sup>, Marco Moncada<sup>2</sup>, Paul Rios<sup>3</sup>, Silvia Zelaya<sup>2</sup>, Tyler Moeller<sup>3</sup>

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5547

### EPIDEMIOLOGY OF STAPHYLOCOCCUS AUREUS PATHOGENS CAUSING INVASIVE DISEASE IN PATIENTS SEEN AT MRC CLINIC, FAJARA THE GAMBIA

Mamadou Mballow, Henry Badji

MRCG at LSHTM, Banjul, Gambia

5548

### SURVEILLANCE OF COLISTIN RESISTANCE PREVALENCE OF NOSOCOMIAL ORIGIN IN PERU

Jesus D. Rojas<sup>1</sup>, Paul A. Rios<sup>2</sup>, Enrique A. Canal<sup>2</sup>, Manuela M. Bernal<sup>3</sup>, Rina A. Meza<sup>2</sup>, Tyler D. Moeller<sup>2</sup>

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5549

### THE LEPTOSPIRAL PROTEIN LIC12254 INTERACTS TO INTEGRINS VIA THE RGD MOTIF

Maria F. Cavenague, Aline F. Teixeira, Luis G. Fernandes, Ana L. Nascimento

Instituto Butantan, Sao Paulo, Brazil

5550

### CHARACTERIZATION OF ANTIGENIC SITES OF NEISSERIA GONORRHOEA USING HIGH-DENSITY PEPTIDE MICROARRAYS AND PSORALEN-INACTIVATED, WHOLE-CELL VACCINE IN MICE

Michael E. DeWitt<sup>1</sup>, Leigh Ann Sanders<sup>1</sup>, Appavu K. Sundaram<sup>2</sup>, Maria Blevins<sup>1</sup>, Kevin R. Porter<sup>2</sup>, John W. Sanders<sup>1</sup>

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5551

**ORAL CHOLERA VACCINATION CAMPAIGN COVERAGE SURVEY IN GARISSA, WAJIR, TANA RIVER, AND NAIROBI COUNTIES, KENYA**

Cynthia Atieno Musumba<sup>1</sup>, Mark Matheka<sup>1</sup>, Stephen Olublyera<sup>1</sup>, Maurice Mowiny<sup>1</sup>, Fredrick Odhiambo<sup>1</sup>, Ahmed Abade<sup>1</sup>, Maria Nunga<sup>1</sup>, Caren Ndeti<sup>1</sup>, Hilary Limo<sup>2</sup>, Catherine Kiama<sup>3</sup>

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5552

**LABORATORY EVALUATION OF THE IS2404 LAMP TEST FOR LABORATORY DIAGNOSIS OF BURULI ULCER DISEASE**

Roberta Dedei Afi Tackie, Anthony Ablordey, Patience Adams, Joseph Bonney, Jennifer Amedior

Noguchi Memorial Institute for Medical Research, Accra, Ghana

5553

**PHENOTYPIC CARBAPENEMASE DETECTION ADAPTED FOR RESOURCE CONSTRAINED SETTINGS**

Ali Asghar Haider, Alex Page, Sarah Satola, Jesse J. Waggoner

Emory University, Atlanta, GA, United States

5554

**MOLECULAR CHARACTERIZATION OF ESBL-PRODUCING KLEBSIELLA PNEUMONIAE AND ESCHERICHIA COLI ISOLATES FROM THE WESTERN REGIONAL HOSPITAL IN GHANA**

Patience Lartekai Adams, Jennifer Amedior, Roberta Tackie, Anthony Ablordey

Noguchi Memorial Institute for Medical Research, Accra, Ghana

5555

**IN SITU GROWTH OF ZIF-67 ON HALLOYSITE NANOTUBES EMBEDDED IN CHITOSAN HYDROGEL FOR THERAPEUTICS IN PARASITIC INFECTION**

Swetha Shanmugam, Amutha Santhanam

University of Madras, Chennai, India

5556

**ADHERENCE AND ACCEPTANCE OF ORAL AMOXICILLIN DISPERSIBLE TABLET FOR THE TREATMENT OF SICK CHILDREN IN KARACHI, PAKISTAN**

Kiran Ramzan Ali Lalani

The Aga Khan University Hospital, Karachi, Pakistan

5557

**GROUP B STREPTOCOCCUS ACUTE SUPPURATIVE PAROTITIS IN A YOUNG INFANT**

Benazir Baloch Baloch

Aga Khan University Hospital, Karachi, Pakistan

5558

**EPIDEMIOLOGICAL BEHAVIOR OF METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS AT THE END OF THE COVID 19 PANDEMIC IN A HEALTH CARE CENTER IN MONTERÍA-COLOMBIA**

Linda M. Chams, William E. Guerrero

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5559

**ISOLATION AND MOLECULAR IDENTIFICATION OF A STRAIN OF PSEUDOMONAS AERUGINOSA XDR IN POLYTRAUMA PATIENTS IN MONTERIA, COLOMBIA**

Linda M. Chams, William E. Guerrero, Carlos J. Castro

Universidad de Córdoba, Montería, Colombia

5560

**MYCOBACTERIUM LEPRAEANTIGEN-SPECIFIC ANTIBODY PROFILING AND CYTOKINE ANALYSES REVEAL UNIQUE SIGNATURES OF LEPROSY AS WELL AS IMMUNE CHANGES IN THE SETTING OF SCHISTOSOMA MANSONICO-INFECTION**

Pedro Marcal<sup>1</sup>, Anushka Saha<sup>2</sup>, Trirupa Chakraborty<sup>2</sup>, Lorena Oliveira<sup>4</sup>, Lucia Fraga<sup>5</sup>, Jishnu Das<sup>3</sup>, Aniruddh Sarkar<sup>2</sup>, Jessica Fairley<sup>6</sup>

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(ACMCIP Abstract)

5561

**MAPPING CHOLERA HOTSPOTS IN THE ELIMINATION PROCESS IN CAMEROON, 2016-2022**

MENDJIME Patricia, DIBOG Bertrand, YOPA Sandra, Tonye Tonye, WAHHAB Abdoul, DEFO Ivan, ESSOH Linda, ETOUNDI MBALLA Georges Alain

Ministry of Public Health, Department for the Control of Disease, Cameroon

**Clinical Tropical Medicine**

5562

**DESERT SORES: THE SCOURGE OF THE SAS "ROGUE HEROES" IN NORTH AFRICA, 1941-1943**

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

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

5563

**MULTIFACETED REALITIES OF SCRUB TYPHUS: A CASE SERIES FROM SOUTHERN INDIA**

Diviya Bharathi Ravikumar<sup>1</sup>, Barath Prashanth Sivasubramanian<sup>2</sup>, Sruthi Nandhaa Shanmugam<sup>3</sup>, Marilyn Jerry<sup>4</sup>, Raghavendra Tirupathi<sup>4</sup>

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5564

**THE UNIVERSAL VITAL ASSESSMENT SCORE PREDICTS MORTALITY IN PATIENTS WITH COVID-19 IN RWANDA**

Gashame Dona Fabiola<sup>1</sup>, Theogene Twagirumugabe<sup>1</sup>, Christopher C. Moore<sup>2</sup>, Kwame A. Boateng<sup>2</sup>

<sup>1</sup>University of Rwanda, Kigali, Rwanda, <sup>2</sup>University of Virginia, Virginia, VA, United States

Thursday  
October 19

**5565****THE PREVALENCE OF MENSTRUAL DYSFUNCTION FOLLOWING COVID-19 INFECTION IN THAILAND**Rebecca Walshe<sup>1</sup>, Watcharagan Kaewwanna<sup>2</sup>, Kamonwan Kaprakhon<sup>2</sup>, Chayanan Chaowanklang<sup>2</sup>, Ellen Beer<sup>1</sup>, Siriwan Tangjitgamol<sup>3</sup>, Rapeephan Maude<sup>1</sup><sup>1</sup>Ramathibodi Hospital, Bangkok, Thailand, <sup>2</sup>Medpark Hospital, Bangkok, Thailand, <sup>3</sup>Vajira Hospital, Bangkok, Thailand**5566****PATTERNS AND PREDICTORS OF MORTALITY WITHIN THE FIRST 24 HOURS OF ADMISSION AMONG CHILDREN AGED 1-59 MONTHS AT A REGIONAL REFERRAL HOSPITAL IN SOUTH WESTERN UGANDA**

Moses Ochora

Mbarara University of Science and Technology, Mbarara, Uganda

**5567****RECONSTRUCTIVE SURGERY FOR THE NEGLECTED TROPICAL DISEASES (NTDS): GLOBAL GAPS AND FUTURE DIRECTIONS**Kala T. Pham<sup>1</sup>, Peter J. Hotez<sup>1</sup>, Kristy L. Hamilton<sup>2</sup><sup>1</sup>Baylor College of Medicine, Houston, TX, United States, <sup>2</sup>Private Practice, Houston, TX, United States**5568****PATTERN OF OCCURRENCE, CLINICOPATHOLOGICAL PRESENTATION AND MANAGEMENT OF SALIVARY GLAND TUMOURS AMONG PATIENTS ATTENDING MUHIMBILI NATIONAL HOSPITAL, TANZANIA**

David K. Deoglas, Boniphace M. Kalyanyama, Jeremiah R. Moshly, Shafii S. Ramadhani, Paulo J. Laizer

Muhimbili University of Health and Allied Sciences, Dar es Salaam, United Republic of Tanzania

**5569****AETIOLOGY OF ACUTE UNDIFFERENTIATED FEBRILE ILLNESS (AUF) AT A TERTIARY CARE CENTRE IN EASTERN UTTAR PRADESH, INDIA**Vishwa Deepak Tiwari<sup>1</sup>, Thakur Shubh Narayan Rai<sup>1</sup>, Mayank Gangwar<sup>2</sup>, Urvashi Geeta Rai<sup>1</sup>, Gopal Nath<sup>2</sup>, Jaya Chakravarty<sup>1</sup><sup>1</sup>Department of General Medicine, Institute of Medical Sciences, Varanasi, India, <sup>2</sup>Department of Microbiology, Institute of Medical Sciences, Varanasi, India**5570****IMPROVING THE REPEATABILITY OF A QUANTITATIVE G6PD POINT-OF-CARE DIAGNOSTIC THROUGH VARIATION OF TEST PROCEDURES**Arkasha Sadhewa<sup>1</sup>, Alina Chaudhary<sup>2</sup>, Lydia V. Panggalo<sup>3</sup>, Angela Rumaseb<sup>1</sup>, Nabaraj Adhikari<sup>2</sup>, Sanjib Adhikari<sup>2</sup>, Komal R. Rijal<sup>2</sup>, Megha R. Banjara<sup>2</sup>, Ric N. Price<sup>1</sup>, Benedikt Ley<sup>1</sup>, Prakash Ghimire<sup>2</sup>, Ari W. Satyagraha<sup>4</sup><sup>1</sup>Menzies School of Health Research, Darwin, Australia, <sup>2</sup>Tribhuvan University, Kathmandu, Nepal, <sup>3</sup>Exeins Health Initiative, Jakarta, Indonesia, <sup>4</sup>Eijkman Center for Molecular Biology, Jakarta, Indonesia**5571****MISSED OPPORTUNITIES: SCREENING FOR CHAGAS DISEASE AND STRONGYLOIDIASIS IN LIVER AND KIDNEY TRANSPLANT RECIPIENTS BORN IN LATIN AMERICA**Danielle Martin<sup>1</sup>, Shaina Rodrigues<sup>2</sup>, Katherine R. McAleese<sup>2</sup>, Adrienne Showler<sup>2</sup><sup>1</sup>Georgetown University School of Medicine, Washington, DC, United States, <sup>2</sup>Georgetown University Hospital, Washington, DC, United States**5572****RETROSPECTIVE EPIDEMIOLOGICAL STUDY ON THE EFFECTIVENESS OF VISCERAL LEISHMANIASIS TREATMENT PROTOCOLS AND RISK FACTORS FOR RELAPSE IN TIATY EAST AND TIATY WEST SUB-COUNTIES, KENYA**Grace C. Kennedy<sup>1</sup>, Katherine O'Brien<sup>1</sup>, Hellen Nyakundi<sup>2</sup>, Mwatela Kitondo<sup>2</sup>, Wilson Biwott<sup>3</sup>, Richard G. Wamai<sup>4</sup><sup>1</sup>Department of Health Sciences, Bouve College of Health Sciences, Northeastern University, Boston, MA, United States, <sup>2</sup>African Center for Community Investment in Health, Chemolingot, Kenya, <sup>3</sup>Chemolingot Sub-county Hospital, Chemolingot, Kenya, <sup>4</sup>Department of Cultures, Societies, and Global Studies, College of Social Sciences and Humanities, Northeastern University, Boston, MA, United States**5573****IMPLEMENTING LABORATORY QUALITY MANAGEMENT SYSTEMS IN GHANA - A BASELINE QUALITY AUDIT OF ACCREDITATION READINESS IN LOWER-TIER HEALTH FACILITIES**Emma Edinam Kploanyi<sup>1</sup>, Joseph Kenu<sup>1</sup>, Benjamin Buade<sup>1</sup>, Benedicta K. Atsu<sup>1</sup>, David A. Opare<sup>2</sup>, Franklin Asiedu-Bekoe<sup>3</sup>, Lee F. Schroeder<sup>4</sup>, David W. Dowdy<sup>5</sup>, Alfred Yawson<sup>6</sup>, Ernest Kenu<sup>1</sup><sup>1</sup>School of Public Health, University of Ghana, Accra, Ghana, <sup>2</sup>National Public Health & Reference Laboratory, Ghana Health Service, Accra, Ghana, <sup>3</sup>Public Health Division, Ghana Health Service, Accra, Ghana, <sup>4</sup>Department of Pathology & Clinical Laboratories, University of Michigan, Ann Arbor, MI, United States, <sup>5</sup>Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>6</sup>Department of Community Health, University of Ghana School of Medicine and Dentistry, Accra, Ghana**5574****ASSESSMENT OF TREATMENT OUTCOMES OF HUMAN IMMUNODEFICIENCY VIRUS POSITIVES TRANSITIONED FROM TENOFOVIR/LAMIVUDINE/EFAVIRENZ TO DOLUTEGRAVIR REGIMEN COMBINATION IN A NIGERIAN TERTIARY HOSPITAL**

Omobola Yetunde Ojo

Federal Medical Centre, Abeokuta, Nigeria

**5575****IMPACT OF THE INTRODUCTION OF A PACKAGE OF DIAGNOSTIC TOOLS, DIAGNOSTIC ALGORITHM, AND TRAINING AND COMMUNICATION ON OUTPATIENT ACUTE FEVER CASE MANAGEMENT AT THREE DIVERSE SITES IN UGANDA: RESULTS OF A RANDOMIZED CONTROLLED TRIAL**James A. Kapisi<sup>1</sup>, Asadu Sserwanga<sup>1</sup>, Freddy E. Kitutu<sup>2</sup>, Elizeus Rutebemberwa<sup>3</sup>, Phyllis Awor<sup>2</sup>, Stephan Weber<sup>4</sup>, Thomas Keller<sup>4</sup>, David K. Mafigiri<sup>5</sup>, Deborah E. Sebatta<sup>1</sup>, Philip Horgan<sup>6</sup>, Sabine Dittrich<sup>6</sup>, Catrin E. Moore<sup>7</sup>, Olawale Salami<sup>6</sup>, Pierro Olliaro<sup>6</sup>, Juvenal Nkeramahame<sup>6</sup>, Heidi Hopkins<sup>8</sup><sup>1</sup>Infectious Diseases Research Collaboration, Kampala, Uganda, <sup>2</sup>Department of Pharmacy, Makerere University School of Health Sciences, Kampala, Uganda, <sup>3</sup>Department of Health Policy, Planning and Management, Makerere University School of Public Health, Kampala, Uganda, <sup>4</sup>ACOMED Statistics, Leipzig, Germany, <sup>5</sup>Social Work and Social Administration, Makerere University, Kampala, Uganda, <sup>6</sup>FIND, the global alliance for diagnostics, Geneva, Switzerland, <sup>7</sup>Centre for Neonatal and Paediatric Infection, Institute for Infection and Immunity, St George's University of London, London, United Kingdom, <sup>8</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom



5576

**PREVALENCE OF CHRONIC KIDNEY DISEASE IN A COHORT OF GUATEMALAN AGRICULTURAL WORKERS 2020-2022: THE AGRICULTURAL WORKERS AND RESPIRATORY ILLNESS IMPACT (AGRI) STUDY**

**Diva M. Calvimontes**<sup>1</sup>, Molly M. Lamb<sup>2</sup>, Neudy Rojop<sup>1</sup>, Kareen Arias<sup>1</sup>, Edgar Barrios<sup>1</sup>, Jaime Butler-Dawson<sup>2</sup>, Lyndsay Krisher<sup>2</sup>, Melissa Gomez<sup>1</sup>, Wanda Mejia<sup>1</sup>, Claudia Paiz<sup>1</sup>, Guillermo A. Bolanos<sup>1</sup>, Lee .. Newman<sup>2</sup>, Edwin J. Asturias<sup>3</sup>, Daniel Olson<sup>3</sup>

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5577

**IMPACT OF IMPROVED DIAGNOSTIC TOOLS, PRACTICES, TRAINING AND COMMUNICATION ON ACUTE FEVER CASE MANAGEMENT AND ANTIBIOTIC PRESCRIPTIONS FOR PATIENTS PRESENTING AT OUTPATIENT FACILITIES IN UGANDA**

**Deborah Ekusai- Sebatta**<sup>1</sup>, Elizeus Rutebemberwa<sup>2</sup>, James A. Kapisi<sup>1</sup>, Asadu Sserwanga<sup>3</sup>, Freddy Kitutu<sup>4</sup>, Heidi Hopkins<sup>4</sup>, David K. Mafigiri<sup>5</sup>, Philip Horgan<sup>6</sup>

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5578

**A SIMPLIFIED CAREGIVER DERIVED DIARRHEA SEVERITY SCORE (14DCODA) FOR USE IN SURVEYS WITH 14-DAY RECALL PERIODS: A VALIDATION STUDY NESTED WITHIN A VIRAL DIARRHEA SURVEILLANCE PROJECT IN AMAZONIAN PERU**

Margaret Kosek<sup>1</sup>, Maribel Paredes Olortegui<sup>2</sup>, **Josh Michael Colston**<sup>1</sup>, Greisi Hurico<sup>2</sup>, Melinda Munos<sup>3</sup>

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**Helminths – Nematodes – Filariasis (Epidemiology)**

5579

**HUMAN EXPOSURE TO ONCHOCERCA VOLVOLUS IN HIGH AND LOW RISK ONCHOCERCIASIS TRANSMISSION SETTINGS**

**Sellase A. Pi-Bansa**<sup>1</sup>, Kwadwo Frempong<sup>1</sup>, Joseph Nyarko<sup>1</sup>, Millicent Opoku<sup>2</sup>, Selassie Afatodji<sup>1</sup>, Franklin Ayisi<sup>3</sup>, Sampson Otoo<sup>1</sup>, Mawunyo Dogbe<sup>1</sup>, Abena Nyarko<sup>1</sup>, Aissatou Diawara<sup>4</sup>, Sake de Vlas<sup>5</sup>, Wilma Stolk<sup>6</sup>, Daniel Boakye<sup>1</sup>

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5580

**COST-BENEFIT ASSESSMENT OF SURGICAL INTERVENTION FOR FILARIAL HYDROCELE PATIENTS AT THE PRIMARY HEALTH CARE LEVEL IN BANGLADESH**

**Shomik Maruf**<sup>1</sup>, Aishi Aratrika<sup>1</sup>, Soumik Kha Sagar<sup>1</sup>, Mohammad Sohel Shomik<sup>1</sup>, Prakash Ghosh<sup>1</sup>, Md Rasel Uddin<sup>1</sup>, Md Shakhawat Hossain<sup>1</sup>, Martin Siegel<sup>2</sup>, MM Aktaruzzaman<sup>3</sup>, Dinesh Mondal<sup>1</sup>

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5581

**BASELINE EVALUATION OF ONCHOCERCIASIS TRANSMISSION IN FOUR DISTRICTS OF NORTHERN GHANA**

**Andrew Abbott**<sup>1</sup>, Joseph Opare<sup>2</sup>, Kofi Asemanyi-Mensah<sup>2</sup>, Odame Asiedu<sup>2</sup>, Ellen J. Doku<sup>2</sup>, Anthony Tetteh-Kumah<sup>2</sup>, Kofi Agyabeng<sup>3</sup>, Ben Masiira<sup>4</sup>, Thomson Lakwo<sup>4</sup>, Gifty Boateng<sup>5</sup>, Lorreta Antwi<sup>5</sup>, E. Scott Elder<sup>1</sup>, Jessica Prince-Guerra<sup>1</sup>, Andrew N. Hill<sup>1</sup>, Paul T. Cantey<sup>1</sup>

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5582

**EVALUATION OF HIGHER SEROLOGIC THRESHOLD FOR STOPPING MASS DRUG ADMINISTRATION IN ONCHOCERCIASIS ELIMINATION IN THE TUKUYU FOCUS, TANZANIA**

**Rebecca J. Chancey**<sup>1</sup>, Andreas Nshala<sup>1</sup>, Akili Kalinga<sup>2</sup>, E. Scott Elder<sup>1</sup>, Paul Maritine Hayuma<sup>2</sup>, Clara Jones<sup>3</sup>, Erick Mgina<sup>2</sup>, Oscar Kaitaba<sup>3</sup>, Ben Masiira<sup>4</sup>, Thomson Lakwo<sup>4</sup>, George Kabona<sup>5</sup>, Paul T. Cantey<sup>1</sup>

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5583

**PROVIDING EVIDENCE ON THE STATUS OF TRANSMISSION OF ONCHOCERCIASIS IN 5 COUNTIES IN LIBERIA**

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5584

**HIGH PREVALENCE OF LOA LOA AND MANSONELLA PERSTANS IN NORTHERN GABON**

**Luccheri Ndong Akomezoghe**, Noé Patrick M'Bondoukwé, Denise Patricia Mawili Mboumba, Jacques Mari Ndong Ngomo, Bridy Chesly Moutombi Ditombi, Hadry Roger Sibi Matotou, Valentin Migueba, Marielle Karine Bouyou-Akotet *Université des Sciences de la Santé, Owendo, Gabon*

5585

**DIROFILARIA SP. HONG KONG AND BRUGIA SP. SRI LANKAN GENOTYPE ARE THE PRIMARY CAUSES OF FILARIAL INFECTION IN DOGS IN SRI LANKA**

**Ushani Atapattu**, Anson V. Koehler, Lucas G. Huggins, Anke Wiethoelter, Rebecca J. Traub, Vito Colella

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5586

**DIFFERENCES IN VACCINE-SPECIFIC RESPONSES BETWEEN URBAN AND RURAL ENVIRONMENTS AND MEDIATORS OF THESE DIFFERENCES AMONG UGANDAN ADOLESCENTS: THE POPVAC TRIALS**

**Agnes Natukunda**<sup>1</sup>, Ludoviko Zirimenya<sup>1</sup>, Gyaviira Nkurunungi<sup>1</sup>, Jacent Nassuuna<sup>1</sup>, Emily L. Webb<sup>2</sup>, Alison M. Elliott<sup>1</sup>

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Thursday  
October 19

5587

### HOW DOES THE PROPORTION OF NEVER TREATMENT INFLUENCE THE SUCCESS OF MASS DRUG ADMINISTRATION PROGRAMMES FOR THE ELIMINATION OF LYMPHATIC FILARIASIS?

Klodeta Kura<sup>1</sup>, Wilma A. Stolk<sup>2</sup>, María-Gloria Basáñez<sup>1</sup>, Benjamin S. Collyer<sup>1</sup>, Sake J. de Vlas<sup>2</sup>, Peter J. Diggle<sup>3</sup>, Katherine M. Gass<sup>4</sup>, Matthew Graham<sup>5</sup>, T. Deirdre Hollingsworth<sup>5</sup>, Jonathan D. King<sup>6</sup>, Alison Krentel<sup>7</sup>, Roy M. Anderson<sup>1</sup>, Luc E. Coffeng<sup>2</sup>

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5588

### ASSESSING IMPACT OF IVERMECTIN AND ALBENDAZOLE MASS DRUG ADMINISTRATION ON TRANSMISSION OF LYMPHATIC FILARIASIS IN 24 DISTRICTS IN SENEGAL

Ngayo Sy<sup>1</sup>, Ernest Mensah<sup>2</sup>, Rose Monteil<sup>3</sup>, Babacar Banda Diallo<sup>3</sup>, Babacar Guèye<sup>1</sup>, Achille Kabore<sup>4</sup>

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5589

### SIGNIFICANT ACHIEVEMENTS IN LYMPHATIC FILARIASIS ELIMINATION IN NORTHWESTERN ETHIOPIA

Geremew Haileyesus<sup>1</sup>, Mohammed Hassen<sup>1</sup>, Aderajew Mohammed<sup>1</sup>, Tekola Endeshaw<sup>1</sup>, Yewondwossen Bitew<sup>1</sup>, Tewodros Seid<sup>1</sup>, Desalegn Jemberie<sup>1</sup>, Abebual Yilak<sup>1</sup>, Worku Mamo<sup>1</sup>, Fetene Mihretu<sup>1</sup>, Gedefaw Ayenew<sup>1</sup>, Mitiku Adugna<sup>1</sup>, Mossie Tamiru<sup>2</sup>, Fikre Seife<sup>2</sup>, Anley Haile<sup>1</sup>, Emily Griswold<sup>3</sup>, Jenna E. Coalson<sup>3</sup>, Gregory S. Noland<sup>3</sup>, Frank O. Richards, Jr.<sup>3</sup>, Zerihun Tadesse<sup>1</sup>

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5590

### NATIONWIDE RE-MAPPING SURVEY FOR LYMPHATIC FILARIASIS ELIMINATION IN THE DOMINICAN REPUBLIC

Karen E.S. Hamre<sup>1</sup>, Luccène Désir<sup>1</sup>, V. Madsen Beau de Rochars<sup>2</sup>, Keyla Ureña<sup>3</sup>, Julio Alexis Batista<sup>3</sup>, Angelita Méndez Florian<sup>3</sup>, Luisa A. Feliz Cuevas<sup>3</sup>, Carmen Cuello Montilla<sup>3</sup>, Gregory S. Noland<sup>1</sup>, Manuel Gonzales<sup>3</sup>

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5591

### MOLECULAR EPIDEMIOLOGY OF CIRCULATING DIROFILARIA IMMITIS AND DIROFILARIA REPENS IN CULICIDAE MOSQUITOES FROM REYNOSA, TAMAULIPAS

Enrique Lopez-NegreteMata<sup>1</sup>, Javier Alfonso Garza-Hernandez<sup>2</sup>, Carlos Arturo Rodríguez-Alarcón<sup>2</sup>, Luis Daniel García-Muñoz<sup>3</sup>, Miguel Angel Reyes-Lopez<sup>1</sup>, Stephanie Viridiana Laredo-Tiscareño<sup>2</sup>, Isela Quintero-Zapata<sup>4</sup>, Fatima Lizeth Gandarilla-Pacheco<sup>4</sup>, Erick de Jesus de Luna-Santillana<sup>1</sup>

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## Helminths – Nematodes – Filariasis (Genetics/Genomics)

5592

### GENETIC DIVERSITY WITH THE EMERGING ZOOZONOSIS OF AN ONCHOCERCA SPECIES OF HUMAN POPULATIONS IN TARABA STATE, NIGERIA

Iliya S. Ndams<sup>1</sup>, Danlami E. Akfyi<sup>1</sup>, Ishaya H. Nock<sup>1</sup>, Gloria D. Chetchet<sup>1</sup>, Alfons Renz<sup>2</sup>

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5593

### BENCHMARKING AN ACCESSIBLE METHOD FOR GENERATING COMPLETE GENOMES FROM PARASITIC NEMATODES

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## Helminths – Nematodes – Filariasis (Immunology)

5594

### BMA-LAD-2 AS A NOVEL ANTIBODY TARGET FOR THE TREATMENT OF LYMPHATIC FILARIASIS

Allison Segard<sup>1</sup>, William Tolbert<sup>1</sup>, Christopher Broder<sup>1</sup>, Marzena Pazgier<sup>1</sup>, Edward Mitre<sup>1</sup>

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(ACMCIP Abstract)

5595

### IMPACT OF WUCHERERIA BANCROFTI INFECTION ON CERVICAL MUCOSAL IMMUNITY OF WOMEN IN LINDI, TANZANIA

Maureen Mosoba<sup>1</sup>, Thomas F. Marandu<sup>2</sup>, Jacklina Mhidze<sup>2</sup>, Sacha E. Horn<sup>3</sup>, Winfrida John<sup>4</sup>, Abdallah Ngenya<sup>4</sup>, Upendo J. Mwingira<sup>4</sup>, Agatha D. Urrio<sup>2</sup>, Nhamo Chiwarengo<sup>5</sup>, Christof Geldmacher<sup>3</sup>, Manuel Ritter<sup>3</sup>, Michael Hölscher<sup>3</sup>, Achim Hoerauf<sup>6</sup>, Akili Kalinga<sup>4</sup>, Lucas H. Maganga<sup>2</sup>, Mkunde Chachage<sup>2</sup>, Inge Kroidl<sup>3</sup>

<sup>1</sup>Center for International Health, Munich, Germany, <sup>2</sup>National Institute for Medical Research-Mbeya Medical Research Center, Mbeya, United Republic of Tanzania, <sup>3</sup>Medical Center of the University of Munich (LMU), Munich, Germany, <sup>4</sup>National Institute for Medical Research-Head Quarter, Dar es Salaam, United Republic of Tanzania, <sup>5</sup>National Institute for Medical Research-Mbeya Medical Research Center, Dar es Salaam, United Republic of Tanzania, <sup>6</sup>Institute of Medical Microbiology, Immunology and Parasitology, Bonn, Germany

5596

### EFFECTS OF WUCHERERIA BANCROFTI INFECTION ON CD4 T CELL RESPONSES TO SPECIFIC AND NON-SPECIFIC ANTIGENS

Jacklina Mhidze<sup>1</sup>, Mkunde Chachage<sup>2</sup>, Maureen Mosoba<sup>1</sup>, Sacha Horn<sup>3</sup>, Agatha Urrio<sup>1</sup>, Antelmo Haule<sup>1</sup>, Nhamo Chiwarengo<sup>1</sup>, Said About<sup>4</sup>, Lucas Maganga<sup>1</sup>, Inge Kroidl<sup>3</sup>, Thomas F. Marandu<sup>2</sup>

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(ACMCIP Abstract)

5597

**MULTIPLEXED HIGH THROUGHPUT POINT-OF-CARE BIOSENSING OF ONCHOCERCIASIS ANTIBODY MARKERS**Mallika Senthil<sup>1</sup>, Sarah Ali<sup>1</sup>, Balazs Kaszala<sup>1</sup>, Dhruvi Trivedi<sup>1</sup>, Neda Rafat<sup>1</sup>, Sukwan Handali<sup>2</sup>, Sylvia A. Ossa<sup>2</sup>, Evan W. Secor<sup>2</sup>, Aniruddh Sarkar<sup>1</sup><sup>1</sup>Georgia Institute of Technology, Atlanta, GA, United States, <sup>2</sup>Centers for Disease Control and Prevention, Atlanta, GA, United States

5598

**CYTOKINE/IN UTEROPRIMING IS ASSOCIATED WITH DETRIMENTAL BIRTH OUTCOMES AND CHILD INFECTIONS**Ruth K. Nyakundi<sup>1</sup>, Ronald K. Ottichilo<sup>2</sup>, Thomas M. Kariuki<sup>3</sup>, Jann Hau<sup>4</sup>, Bernard Guyah<sup>2</sup>, Dunstan Mukoko<sup>5</sup>, Francis M. Mutuku<sup>6</sup>, A. Desiree LaBeaud<sup>7</sup>, Christopher L. King<sup>8</sup>, Charles H. King<sup>9</sup>, Indu Malhotra<sup>8</sup><sup>1</sup>Institute of Primate Research, Nairobi, Kenya, <sup>2</sup>School of Public Health and Development Studies, Maseno, Kenya, <sup>3</sup>Alliance for Accelerating Excellence in Science in Africa, Nairobi, Kenya, <sup>4</sup>University of Copenhagen, Copenhagen, Denmark, <sup>5</sup>Division of Vector Borne and Neglected Tropical Diseases, Nairobi, Kenya, <sup>6</sup>Technical University of Mombasa, Mombasa, Kenya, <sup>7</sup>Stanford University School of Medicine, Stanford, CA, United States, <sup>8</sup>Case Western Reserve University, Cleveland, OH, United States

(ACMCIP Abstract)

**Integrated Control Measures for Neglected Tropical Diseases (NTDs)**

5599

**IMPACT AND COST EFFECTIVENESS OF ANNUAL VS. TWICE ANNUAL MASS DRUG ADMINISTRATION FOR ELIMINATION OF LYMPHATIC FILARIASIS AND CONTROL OF ONCHOCERCIASIS IN COTE D'IVOIRE**Betsy Abente<sup>1</sup>, Ann Goldman<sup>2</sup>, Benjamin Koudou<sup>3</sup>, Olivier Kouadio<sup>3</sup>, Jennifer Klenke<sup>1</sup>, Peter Fischer<sup>1</sup>, Gary Weil<sup>1</sup><sup>1</sup>Washington University in St. Louis, St. Louis, MO, United States, <sup>2</sup>George Washington University, Washington, DC, United States, <sup>3</sup>Centre Suisse de Recherches Scientifiques (CSRS), Abidjan, Côte D'Ivoire

5600

**INVESTIGATING KNOWLEDGE, ATTITUDES, AND PRACTICES OF HEALTH WORKERS ON THE MANAGEMENT OF FEMALE GENITAL SCHISTOSOMIASIS IN THE SOUTH REGION OF CAMEROON**

Charlotte Njua Mbuh

Texila American University, Lusaka, Zambia

5601

**INVESTIGATING THE INFLUENCE OF PATHOGENIC LEPTOSPIRE SHEDDING BY RAT POPULATIONS ON HUMAN LEPTOSPIRA INCIDENCE IN SALVADOR, BRAZIL**Nirali Soni<sup>1</sup>, Fábio N. Souza<sup>2</sup>, Albert I. Ko<sup>3</sup>, Elsie A. Wunder Jr<sup>3</sup>, Michael Begon<sup>4</sup>, Hussein Khalil<sup>5</sup>, Daiana S. de Oliveira<sup>6</sup>, Mitermayer G. Reis<sup>6</sup>, Federico Costa<sup>6</sup>, Emanuele Giorgi<sup>1</sup><sup>1</sup>Centre for Health Informatics, Computing, and Statistics, Lancaster University Medical School, Lancaster, United Kingdom, <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>Department of Evolution, Ecology and Behaviour, University of Liverpool, Liverpool, United Kingdom, <sup>5</sup>Department of Wildlife, Fish and Environmental Studies, Swedish University of Agricultural Sciences, Umeå, Sweden, <sup>6</sup>Goncalo Moniz Institute, Oswaldo Cruz Foundation, Salvador, Brazil

5602

**MAINTAINING ELIMINATION OF TRACHOMA AS A PUBLIC HEALTH PROBLEM: POST-VALIDATION SURVEILLANCE PLANS IN VALIDATED COUNTRIES**Stephanie Palmer<sup>1</sup>, Shoa Moosavi<sup>2</sup>, Aryc W. Mosher<sup>3</sup>, Anna Phillips<sup>1</sup>, Achille Kabore<sup>1</sup><sup>1</sup>FHI 360, Washington, DC, DC, United States, <sup>2</sup>Georgetown University, Washington, DC, DC, United States, <sup>3</sup>USAID, Atlanta, GA, United States

5603

**INTEGRATED SURVEILLANCE FOR LYMPHATIC FILARIASIS, VISCERAL LEISHMANIASIS AND DENGUE A DIFFICULT PROPOSITION**Pradeep Kumar Srivastava<sup>1</sup>, Anju Viswan K<sup>2</sup><sup>1</sup>EX NVBDCP, Ghaziabad, India, <sup>2</sup>EX WHO, Jagdalpur, India

5604

**IMPLEMENTATION OF A SUSTAINABLE AEADES AEGYPTI CONTROL STRATEGY (ISAACS): A COMMUNITY-BASED MODEL**Harold Suazo<sup>1</sup>, Lester Lorente<sup>2</sup>, Jacqueline Mojica<sup>1</sup>, Jose Juarez<sup>3</sup>, Jorge Ruiz<sup>1</sup>, Laura Chanchien<sup>2</sup>, Josefina Coloma<sup>4</sup><sup>1</sup>Sustainable Science Institute, Managua, Nicaragua, <sup>2</sup>Fundacion AMOS, Health and Hope, Managua, Nicaragua, <sup>3</sup>Sustainable Science Institute, Guatemala, Guatemala, <sup>4</sup>Division of Infectious Diseases and Vaccinology, School of Public Health, University of California, Berkeley, Berkeley, CA, United States

5605

**COST EFFECTIVENESS OF COMPARATIVE SURVEY DESIGNS FOR HELMINTH CONTROL PROGRAMS: POST-HOC COST ANALYSIS AND MODELLING OF THE KENYAN NATIONAL SCHOOL BASED DEWORMING PROGRAM**Mark Minnery<sup>1</sup>, Collins Okoyo<sup>2</sup>, Grace Morgan<sup>1</sup>, Andrew Wang<sup>1</sup>, Olatunji Johnson<sup>3</sup>, Claudio Fronterre<sup>3</sup>, Antonio Montresor<sup>4</sup>, Suzy Campbell<sup>1</sup>, Charles Mwandawiro<sup>2</sup>, Peter Diggle<sup>3</sup><sup>1</sup>Evidence Action, Washington DC, DC, United States, <sup>2</sup>Kenyan Medical Research Institute, Nairobi, Kenya, <sup>3</sup>Centre for Health Informatics Statistics and Computing, Lancaster University, Lancaster, United Kingdom, <sup>4</sup>World Health Organisation, Geneva, Switzerland

5606

**SEROSTATUS OF ANTI-RABIES TITER VACCINE LEVELS IN IMPOUNDED DOGS IN MUNTINLUPA CITY, PHILIPPINES, 2021**

Jairue Pattaguan Cafe

Research Institute for Tropical Medicine, Muntinlupa, Philippines

5607

**ASSESSING HEALTH SYSTEM'S PERFORMANCE FOR NEGLECTED TROPICAL DISEASES (NTDs) THROUGH WHO'S DATA QUALITY ASSESSMENT (DQA) TOOL IN FOUR WEST AFRICAN COUNTRIES**

Kaustubh Wagh, Dillon Tindall, Diana Stukel

FHI360, WASHINGTON DC, DC, United States

5608

**MEASURING THE OUTCOME OF THE MASS DRUGS ADMINISTRATION OF LYMPHATIC FILARIASIS THROUGH SENTINEL AND SPOT SITES SURVEYS FROM 2012 - 2021**

Abraham Wlah Nyenswah

Ministry of Health, Monrovia, Liberia

**5609****INCIDENCE OF SNAKEBITES IN RURAL POPULATIONS OF REPUBLIC OF CONGO**

Lise B. Mavoungou<sup>1</sup>, Kate Jackson<sup>2</sup>, Joseph Goma-Tchimbakala<sup>1</sup>  
<sup>1</sup>Institut national de Recherche en Sciences Exactes et Naturelles (IRSEN), Brazzaville, Republic of the Congo, <sup>2</sup>Withman College, Walla Walla, WA, United States

## Kinetoplastida and Other Protozoa - Diagnosis and New Detection Tools (Including Leishmania and Trypanosomes)

**5610****UTILITY OF THE LOOP-MEDIATED ISOTHERMAL AMPLIFICATION ASSAY FOR THE DIAGNOSIS OF VISCERAL LEISHMANIASIS FROM BLOOD SAMPLES IN ETHIOPIA**

Dawit Gebreegziabihir Hagos<sup>1</sup>, Yazezew Kebede kiros<sup>1</sup>, Mahmud Abdulkadir<sup>1</sup>, Dawit Wolday<sup>1</sup>, D. F. Henk Schallig<sup>2</sup>  
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**(ACMCIP Abstract)****5611****VISCERAL LEISHMANIASIS: IMPROVED MOLECULAR DIAGNOSIS USING THE MINI DIRECT ON BLOOD PCR NUCLEIC ACID LATERAL FLOW IMMUNOASSAY (DBPCR-NALFIA)**

Henk Schallig<sup>1</sup>, Norbert Van Dijk<sup>1</sup>, Daniela Huggins<sup>1</sup>, Eugenia Carrillo Gallego<sup>2</sup>, Dawit Hagos<sup>1</sup>, Sandra Menting<sup>1</sup>  
<sup>1</sup>Academic Medical Centre, Amsterdam, Netherlands, <sup>2</sup>Instituto de Salud Carlos III, Madrid, Spain

**5612****COST EFFECTIVENESS ANALYSIS OF CONGENITAL CHAGAS DISEASE SCREENING METHODS IN BOLIVIA**

Steffany Vucetich Valdivia  
 Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

**5613****POTENTIAL BIOMARKERS FOR ASYMPTOMATIC VISCERAL LEISHMANIASIS AMONG DEPLOYED U.S. MILITARY PERSONNEL**

Fernanda Fortes de Araujo<sup>1</sup>, Ines Lakhali-Naouar<sup>2</sup>, Rupal Mody<sup>3</sup>, John Curtin<sup>4</sup>, Edgie-Mark Co<sup>5</sup>, Nathaniel K. Copeland<sup>6</sup>, Nancy Koles<sup>1</sup>, Hui Liu<sup>1</sup>, Anna Wooten<sup>1</sup>, Naomi Aronson<sup>1</sup>  
<sup>1</sup>Uniformed Services University of the Health Sciences, Bethesda, MD, United States, <sup>2</sup>Walter Reed Army Institute of Research, Bethesda, MD, United States, <sup>3</sup>William Beaumont Army Medical Center, El Paso, TX, United States, <sup>4</sup>Walter Reed National Military Medical Center, Bethesda, MD, United States, <sup>5</sup>Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand, <sup>6</sup>Tripler Army Medical Center, Honolulu, HI, United States

**5614****OPTIMIZATION AND VALIDATION OF RECOMBINANT ANTIGEN BASED INDIRECT ELISA FOR CUTANEOUS LEISHMANIASIS**

Charani Karunathilake, Narmadha Alles, Sachee Bhanu Piyasiri, Isurika Weerasinghe, Nipuni Chandrasiri, Rajika Dewasurendra, Nadira Karunaweera  
 Department of Parasitology, Faculty of Medicine, University of Colombo, Colombo, Sri Lanka

**(ACMCIP Abstract)****5615****EVALUATION OF NOVODIAG® STOOL PARASITES TEST, A HIGH-PLEX STOOL TEST, AGAINST TRADITIONAL METHODS IN A HIGH-RISK TRAVELLER AND MIGRANT POPULATION AS A POTENTIAL FOR QUICKER AND MORE ACCURATE IDENTIFICATION OF INTESTINAL PARASITES**

Rohma Ghani<sup>1</sup>, Spencer Polley<sup>2</sup>, Rashmita Bodhani<sup>2</sup>, Amina Moussa<sup>2</sup>, Peter L. Chiodini<sup>1</sup>, Gauri Godbole<sup>1</sup>, Laura Nabarro<sup>1</sup>  
<sup>1</sup>University College London, London, United Kingdom, <sup>2</sup>Health Services Laboratories LLP Analytics, London, United Kingdom

**5616****A SEROLOGICAL 'TEST OF TREATMENT RESPONSE' FOR CHAGAS DISEASE**

Sarah Miller<sup>1</sup>, Vashti Irani<sup>1</sup>, Ester Sabino<sup>2</sup>, Michael P. Busch<sup>3</sup>, Ursula Saade<sup>4</sup>, Maan Zrein<sup>4</sup>, Alicia Majeau<sup>1</sup>, Andrew Levin<sup>1</sup>  
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**5617****EVALUATION OF TOXOPLASMA GONDII EXCRETORY/ SECRETORY AND MEMBRANE ANTIGEN FOR THE DETECTION OF INFECTION IN ACUTE PHASE BY WESTERN BLOTTING**

José L. Pasco Espinoza<sup>1</sup>, Juan A. Jimenez Chunga<sup>2</sup>, Edith S. Málaga<sup>1</sup>, Solange B. Custodio Custodio<sup>1</sup>, Manuela R. Verastegui Pimentel<sup>1</sup>, Martiza Calderón Sánchez<sup>1</sup>, Cesar M. Gavidia Chucan<sup>3</sup>, Robert H. Gilman<sup>4</sup>  
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**(ACMCIP Abstract)****5618****DRIED BLOOD SPOTS (DBS): A SUITABLE ALTERNATIVE TO USING WHOLE BLOOD SAMPLES FOR DIAGNOSTIC TESTING OF VISCERAL LEISHMANIASIS IN THE POST-ELIMINATION ERA**

Prakash Ghosh, Dinesh Mondal  
 icddr,b, Dhaka, Bangladesh

**5619****TESA-BLOT AS A RAPID TEST**

Edith S. Malaga<sup>1</sup>, Manuela R. Verastegui Pimentel<sup>1</sup>, Shirley Equila<sup>2</sup>, Jean C. Belarde Leigue<sup>2</sup>, Clarisa R. Chavez<sup>2</sup>, Freddy Tinajeros<sup>2</sup>, Robert H. Gilman<sup>3</sup>  
<sup>1</sup>CAYETANO HEREDIA PERUVIAN UNIVERSITY, Lima, Peru, <sup>2</sup>PRISMA Charitable Association, Lima, Peru, <sup>3</sup>Department of International Health, Johns Hopkins University, Baltimore, MD, United States

**5620****EVALUATION OF TRYPANOSOMA CRUZI AMASTIGOTE ANTIGENS IN CARDIAC TISSUE AT DIFFERENT POST-INFECTION TIMES**

José O. Zapata More<sup>1</sup>, Edith S. Malaga Machaca<sup>1</sup>, Manuela R. Verastegui Pimentel<sup>1</sup>, Robert H. Gilman<sup>2</sup>  
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**(ACMCIP Abstract)**

5621

**COMPARATIVE ANALYSIS OF A CHAGAS DISEASE RAPID DIAGNOSTIC TEST (RDT) FOR THE DETECTION OF ANTI-TRYPANOSOMA CRUZI ANTIBODIES AMONG SERUM COLLECTED FROM MULTIPLE REGIONS OF COLOMBIA**Norman L. Beatty<sup>1</sup>, Omar Cantillo-Barazza<sup>2</sup>, Paola Vásquez Escobar<sup>2</sup>, Daniela Sánchez Aristizabal<sup>2</sup>, Omar Triana-Chávez<sup>2</sup><sup>1</sup>University of Florida College of Medicine, Department of Medicine, Division of Infectious Diseases and Global Medicine, Gainesville, FL, United States, <sup>2</sup>Grupo Biología y Control Enfermedades Infecciosas, Universidad de Antioquia, Medellín, Colombia

5622

**DETECTION OF A TOXOPLASMA GONDII ANTIGENIC PROTEIN AND ITS POTENTIAL USE IN THE NONINVASIVE DIAGNOSIS OF TOXOPLASMOSIS**

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**Kinetoplastida and Other Protozoa - Genomics, Proteomics and Metabolomics, Molecular Therapeutic Targets (Including Leishmania and Trypanosomes)**

5623

**ASSESSING THE TSETSE FLY MICROBIOME COMPOSITION AND THE POTENTIAL ASSOCIATION OF SOME BACTERIA TAXA WITH TRYPANOSOME ESTABLISHMENT**

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5624

**SIMILARITIES BETWEEN GENES FOR TRYPANOSOMA CRUZI MICROTUBULE ASSOCIATED PROTEINS AND HUMAN INTERFERONS**Martin A. Winkler<sup>1</sup>, Alfred A. Pan<sup>2</sup><sup>1</sup>Biotech Advisor, Lawrence, KS, United States, <sup>2</sup>TNTC, Inc., Pleasant Hill, CA, United States

5625

**HYBRID ASSEMBLY OF THE LEISHMANIA VIANNIA PERUVIANA GENOME**Freddy E. Villena<sup>1</sup>, Maxy De los Santos B. De los Santos<sup>2</sup>, Carmen Lucas<sup>2</sup>, Danielle Pannebaker<sup>2</sup>, Hugo O. Valdivia<sup>2</sup><sup>1</sup>Vysnova, Lima, Peru, <sup>2</sup>U.S. Naval Medical Research Unit No. 6. Department of Parasitology, Lima, Peru

5626

**MECHANISM OF INTESTINAL BARRIER REPAIR IN GIARDIASIS**Rita Teye Kosile, Vanessa Angelova, Evan Pannkuk, Steven Singer  
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(ACMCIP Abstract)

5627

**GENOMIC ANALYSIS DEMONSTRATES EXTENSIVE DIVERSITY AND SUBTLE POPULATION STRUCTURE IN PLASMODIUM VIVAX ACROSS 9 DISTRICTS OF ETHIOPIA**

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5628

**IN VITRO TRANSCRIPTOMIC REMODELING OF CARDIOMYOCYTES CAUSED BY TRYPANOSOMA CRUZI**Katherine-Sofia Candray-Medina<sup>1</sup>, Yu Nakagama<sup>1</sup>, Ito Masamichi<sup>2</sup>, Shun Nakagama<sup>3</sup>, Evariste Tshibangu-Kabamba<sup>1</sup>, Norihiko Takeda<sup>4</sup>, Yuki Sugiura<sup>5</sup>, Yuko Nitahara<sup>1</sup>, Yu Michimuko-Nagahara<sup>1</sup>, Natsuko Kaku<sup>1</sup>, Yoko Onizuka<sup>6</sup>, Carmen Arias<sup>7</sup>, Maricela Mejia<sup>7</sup>, Karla Alas<sup>7</sup>, Susana Peña<sup>8</sup>, Yasuhiro Maejima<sup>3</sup>, Issei Komuro<sup>9</sup>, Junko Nakajima-Shimada<sup>6</sup>, Yasutoshi Kido<sup>1</sup><sup>1</sup>Parasitology and Virology department, Osaka Metropolitan University, Abeno Ku, Osaka, Japan, <sup>2</sup>Department of Cardiovascular Medicine, Graduate School of Medicine, The University of Tokyo, Bunkyo-Ku, Tokyo, Japan, <sup>3</sup>Department of Cardiovascular Medicine, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Yushima, Bunkyo-ku, Tokyo, Japan, <sup>4</sup>Division of Cardiology and Metabolism, Center for Molecular Medicine, Jichi Medical University, Yakushiji, Shimotsuke, Japan, <sup>5</sup>Center for Cancer Immunotherapy and Immunobiology, Kyoto University Graduate School of Medicine, Yoshida Nihonmatsucho, Sakyo-ku, Kyoto, Japan, <sup>6</sup>Department of Molecular and Cellular Parasitology, Graduate School of Health Sciences, Gunma University, Showa-machi, Maebashi, Gunma, Japan, <sup>7</sup>Centro Nacional de Investigaciones Científicas de El Salvador (CICES), San Salvador, El Salvador, <sup>8</sup>Departamento de investigación, Hospital Nacional Especializado "Rosales", Ministerio de Salud de El Salvador, San Salvador, El Salvador, <sup>9</sup>Department of Cardiovascular Medicine, Graduate School of Medicine, The University of Tokyo, Hongo, Bunkyo-ku, Tokyo, Japan

5629

**GENOME ASSEMBLY OF TRYPANOSOMA CRUZI TULAHUEN STRAIN REVEALS HIGHLY ABUNDANT TRANSPOSABLE ELEMENTS ASSOCIATED WITH VARIABLE SURFACE PROTEINS**Jill Hakim, Sneider Gutierrez, Edith Malaga, Anshule Takyar, Robert Gilman, Monica Mugnier  
Johns Hopkins University, Baltimore, MD, United States**One Health: The Interconnection between People, Animals, Plants and Their Shared Environment**

5630

**ZOONOTIC HEPATITIS E VIRUS GENOTYPE 3 STRAIN DETECTED IN A CAPYBARA (HYDROCHOERIS HYDROCHAERIS) FECAL SAMPLE, BRAZIL**Adriana Luchs<sup>1</sup>, Lia Cunha<sup>1</sup>, Lais S. Azevedo<sup>1</sup>, Vanessa CM Silva<sup>1</sup>, Marcilio F. Lemos<sup>1</sup>, Antonio C. da Costa<sup>2</sup>, Adriana P. Compri<sup>1</sup>, Yasmin França<sup>1</sup>, Ellen Viana<sup>1</sup>, Fernanda Malta<sup>3</sup>, Roberta S. Medeiros<sup>1</sup>, Raquel Guiducci<sup>1</sup>, Simone G. Morillo<sup>1</sup>, Michelle S. Gomes-Gouveia<sup>2</sup>, Deyvid Amgarten<sup>3</sup>, João Renato R. Pinho<sup>3</sup>, Regina C. Moreira<sup>1</sup><sup>1</sup>Adolfo Lutz Institute, Sao Paulo, Brazil, <sup>2</sup>Institute of Tropical Medicine of São Paulo, Sao Paulo, Brazil, <sup>3</sup>Hospital Israelita Albert Einstein, Sao Paulo, Brazil

5631

**ASYMPTOMATIC VISCERAL LEISHMANIASIS PREVALENCE IN MILITARY WORKING DOGS COMPARED TO SOLDIERS DEPLOYED TO IRAQ**Jennifer A. Safko<sup>1</sup>, Sorana Raiciulescu<sup>2</sup>, Fernanda Fortes De Araujo<sup>2</sup>, Edward Breitschwerdt<sup>3</sup>, Naomi E. Aronson<sup>2</sup><sup>1</sup>Walter Reed Army Institute of Research, Silver Spring, MD, United States, <sup>2</sup>Uniformed Services University of the Health Sciences, Bethesda, MD, United States, <sup>3</sup>North Carolina State University, College of Veterinary Medicine, Raleigh, NC, United States

5632

### DOES CAVE USE POSE A RISK FOR PATHOGEN SPILL? A CASE OF CHEKWOPUTOI CAVE IN MT ELGON EASTERN UGANDA

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5633

### ACTIVITY PATTERNS OF INSECTIVOROUS BATS IN THE MT. ELGON REGION-UGANDA: IMPLICATION FOR DISEASE SURVEILLANCE

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5634

### FACTORS INFLUENCING BAT BORNE VIRAL PATHOGENS PREVALENCE AND SPILL OVER IN UGANDA: IMPLICATIONS FOR ONE HEALTH INITIATIVES

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5635

### PURCHASE, CONSUMPTION, AND OWNERSHIP OF CHICKENS AND CHICKEN PRODUCTS AMONG HOUSEHOLDS IN MAPUTO, MOZAMBIQUE: A CROSS-SECTIONAL STUDY

Kayoko Shioda<sup>1</sup>, Frederica Lamar<sup>2</sup>, Jhanel Chew<sup>3</sup>, Hermógenes N. Mucache<sup>4</sup>, Karen Levy<sup>5</sup>, Matthew Freeman<sup>2</sup>

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5636

### HIGHLY PATHOGENIC AVIAN INFLUENZA A (H5N1) IN MARINE MAMMALS AND SEABIRDS IN PERU

Mariana Leguia<sup>1</sup>, Alejandra Garcia-Glaessner<sup>1</sup>, Breno Muñoz-Saavedra<sup>1</sup>, Diana Juarez<sup>1</sup>, Patricia Barrera<sup>1</sup>, Carlos Calvo-Mac<sup>2</sup>, Javier Jara<sup>2</sup>, Walter Silva<sup>3</sup>, Karl Ploog<sup>3</sup>, Lady Amaro<sup>3</sup>, Paulo Colchao-Claux<sup>4</sup>, Marcela M. Uhart<sup>5</sup>, Martha I. Nelson<sup>6</sup>, Jesus Lescano<sup>3</sup>

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5637

### EXPLORING THE HEALTH SEEKING BEHAVIOR OF SNAKEBITE VICTIMS AND COMMUNITY PERCEPTIONS IN THE VOLTA AND OTI REGIONS OF GHANA

Rita Suhuyini Salifu, Martin A. Ayanore, Agani Afaya  
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5638

### PREVALENCE AND RISK FACTORS FOR HUMAN LEPTOSPIROSIS IN A PASTORALIST COMMUNITY, ENDULEN, TANZANIA

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5639

### CRIMEAN CONGO HEMORRHAGIC FEVER IN TANZANIA: RELEVANCE OF ONE HEALTH APPROACH ON UNDERSTANDING THE EPIDEMIOLOGY OF A PRIORITY ZONOSIS

Ray Kayaga<sup>1</sup>, Gabriel Shirima<sup>1</sup>, Lugano Kusiluka<sup>2</sup>, Sarah Cleaveland<sup>3</sup>, Blandina Mmbaga<sup>4</sup>, Felix Lankester<sup>5</sup>, Furaha Mramba<sup>6</sup>, William B. Karesh<sup>7</sup>, Elichilia Shao<sup>8</sup>, Tito Kibona<sup>9</sup>, Roger Hewson<sup>10</sup>, Oliver Carnell<sup>10</sup>, Brian Willett<sup>3</sup>, Ryan Carter<sup>3</sup>, Andrew Clarke<sup>3</sup>, Julius Keyyu<sup>11</sup>, Carlos Zambrana-Torrel<sup>12</sup>, Abdul Lukambagire<sup>2</sup>, Nichar Gregory<sup>1</sup>, Rebecca Bodenham<sup>1</sup>, Johana Teigen<sup>1</sup>, Melinda Rostal<sup>1</sup>

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5640

### ARPHILAKE COMBATING ANTIBIOTIC RESISTANCE IN PHILIPPINES' LAKES: ONE HEALTH UPSTREAM INTERVENTIONS TO REDUCE THE BURDEN

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5641

**PARASITOLOGICAL RISK AT THE INTERFACE WILDLIFE-DOMESTIC ANIMALS IN NAZINGA RANCH, BURKINA FASO**Awa Gnome<sup>1</sup>, Victor Dapougdi Thiombiano<sup>1</sup>, Yamba Sinare<sup>2</sup>, Siriki Roland Konate<sup>1</sup>, Emmanuel Midibahaye Hema<sup>3</sup><sup>1</sup>Université Joseph KI-ZERBO, Ouagadougou, Burkina Faso, <sup>2</sup>Ecole Normale Supérieure, Koudougou, Burkina Faso, <sup>3</sup>Université de Dedougou, Dedougou, Burkina Faso**Pneumonia, Respiratory Infections and Tuberculosis**

5642

**CHARACTERISING PSYCHOSOCIAL IMPACT OF TUBERCULOSIS AND THE SOCIAL SUPPORT NEEDS FOR PEOPLE WITH TUBERCULOSIS IN INDONESIA**Ahmad Fuady<sup>1</sup>, Bustanul Arifin<sup>2</sup>, Ferdiana Yunita<sup>3</sup>, Saidah Rauf<sup>4</sup>, Agus Fitriangga<sup>5</sup>, Agus Sugiharto<sup>1</sup>, Finny Fitry Yani<sup>6</sup>, Helmi Suryani<sup>7</sup>, I Wayan Gede Artawan Eka Putra<sup>8</sup>, Muchtaruddin Mansyur<sup>1</sup>, Tom Wingfield<sup>9</sup><sup>1</sup>Universitas Indonesia, Jakarta, Indonesia, <sup>2</sup>Universitas Hasanuddin, Makassar, Indonesia, <sup>3</sup>Universitas Gunadarma, Depok, Indonesia, <sup>4</sup>Politeknik Kesehatan Kemenkes Maluku, Maluku, Indonesia, <sup>5</sup>Universitas Tanjungpura, Pontianak, Indonesia, <sup>6</sup>Universitas Andalas, Padang, Indonesia, <sup>7</sup>Universitas Jambi, Jambi, Indonesia, <sup>8</sup>Universitas Udayana, Bali, Indonesia, <sup>9</sup>Liverpool School of Tropical Medicine, Liverpool, United Kingdom

5643

**DIAGNOSTIC ACCURACY OF THE NOVA TUBERCULOSIS TOTAL ANTIBODY RAPID TEST FOR DETECTION OF PULMONARY TUBERCULOSIS AND INFECTION WITH MYCOBACTERIUM TUBERCULOSIS**Gideon Nsubuga  
Makerere University, Kampala, Uganda

5644

**EXPLORING THE POTENTIAL OF A SALIVA-BASED, RNA-EXTRACTION-FREE PCR TEST FOR THE MULTIPLEXED DETECTION OF KEY RESPIRATORY PATHOGENS**Orchid M. Allcock<sup>1</sup>, Tzu-Yi Lin<sup>1</sup>, Katherine Fajardo<sup>1</sup>, Devyn Yolda-Carr<sup>1</sup>, Claire Laxton<sup>1</sup>, Maikel S. Hislop<sup>1</sup>, Jianhui Wang<sup>2</sup>, Denora Zuniga<sup>3</sup>, William Platt<sup>2</sup>, Beth Tuhoy<sup>3</sup>, Anne L. Wyllie<sup>1</sup><sup>1</sup>Yale School of Public Health, New Haven, CT, United States, <sup>2</sup>Yale School of Medicine, New Haven, CT, United States, <sup>3</sup>Yale University, New Haven, CT, United States

5645

**PREVALENCE OF NASOPHARYNGEAL CARRIAGE OF MACROLIDE RESISTANCE-ASSOCIATED ERM GENES AMONG HEALTHY CHILDREN AND ADULTS IN A PERI-URBAN COMMUNITY IN LIMA, PERU**Cara E. Chamogursky<sup>1</sup>, Ana I. Gil<sup>2</sup>, Lucie Ecker<sup>2</sup>, Rubelio Cornejo<sup>2</sup>, Stefano Rios<sup>2</sup>, Mayra Ochoa<sup>2</sup>, Bia Peña<sup>2</sup>, Omar Flores<sup>2</sup>, Claudio F. Lanata<sup>2</sup>, Carlos G. Grijalva<sup>1</sup>, Leigh M. Howard<sup>1</sup><sup>1</sup>Vanderbilt University Medical Center, Nashville, TN, United States, <sup>2</sup>Instituto de Investigación Nutricional, Lima, Peru

5646

**VACCINATION FOLLOWING THE EXPANDED PROGRAM ON IMMUNIZATION SCHEDULE COULD HELP TO REDUCE DEATHS IN CHILDREN UNDER FIVE HOSPITALIZED FOR PNEUMONIA & SEVERE PNEUMONIA IN A DEVELOPING COUNTRY**Abu Sadat Mohammad Sayeem Bin Shahid, Tahmina Alam, Lubaba Shahrin, Mohammad Jobayer Chisti  
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5647

**RESPIRATORY SYNCYTIAL VIRUS INFECTION IN CHILDREN ADMITTED TO A PEDIATRIC INTENSIVE CARE UNIT IN GHANA AMID COVID-19 PANDEMIC**Comfort Nuamah Antwi<sup>1</sup>, Evangeline Obodai<sup>1</sup>, Kwabena Osman<sup>2</sup>, Jonas Kusah<sup>2</sup>, Renate Visser<sup>3</sup>, Yvette Lowensteyn<sup>3</sup>, John Kofi Odoom<sup>1</sup>, Bamenla Quarm Goka<sup>4</sup><sup>1</sup>Noguchi Memorial Institute for Medical Research, University of Ghana, Legon, Accra, Ghana, <sup>2</sup>Department of Child Health, Medical School, College of Health Sciences, University of Ghana, Legon, Accra, Ghana, <sup>3</sup>Department of Pediatric Infectious Diseases and Immunology, Wilhelmina Children's Hospital, University Medical Center, Utrecht, Netherlands, <sup>4</sup>Department of Child Health, Medical School, College of Health Sciences, University of Ghana, Accra, Ghana

5648

**MOLECULAR INVESTIGATION OF THE AETIOLOGY OF TUBERCULOSIS-LIKE CLINICAL SYNDROMES IN ADULTS PRESENTING FOR PRIMARY HEALTH CARE AT LIMBE AND NDIRANDE HEALTH CENTRES**Alice Chimwemwe Mnyanga<sup>1</sup>, Marriott Nliwasa<sup>1</sup>, Elisabeth L Corbett<sup>2</sup>, Katherine L Fielding Fielding<sup>2</sup>, Dereck J Sloan<sup>3</sup>, Neil French<sup>4</sup>, Peter MacPherson<sup>5</sup>, Chikondi Kandulu<sup>6</sup>, Lingstone Chieme<sup>1</sup>, Sanderson Chilanga<sup>1</sup>, Titus H. Divala<sup>7</sup>, Masiye John Ndaferankhanda<sup>8</sup><sup>1</sup>Helse Nord Tuberculosis Initiative, Kamuzu University of Health Sciences, Blantyre, Malawi, <sup>2</sup>TB Centre, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>School of Medicine, University of Saint Andrews, Saint Andrews, Fife, United Kingdom, <sup>4</sup>Institute of Infection and Global Health, University of Liverpool, Faculty of Health and Life Sciences, Liverpool, United Kingdom, <sup>5</sup>Malawi Liverpool Wellcome Programme, Kamuzu University of Health Sciences, Blantyre, Malawi, <sup>6</sup>Helse Nord Tuberculosis Initiative, Kamuzu University of Health Sciences, Blantyre, Malawi, <sup>7</sup>TB Centre, London School of Hygiene & Tropical Medicine, Helse Nord Tuberculosis Initiative, Kamuzu University of Health Sciences, Blantyre, Malawi, <sup>8</sup>Malawi Liverpool Wellcome Programme, Kamuzu University of Health Sciences, Blantyre, Malawi

5649

**PULMONARY-UROGENITAL TUBERCULOSIS: A DELAYED DIAGNOSIS**Fara Rahidah Hussin<sup>1</sup>, Nor Shuhaila Shahril<sup>2</sup>, Ummu Afeera Zainulabid<sup>3</sup>, Najma Kori<sup>4</sup>, Petrick Periyasamy<sup>4</sup><sup>1</sup>Tuanku Mizan Armed Forces Hospital, Kuala Lumpur, Malaysia, <sup>2</sup>Putrajaya Hospital, Kuala Lumpur, Malaysia, <sup>3</sup>International Islamic University, Pahang, Malaysia, <sup>4</sup>National University of Malaysia, Kuala Lumpur, Malaysia

5650

**PREVALENCE OF MALARIA-PNEUMONIA OVERLAP IN RURAL GAMBIA: 9 YEARS OF CLINICAL EXPERIENCE IN ENDEMIC AREA**Mohammad Ilias Hossain, Malick Ndiaye, Babila G Lobga, Golam Sarwar, Grant Mackenzie  
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5651

**DETERMINANTS OF TUBERCULOSIS OUTCOMES DURING THE COVID-19 PANDEMIC AT A REFERRAL HOSPITAL IN RURAL HAITI**Elie Saintilien<sup>1</sup>, Aaron Richterman<sup>2</sup>, Medgine St-Cyr<sup>1</sup>, Louise Claudia Gracia<sup>1</sup>, Inobert Pierre<sup>1</sup>, Moïse Compère<sup>1</sup>, Ahmed Elnaïem<sup>3</sup>, Dyemy Dumerjuste<sup>1</sup>, Louise C. Ivers<sup>4</sup><sup>1</sup>St. Boniface Hospital, Fond-des-Blancs, Haiti, <sup>2</sup>University of Pennsylvania, Philadelphia, PA, United States, <sup>3</sup>Brigham and Women's Hospital, Boston, MA, United States, <sup>4</sup>Massachusetts General Hospital, Boston, MA, United States

5652

### SHORT VERSUS LONG DURATION MACROLIDE TREATMENT FOR RESPIRATORY TRACT INFECTIONS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF EFFICACY, SAFETY, AND ADHERENCE OUTCOMES

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5653

### PREVALENCE OF EXTRA-PULMONARY TUBERCULOSIS IN AFRICA A SYSTEMATIC REVIEW AND META-ANALYSIS

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5654

### NEUTRALIZING ANTIBODIES TO SARS-COV-2 IN A ONE YEAR CROSS-SECTIONAL STUDY IN KISUMU COUNTY, KENYA

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KEMRI-USAMRD-A/K, KISUMU, Kenya

5655

### PREDICTION OF DISEASE OUTCOME USING A DEFINITE CUT-OFF VALUE IN CHEST X-RAY SCORING, OBSERVATION FROM A RESOURCE LIMITED COVID-19 TREATMENT FACILITY

Shamsun Nahar Shaima<sup>1</sup>, Md, Ahshanul Haque<sup>1</sup>, Monira Sarmin<sup>1</sup>, Sharika Nuzhat<sup>1</sup>, Yasmin Jahan<sup>2</sup>, Lubaba Shahrin<sup>1</sup>, Fariha Bushra Matin<sup>1</sup>, Rehnuma Tabassum Timu<sup>1</sup>, Abu Sadat Mohammad Sayeem Bin Shahid<sup>1</sup>, Mohammod Jobayer Chisti<sup>1</sup>, Tahmeed Ahmed<sup>1</sup>  
<sup>1</sup>icddr, Dhaka, Bangladesh, <sup>2</sup>Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan

5656

### STREPTOCOCCUS PNEUMONIAE NASOPHARYNGEAL CARRIAGE AND SEROTYPES DISTRIBUTION IN URBAN (KIBERA) AND RURAL (ASEMBO) KENYA AMONG CASES WITH SEVERE ACUTE RESPIRATORY ILLNESS 6-9 YEARS POST INTRODUCTION OF 10-VALENT PNEUMOCOCCAL CONJUGATE VACCINE (PCV10)

Terry Watiri Komo<sup>1</sup>, Patrick Munywoki<sup>2</sup>, Joshua Ouko<sup>1</sup>, Daniel Omondii<sup>1</sup>, Arthur Odoyo<sup>1</sup>, Herine Odiembo<sup>1</sup>, Clayton Onyango<sup>2</sup>, Alice Ouma<sup>1</sup>, George Aol<sup>1</sup>, Fabiana C Pimenta<sup>3</sup>, Maria da Gloria Carvalho<sup>3</sup>, Godfrey Bigogo<sup>1</sup>, Jennifer R. Verani<sup>3</sup>

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5657

### HUMAN IMMUNODEFICIENCY VIRUS INFECTION AND DIABETES MELLITUS IN PEOPLE WITH TUBERCULOSIS IN ODISHA, INDIA

Sidhartha Giri<sup>1</sup>, Priyanka Sahu<sup>1</sup>, Srikanta Kanungo<sup>1</sup>, Himadri Bhusan Bal<sup>2</sup>, Sanghamitra Pati<sup>1</sup>

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## Schistosomiasis and Other Trematodes – Diagnostics and Treatment

5658

### SCHISTOSOMAL CIRCULATING ANODIC ANTIGEN CLEARANCE IN PRESCHOOL AGED CHILDREN FROM THE PIP (PRAZIQUANTEL IN PRESCHOOLERS) TRIAL

Gloria Kakoba Ayebazibwe<sup>1</sup>, Andrew Edielu<sup>1</sup>, Susannah Colt<sup>2</sup>, Emily L. Webb<sup>3</sup>, Patrice A. Mawa<sup>1</sup>, Hannah W. Wu<sup>3</sup>, Govert J. van Dam<sup>4</sup>, Paul Corstjens<sup>4</sup>, Racheal Nakyesige<sup>1</sup>, Jennifer F. Friedman<sup>2</sup>, Amaya L. Bustinduy<sup>3</sup>

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5659

### GAPS IN BEDSIDE PROTOCOLS AND POLICIES FOR MANAGEMENT OF FEMALE GENITAL SCHISTOSOMIASIS IN ENDEMIC SOUTH AFRICA AND NON-ENDEMIC NORWAY

Iris Kamilla Ottosen<sup>1</sup>, Stina Josefine Karlsen<sup>1</sup>, Patricia Ndhlovu<sup>2</sup>, Solrun Søfteland<sup>3</sup>, Saloshni Naidoo<sup>4</sup>, Motshedisi Sebitloane<sup>5</sup>, Pamela S. Mbabazi<sup>6</sup>, Santiago Martinez<sup>7</sup>, Takalani Nemungadi<sup>4</sup>, Themba Ginindza<sup>4</sup>, Fortunate Shabalala<sup>8</sup>, Sakhile Masuku<sup>8</sup>, Svein Gunnar Gundersen<sup>9</sup>, Pavitra Pillay<sup>10</sup>, Myra Taylor<sup>1</sup>, Eyrun Floercke Kjetland<sup>3</sup>

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5660

### NEXT STEP TOWARDS POINT-OF-CARE MOLECULAR DIAGNOSIS OF FEMALE GENITAL SCHISTOSOMIASIS (FGS): EVALUATION OF AN INSTRUMENT-FREE LAMP PROCEDURE

Kim van Bergen<sup>1</sup>, Eric Brienens<sup>1</sup>, Bodo Randrianasolo<sup>2</sup>, Charles Ramarakoto<sup>2</sup>, Peter Leutscher<sup>3</sup>, Eyrun Kjetland<sup>4</sup>, Angela van Diepen<sup>1</sup>, Vittorio Saggiomo<sup>5</sup>, Aldrik Velders<sup>5</sup>, Lisette van Lieshout<sup>1</sup>

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5661

### POPULATION LEVEL IMPACT OF NOVEL DRUGS TARGETING JUVENILE SCHISTOSOMES ON CONTROL AND ELIMINATION OF SCHISTOSOMIASIS

Benjamin J. Singer<sup>1</sup>, Minoli Daigavane<sup>1</sup>, Sophia Tan<sup>1</sup>, Mireille Gomes<sup>2</sup>, Thomas Spangenberg<sup>3</sup>, Jason R. Andrews<sup>3</sup>, Isaac I. Bogoch<sup>4</sup>, Nathan C. Lo<sup>1</sup>

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5662

**DEVELOPMENT OF ANTIGEN-BASED MULTIPLEX IMMUNODIAGNOSTICS FOR TWO PREDOMINANT SCHISTOSOMA PARASITES IN SUB-SAHARAN AFRICA**

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(ACMCIP Abstract)

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**Schistosomiasis and Other Trematodes – Epidemiology and Control**

5663

**BASELINE SEROPREVALENCE OF SCHISTOSOMA IN ZAMBIAN WOMEN ENROLLED IN A COHORT STUDY (THE ZIPIME WEKA SCHISTA STUDY)**

Bronwyn Neufeld<sup>1</sup>, Olimpia Lamberti<sup>1</sup>, Helen Kelly<sup>1</sup>, Rhoda Ndubani<sup>2</sup>, Nkatya Kasese<sup>2</sup>, Emily Webb<sup>1</sup>, Beatrice Nyondo<sup>2</sup>, Barry Kosloff<sup>2</sup>, Jennifer Fitzpatrick<sup>2</sup>, Bonnie Webster<sup>3</sup>, Maina Cheeba<sup>2</sup>, Helen Ayles<sup>2</sup>, J.Russell Stothard<sup>4</sup>, Kwame Shanaube<sup>2</sup>, Amaya Bustinduy<sup>1</sup>  
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5668

**THE PREVAILING INFECTION OF SCHISTOSOMA JAPONICUM AND OTHER ZOOONOTIC PARASITES IN BUBALINE RESERVOIR HOSTS IN THE RICEFIELD OF LAKE ECOSYSTEM; A CASE IN LAKE MAINIT THE PHILIPPINES**

Joycelyn C. Jumawan<sup>1</sup>, Leonardo A. Estano<sup>2</sup>  
<sup>1</sup>Caraga State University, BUTUAN CITY, Philippines, <sup>2</sup>Mindanao State University Iligan Institute of Technology, Iligan City, Philippines

5664

**DEVELOPMENT OF AN ELISA TO DETECT ANTIBODY TO SCHISTOSOMA JAPONICUM INFECTION USING A BACTERIAL EXPRESSED RECOMBINANT ANTIGEN SJ10.3**

Maurice Terrell Royal<sup>1</sup>, Saima Chavenet<sup>2</sup>, Sylvia Ossai<sup>1</sup>, William Secor<sup>1</sup>, Sukwan Handali<sup>1</sup>  
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5669

**POOLED PEAKS PIPELINE (P3): AN R-BASED PROGRAM FOR POPULATION GENETIC ANALYSES IN POOLED SAMPLES**

Kathleen M. Kuesters<sup>1</sup>, Jessica M. Blanton<sup>2</sup>, Jeffrey D. Kovach<sup>3</sup>, Walter A. Blank<sup>4</sup>, Jeffrey C. Long<sup>5</sup>, Ronald E. Blanton<sup>1</sup>  
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5665

**URINARY HPV ANALYSIS AS A COMPLEMENTARY DIAGNOSTIC TEST AMONG WOMEN AT RISK FOR CERVICAL CANCER & FGS**

Pavitra Pillay<sup>1</sup>, Hashini N. Galappaththi-Arachchige<sup>2</sup>, Myra Taylor<sup>3</sup>, Borghild B H Roald<sup>4</sup>, Eyrun F. Kjetland<sup>5</sup>  
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5670

**RISK FACTORS FOR HIGHER-INTENSITY SCHISTOSOMA MANSONI INFECTION IN LAKE ALBERT COMMUNITIES, UGANDA: A CROSS-SECTIONAL STUDY**

Dominic P. Dee<sup>1</sup>, Germain Lam<sup>1</sup>, Andrew Edielu<sup>1</sup>, Victor Anguajibi<sup>2</sup>, Emily L. Webb<sup>3</sup>, Aidah Wamboko<sup>4</sup>, Patrice A. Mawa<sup>5</sup>, Jennifer F. Friedman<sup>6</sup>, Amaya L. Bustinduy<sup>1</sup>  
<sup>1</sup>Department of Clinical Research, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>China-Uganda Friendship Hospital, Kampala, Uganda, <sup>3</sup>Department of Infectious Disease Epidemiology, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>4</sup>Vector Control Division, Kampala, Uganda, <sup>5</sup>MRC/UVRI and LSHTM Uganda Research Unit, Entebbe, Uganda, <sup>6</sup>Rhode Island Hospital, Brown University, Providence, RI, United States

5666

**POPULATION PHARMACOKINETICS OF PRAZIQUANTEL IN PRE-SCHOOL AGE CHILDREN PARTICIPANTS IN THE PRAZIQUANTEL IN PRESCHOOLERS (PIP) TRIAL**

Bonniface Obura<sup>1</sup>, Andrew Edielu<sup>2</sup>, Emily Webb<sup>3</sup>, Jennifer Unsworth<sup>1</sup>, Ana Jimenez-Valverde<sup>1</sup>, Patrice Mawa<sup>2</sup>, Amaya L. Bustinduy<sup>3</sup>, Jennifer Friedman<sup>4</sup>, Shampa Das<sup>1</sup>  
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5671

**SNAIL-SCHISTOSOME DYNAMICS IN COMPLEX ECOLOGICAL COMMUNITIES**

Kelsey E. Shaw<sup>1</sup>, Ella Arms<sup>1</sup>, Teckla Angelo<sup>2</sup>, Moses Mahalila<sup>2</sup>, Raeyan Syed<sup>1</sup>, Safari Kinung'hi<sup>2</sup>, David Civitello<sup>1</sup>  
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5667

**PHARMACOLOGIC MONITORING OF PLASMA CONCENTRATION OF PRAZIQUANTEL ON THE INTENSITY OF SCHISTOSOMA INFECTION IN A THERAPEUTIC EFFICACY MONITORING STUDY IN PERSONS TREATED FOR SCHISTOSOMIASIS IN ABUJA, FEDERAL CAPITAL TERRITORY, NIGERIA**

Godswill Iboma<sup>1</sup>, WELLINGTON OYIBO<sup>2</sup>, Rita O. Urude<sup>3</sup>, Obiageli J. Nebe<sup>4</sup>, Michael N. Akpan<sup>5</sup>  
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5672

**A COMPLEX INTERPLAY BETWEEN FOOD, HEALTH AND LIVELIHOODS - LIVE FLUKE (OPISTHORCHIS VIVERRINI) IN NORTHEAST THAILAND**

Hannah C. Bialic<sup>1</sup>, Thomas Crellen<sup>1</sup>, Arporn Wangwuwatsin<sup>2</sup>, Watcharin Loilome<sup>2</sup>  
<sup>1</sup>University of Glasgow, Glasgow, United Kingdom, <sup>2</sup>Khon Kaen University, Khon Kaen, Thailand

Thursday  
October 19

5673

### THE SNAIL-TREMATODE-MICROBIOME TRIPARTITE INTERACTION: FROM LAB MANIPULATIONS TO THE FIELD

Ruben Schols<sup>1</sup>, Cyril Hammoud<sup>1</sup>, Tim Maes<sup>2</sup>, Bruno Senghor<sup>3</sup>, Tine Huyse<sup>1</sup>, Ellen Decaestecker<sup>4</sup>

<sup>1</sup>The Royal Museum for Central Africa, Tervuren, Belgium, <sup>2</sup>The Catholic University of Leuven, Leuven, Belgium, <sup>3</sup>Ucad-IRD de Hann, Dakar, Senegal, <sup>4</sup>The Catholic University of Leuven, campus Kortrijk, Kortrijk, Belgium

5674

### USING MATHEMATICAL MODELS TO UNDERSTAND SCHISTOSOMIASIS TRANSMISSION IN A UGANDAN HOTSPOT

Gregory C. Milne<sup>1</sup>, Rebecca Oettle<sup>2</sup>, Joanne P. Webster<sup>1</sup>, Martin Walker<sup>1</sup>, Shona Wilson<sup>2</sup>

<sup>1</sup>Royal Veterinary College, Brookmans Park, United Kingdom, <sup>2</sup>University of Cambridge, Cambridge, United Kingdom

5675

### MALE GENITAL SCHISTOSOMIASIS (MGS) AMONG LOCAL FISHERMEN ALONG SOUTH SHORELINE OF LAKE MALAWI IN MANGOCHI DISTRICT

Sekeleghe Amos Kayuni<sup>1</sup>, Mohammad H. Alharbi<sup>2</sup>, Adam Abdullahi<sup>3</sup>, Peter Makaula<sup>1</sup>, Fanuel Lampiao<sup>4</sup>, Janelisa Musaya<sup>1</sup>, E. James LaCourse<sup>2</sup>, Jaco J. Verweij<sup>5</sup>, Johnstone J. Kumwenda<sup>4</sup>, Peter D.C. Leutscher<sup>6</sup>, Anna Maria Geretti<sup>7</sup>, J. Russell Stothard<sup>2</sup>

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5676

### PREVALENCE OF SCHISTOSOMIASIS & IMPLEMENTATION OF SCHISTOSOMA PREVENTION PROJECT IN GEZIRA STATE, SUDAN 2022-23

Mazin Mohammed Osman

King Fahad Hospital, Al baha, Saudi Arabia

5677

### EVALUATION OF THE BURDEN AND RISK FACTORS ASSOCIATED WITH FEMALE GENITAL SCHISTOSOMIASIS IN TWO ENDEMIC AREAS IN MALAWI AS PART OF THE MORBIDITY OPERATIONAL RESEARCH FOR BILHARZIASIS IMPLEMENTATION DECISIONS (MORBID) STUDY

Olimpia Lamberti<sup>1</sup>, Sekeleghe Kayuni<sup>2</sup>, Dingase Kumwenda<sup>2</sup>, Varsha Singh<sup>3</sup>, Veena Muktali<sup>3</sup>, Neerav Dhanani<sup>3</sup>, Els Wessels<sup>5</sup>, Lisette Van Lieshout<sup>6</sup>, Fiona M. Fleming<sup>4</sup>, Themba Mzilahowa<sup>2</sup>, Amaya Bustinduy<sup>1</sup>

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## Water, Sanitation, Hygiene and Environmental Health

5678

### PRESENCE OF SARS-COV-2 RNA IN DIFFERENT SOURCES OF WATER OF NEPAL

Sarmila Tandukar<sup>1</sup>, Eiji Haramoto<sup>1</sup>, Samendra Sherchan<sup>2</sup>

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5679

### POOR OUTDOOR BATHROOMS DRAINAGE SYSTEMS OF CHING'AMBO RESIDENTS IN MZUZU CITY AS A SAFE HAVEN AND TOOL FOR INCREASED EXPOSURE TO TROPICAL PARASITES

Vita Mithi<sup>1</sup>, Sarah Eliza Dunn<sup>2</sup>

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5680

### SOCIOCULTURAL INFLUENCES ON ACCEPTANCE AND HEALTH RISK OF WATER RESOURCES IN REMOTE COMMUNITIES IN GHANA

Forgive A. Norvivor

University of Health and Allied Sciences, Ho, Ghana

5681

### MOLECULAR DETECTION OF PATHOGENIC LEPTOSPIRA AND HELICOBACTER PYLORI IN ENVIRONMENTAL SPECIMENS COLLECTED FROM THE OPISTHORCHIASIS ENDEMIC AREAS AT KHON KAEN PROVINCE, THAILAND

Shih Keng Loong<sup>1</sup>, Manop Sripa<sup>2</sup>, Sangduan Wannachart<sup>2</sup>, Laksika Phumipheng<sup>2</sup>, Thanagorn Saykaew<sup>2</sup>, Yuchen Liu<sup>3</sup>, Sirikachorn Tangkawattana<sup>2</sup>, Banchob Sripa<sup>2</sup>

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5682

### ASSESSMENT OF THE MICROBIAL CONTAMINATION OF DELIVERY BOXES OF ONLINE FOOD DELIVERY SERVICES PROVIDERS IN ACCRA

Doreen Dedo Adi<sup>1</sup>, Chris Y. Asare<sup>2</sup>

<sup>1</sup>Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, Kumasi, Ghana, <sup>2</sup>Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

5683

### INCREASING THE ACCESSIBILITY AND HANDWASHING PRACTICES THROUGH TIPPY TAPS IN CABO DELGADO PROVINCE, MOZAMBIQUE

Xavier Badia-Rius<sup>1</sup>, James Mungai Waringa<sup>2</sup>, Nelson Sequião<sup>2</sup>, Maria Sacchetti<sup>3</sup>, Anastácia Lidimba<sup>3</sup>, Pablo Ignacio Eulogio de Sancha<sup>2</sup>, Sérgio Lopes<sup>1</sup>, Mussa M. Aly<sup>4</sup>

<sup>1</sup>The MENTOR Initiative, Haywards Heath, United Kingdom, <sup>2</sup>The MENTOR Initiative, Pemba, Mozambique, <sup>3</sup>Serviço Provincial de Saúde, Pemba, Mozambique, <sup>4</sup>Núcleo de Investigação Operacional de Pemba, Pemba, Mozambique

5684

**WORK RELATED INJURIES; WHAT FACTORS DETERMINE ITS SEVERITY IN A LOW RESOURCE SETTING?**

Regina Adiyah<sup>1</sup>, Alfred Kwame Owusu<sup>2</sup>, Francis Adjei Osei<sup>1</sup>, Alexis Buunaaim<sup>3</sup>  
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5685

**ASSOCIATION OF PRENATAL ENVIRONMENT FACTORS WITH UNDER 5 NUTRITIONAL GROWTH OUTCOMES IN UGANDA**

Paddy Ssentongo<sup>1</sup>, Claudio Fronterre<sup>2</sup>, Steven Schiff<sup>3</sup>  
<sup>1</sup>Penn State Hershey Medical Center, Hershey, PA, United States, <sup>2</sup>Lancaster University, Lancaster, United Kingdom, <sup>3</sup>Yale University School of Medicine, New Haven, CT, United States

5686

**BARRIERS OF EFFECTIVE AND SUSTAINABLE WATER, SANITATION AND HYGIENE (WASH) SERVICES AT SCHOOLS IN BANGLADESH**

Debashish Biswas<sup>1</sup>, Md. Rofi Uddin<sup>1</sup>, Jyoti Bhushan Das<sup>1</sup>, Md. Asadullah<sup>1</sup>, Mahbub-Ul Alam<sup>1</sup>, Habibur Rahman<sup>2</sup>, Pritum Kumar Saha<sup>2</sup>, Emanuel Owako<sup>3</sup>, Mahbubur Rahman<sup>1</sup>  
<sup>1</sup>International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh, <sup>2</sup>Water & Sanitation for the Urban Poor (WSUP), Dhaka, Bangladesh, <sup>3</sup>Water & Sanitation for the Urban Poor (WSUP), London, United Kingdom

5687

**EVALUATION OF A MULTI-LEVEL, PARTICIPATORY INTERVENTION TO REDUCE ARSENIC EXPOSURE IN AMERICAN INDIAN COMMUNITIES: A CLUSTER RANDOMIZED CONTROLLED TRIAL OF THE COMMUNITY-LED STRONG HEART WATER STUDY PROGRAM**

Christine Marie George<sup>1</sup>, Tracy Zacher<sup>2</sup>, Kelly Endres<sup>1</sup>, Francine Richards<sup>2</sup>, Lisa Bear Robe<sup>2</sup>, David Harvey<sup>3</sup>, Lyle G. Best<sup>4</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>6</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>6</sup>, Ana Navas-Acien<sup>8</sup>  
<sup>1</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, 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

**Digital Education Committee Meeting**

Michigan 1A - Concourse Level (East Tower)  
 Thursday, October 19, 12:15 p.m. - 1:30 p.m. U.S. Central Time Zone

**Membership Committee Meeting**

Michigan 1B - Concourse Level (East Tower)  
 Thursday, October 19, 12:15 p.m. - 1:30 p.m.

**Ben Kean Fellowship Committee Meeting**

Michigan Boardroom - Concourse Level (East Tower)  
 Thursday, October 19, 12:15 p.m. - 1:30 p.m. U.S. Central Time Zone

**Late-Breaker Session 28** **Late-Breakers in Basic Science**

Grand Ballroom CDEF - Ballroom Level (East Tower)  
 Thursday, October 19, 12:15 p.m. - 1:30 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**

Yai Justin Doritchamou  
 National Institute of Allergy and Infectious Disease, Bethesda, MD, United States

Ayman El-Badry  
 Cairo University, Kasr Al-Ainy Faculty of Medicine, Cairo, Egypt

**Meet the Professors Session 29****Meet the Professors Session A – Dilemmas in Clinical Tropical Medicine**

Grand Hall K - Ballroom Level (East Tower)  
 Thursday, October 19, 12:15 p.m. - 1:30 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. In this session, Drs. McCarthy and Barry will present challenging and instructive clinical tropical medicine cases.

**CHAIR**

Daniel Leung  
 University of Utah, Salt Lake City, UT, United States

**1:30 p.m. PRESENTATION #1**

Michele Barry  
 Dean's Office, Stanford University, Stanford, CA, United States

**1:50 p.m. PRESENTATION #2**

Anne McCarthy  
 University of Ottawa, Ottawa, ON, Canada

**Poster Session A Viewing**

Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI - Ballroom Level (East Tower)  
 Thursday, October 19, 1:45 p.m. - 3 p.m.

Thursday  
October 19

## Plenary Session 30



### Plenary Session II: Fred L. Soper Lecture

Grand Ballroom CDEF - Ballroom Level (East Tower)

Thursday, October 19, 1:45 p.m. - 2:30 p.m. U.S. Central Time Zone



The Fred L. Soper Lecture is an honor bestowed upon distinguished workers in environmental control or preventive medicine. Born in 1893, Dr. Soper received his MD from the University of Chicago and a doctorate in public health from Johns Hopkins University in 1925. He began his career working with the Rockefeller Foundation on hookworm control

in Brazil. Soper headed an international group that did revolutionary work in research and control of yellow fever in South America, and eventually became director of the Pan American Health Organization. Dr. Soper died in 1977. The first Lecture was delivered by Thomas Weller in 1978, former president of ASTMH and winner of the 1954 Nobel Prize in Medicine or Physiology, in celebration of the 40th anniversary of the Gorgas Memorial Laboratory. The lecture is now a biannual event for ASTMH and focuses on a topic related to environmental control and preventive medicine.

#### CHAIR

Albert Icksang Ko  
Yale School of Public Health, New Haven, CT, United States

1:45 p.m.

#### INTRODUCTION

Albert Icksang Ko  
Yale School of Public Health, New Haven, CT, United States

2 p.m.

#### FRED L. SOPER LECTURE: MILES TO GO: VACCINES FOR ENTERIC INFECTIONS



#### Gagandeep Kang, MBBS, MD, PhD, FRCPath

Director EDGE, Global Health  
Bill & Melinda Gates Foundation  
Seattle, Washington

Professor Gagandeep Kang received her training in medicine and microbiology at the Christian Medical College, Vellore and postdoctoral training the UK and US before returning to India to continue her work on enteric infections in children. With Indian and global collaborators, Professor Kang has worked on the development and use of vaccines for rotaviruses, cholera and typhoid, conducting large studies to define burden, test vaccines and conduct the comprehensive studies required for introduction into the national immunization program. Post-introduction,

her group were the first to conduct studies in India to measure rotavirus vaccine safety and measure impact. With ancillary community-based research, she has shown that infections in early life impact nutrition, future growth and cognitive development. During the peak of the COVID-19 pandemic, she became a trusted voice for science communication in India. Following her 35-year career in medicine and public health in India, Professor Kang joined the Bill & Melinda Gates Foundation in 2023 to continue and expand her efforts to address infectious diseases in India and globally. She is the first woman from India to be elected a Fellow of the Royal Society and a fellow of the American Academy of Microbiology and the second elected to the US National Academy of Medicine.

### Exhibit Hall Open

Riverside Center - Exhibit Level (East Tower)

Thursday, October 19, 2:15 p.m. - 3:15 p.m. U.S. Central Time Zone

### Coffee Break

Riverside Center - Exhibit Level (East Tower)

Thursday, October 19, 2:30 p.m. - 3 p.m. U.S. Central Time Zone

## Symposium 31

### Science Under Assault

Grand Ballroom A - Ballroom Level (East Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. United States Central Time Zone

*This session does not carry CME credit.*

Science can be defined as the pursuit and application of knowledge and understanding of the natural and social world following a systematic methodology based on evidence. Increasing political polarization, compounded by the global stress of the COVID-19 pandemic, has engendered a wave of skepticism regarding the value of scientific evidence and the scientific process, including at times at the highest levels of political leadership. The consequences can be severe, and have included, for example, resistance to vaccination, which not only impeded control of the COVID-19 pandemic, but also opened the door to transmission of various vaccine preventable illnesses that had not been seen in certain regions for decades. Not only has the value of science been diminished in the eyes of many but, facilitated by modern social media, leading scientists and public health experts have often become the targets of intense criticism and violent rhetoric, sometimes even requiring physical protection. This enhancing skepticism of science and scientists threatens what has been the foundation for most of the world's civilizations for centuries, if not millennia. In this symposium, a panel of public health leaders, many of whom have been not only leading voices in the sciences, but also often the targets of the skeptics, and communications experts will discuss this concerning trend, and how to chart a path back to respectful discourse and appreciation for science and scientists.

**CHAIR**

Daniel G. Bausch  
 FIND, Geneva, Switzerland

**3 p.m.  
INTRODUCTION****3:05 p.m.****MODERATOR**

Richard Baron  
 Coalition for Trust in Health and Science, Washington, DC, United States

**PANELISTS**

Daniel G. Bausch  
 FIND, Geneva, Switzerland

Peter Daszak  
 EcoHealth Alliance, New York, NY, United States

Peter Hotez  
 National School of Tropical Medicine, Baylor College of Medicine, Houston, TX, United States

Carol Schadelbauer  
 Burness, Bethesda, MD, United States

**Symposium 32****Approaching Malaria Elimination in Cambodia: Progress and Challenges**

Grand Ballroom B - Ballroom Level (East Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

Malaria in Cambodia has decreased by 90.8% between 2010 and 2020, driven by the commitment of the National Center for Parasitology, Entomology and Malaria (CNM). Cambodia aims to eliminate *Plasmodium falciparum* malaria by 2023, and all species of malaria, including *Plasmodium vivax*, by 2025. Challenges remain in preventing malaria re-introduction in elimination areas and scaling up elimination efforts nationally and within specific high-risk populations, such as forest workers and mobile and migrant populations. Artemisinin resistance and partner drug resistance continues to present a threat to malaria elimination efforts if parasites become resistant to the partner drug, yet again. Rotating artemisinin-based combination therapies (ACTs) is logistically challenging and delays could result in patients being treated with suboptimal ACTs leading to a resurgence of *P. falciparum* malaria. As *P. falciparum* malaria cases have decreased in Cambodia, infection has become increasingly focal in hotspots across the country and in populations that are routinely harder to reach. *P. vivax* has become the prominent species causing malaria in Cambodia. Vivax malaria is more difficult than falciparum to eliminate because of the dormant hypnozoites. In this symposium we will present the overall plan of CNM to achieve malaria elimination within the next few years and discuss progress and challenges. We will present data from a randomized, controlled, clinical trial with artemether-lumefantrine and amodiaquine (ALAQ) that demonstrates the safety, tolerability and efficacy of a triple ACT, that could become available for deployment before novel antimalarials become available, and could provide a tool to be used instead of another rotation of ACTs. We will present a study on antimalarial chemoprophylaxis in forest-goers with artemether-lumefantrine, that was acceptable, feasible and well-

tolerated and substantially reduced malaria prevalence among forest goers. We will also present the development of a panel of serological exposure markers (SEMs) to *P. vivax* infection for the identification of people at risk of carrying clinically silent hypnozoites to be targeted with anti-hypnozoite therapy. We will describe the application of this SEM panel to a longitudinal cohort that tested the feasibility of a serological and testing approach in remote, resource-limited settings in rural Cambodia. Community engagement has increasingly received attention in malaria research and program interventions, particularly as countries aim for malaria elimination. We present a novel approach by engaging Cambodian youth to sustain malaria elimination activities and will present their opinions and perspectives via video recordings.

**CHAIR**

Arjen M. Dondorp  
 Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand

Chanaki Amaratunga  
 Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand

**3 p.m.  
INTRODUCTION****3:10 p.m.  
IMPLEMENTATION OF NOVEL STRATEGIES TO ELIMINATE MALARIA IN CAMBODIA**

Dysoley Lek  
 National Center for Parasitology, Entomology and Malaria Program, Phnom Penh, Cambodia

**3:30 p.m.  
SAFETY, TOLERABILITY AND EFFICACY OF ARTEMETHER-LUMEFANTRINE+AMODIAQUINE IN CAMBODIA**

Chanaki Amaratunga  
 Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand

**3:50 p.m.  
ANTIMALARIAL CHEMOPROPHYLAXIS FOR FOREST GOERS IN CAMBODIA**

Rupam Tripura  
 Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand

**4:10 p.m.  
ASSESSING THE SPECIFICITY, SENSITIVITY AND FEASIBILITY OF A SEROLOGICAL TESTING AND TREATMENT APPROACH TO ELIMINATE P. VIVAX IN CAMBODIA**

Costanza Tacoli  
 Pasteur Institute of Cambodia, Phnom Penh, Cambodia

**4:30 p.m.  
EMBEDDING THE VOICES OF CAMBODIAN YOUTH IN MALARIA RESEARCH**

Phaik Yeong Cheah  
 Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand

## Symposium 33

### A Global Health Two-fer: How Integrating Health Campaigns Delivers on Both Desired Programmatic Intervention Coverage and Greater Sustainability

Grand Hall J - Ballroom Level (East Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

To meet goals of universal health coverage, many countries rely on both facility- and community-based health services and campaigns. Campaigns are time-limited, targeted, intermittent activities that are implemented to address specific health needs, fill delivery gaps, or provide surge coverage for health interventions. Campaigns are used to prevent, control, and in some cases even eliminate malaria and neglected tropical diseases, vaccine preventable diseases, malnutrition, and vitamin deficiency. Since 2020, more than 450 health campaigns have been conducted worldwide each year, totaling almost \$10 billion. Health campaigns occur within vertical (disease-specific) programs, often externally funded, and planned and implemented independently from one another and from primary health care services, with little communication, coordination, or collaboration. Strategic and operational inefficiencies and inequities may result, which strain health systems, burden health care workers, and limit campaigns' impact. There is increasing recognition that collaborative and integrated approaches to campaign planning, implementation, and monitoring—whether between campaigns in different health programs or in greater linkages with primary health care system—may increase campaigns' effectiveness and sustainability. Public health agencies implementing these changes need guidance and advice on how to conduct integration or transition efficiently and effectively. What challenges can be anticipated and how can they be addressed? What opportunities may arise to circumvent known financial barriers and disincentives to strengthen inter-agency collaboration? What tools exist to aid campaign managers? How can a primary healthcare system be assessed for readiness in taking on campaign activities and services? This symposium will cover much ground as we provide: (1) an overview of the health campaign integration and mainstreaming landscape, including promising practices from a synthesis of implementation research studies on campaign integration and transition to primary health care; (2) share a landscape analysis of campaign financing and the rationale for integration, including key financial barriers and disincentives as well as opportunities for action; (3) describe the acceptability, feasibility, efficacy and challenges of a pilot study integrating nutrition assessments and immunizations into SMC campaigns in Guinea; (4) present a readiness assessment of NTD campaign mainstreaming at all levels and in diverse regions of Ethiopia; and (5) an evaluation of mainstreaming of mass drug administrations for soil transmitted helminthiasis and schistosomiasis (NTD) campaign with handover to government agencies in Nigeria.

#### CHAIR

Richard Reithinger  
*RTI International, Washington, DC, United States*

Kristin Saarlans  
*Task Force for Global Health, Decatur, GA, United States*

#### 3 p.m.

##### INTRODUCTION

#### 3:10 p.m.

##### OVERVIEW OF THE HEALTH CAMPAIGN EFFECTIVENESS COALITION: PROMISING PRACTICES AND TOOLS FOR CAMPAIGN INTEGRATION AND MAINSTREAMING/LINKAGES WITH THE PRIMARY HEALTHCARE SYSTEM FROM IMPLEMENTATION RESEARCH PROJECTS IN 14 COUNTRIES

Kristin Saarlans  
*The Task Force for Global Health, Decatur, GA, United States*

#### 3:25 p.m.

##### FINANCING OF HEALTH CAMPAIGNS AND INTEGRATION: A LANDSCAPE ANALYSIS

Annette Ozaltin  
*Independent Health Finance Consultant, Washington, DC, United States*

#### 3:40 p.m.

##### INTEGRATION OF NUTRITIONAL ASSESSMENTS AND IMMUNIZATION INTO SEASONAL MALARIA CHEMOPREVENTION CAMPAIGNS

Alioune Camara  
*National Malaria Control Program, Conakry, Guinea*

#### 3:55 p.m.

##### READINESS ASSESSMENT FOR NTD CAMPAIGN MAINSTREAMING IN ETHIOPIA

Teshome Gebre  
*International Trachoma Initiative, Addis Ababa, Ethiopia*

#### 4:10 p.m.

##### EFFECTS OF TRANSITION TO COUNTRY OWNERSHIP OF INTEGRATED NTD MASS DRUG ADMINISTRATION IN NIGERIA

Emmanuel Emukah  
*The Carter Center, Abuja, Nigeria*

## Scientific Session 34



### Malaria - Drug Development and Clinical Trials

Grand Ballroom CDEF - Ballroom Level (East Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

#### CHAIR

David Saunders  
*U.S. Army, Rockville, MD, United States*

Luana Ortolan  
*Seattle Children's Research Institute, Seattle, WA, United States*

3 p.m.

5688

### A CLUSTER RANDOMIZED CONTROLLED NON-INFERIORITY TRIAL TO COMPARE THE PROTECTIVE EFFECTIVENESS OF SULFADOXINE PYRIMETHAMINE AND AMODIAQUINE AND DIHYDROARTEMISININ PIPERAQUINE FOR SEASONAL MALARIA CHEMOPREVENTION AMONG CHILDREN 3 TO 59 MONTHS, IN THE CONTEXT OF HIGH PARASITE RESISTANCE, KARAMOJA REGION, UGANDA

Anthony Nuwa<sup>1</sup>, Richard Kajubi<sup>1</sup>, Craig Bonnington<sup>2</sup>, Kevin N. Baker<sup>2</sup>, Chuks Nnaji Nnaji<sup>2</sup>, Musa Odongo<sup>1</sup>, Tonny Kyagulanyi<sup>1</sup>, Jane I. Nabakooza<sup>3</sup>, David S. Odong<sup>1</sup>, Denis Rubahika<sup>3</sup>, Maureen Nakirunda<sup>1</sup>, Godfrey Magumba<sup>1</sup>, Madeleine Marasciulo-Rice<sup>4</sup>, Jane Achan<sup>2</sup>, Christian Rassi<sup>5</sup>, Erica Viganò<sup>6</sup>, Jennifer Ainsworth<sup>2</sup>, Damian Rutazaana<sup>2</sup>, Jimmy Opiyo<sup>2</sup>, James K. Tibenderana<sup>2</sup>

<sup>1</sup>Malaria Consortium, Kampala, Uganda, <sup>2</sup>Malaria Consortium, London, United Kingdom, <sup>3</sup>Ministry of Health, Uganda, Kampala, Uganda, <sup>4</sup>Malaria Consortium, Raleigh, NC, NC, United States, <sup>5</sup>Malaria Consortium, London, Uganda

3:15 p.m.

5689

### MATAMAL: A CLUSTER - RANDOMIZED PLACEBO-CONTROLLED TRIAL TO EVALUATE THE ADDITIVE IMPACT OF IVERMECTIN TO DIHYDROARTEMISININ-PIPERAQUINE SEASONAL MASS DRUG ADMINISTRATION FOR MALARIA CONTROL ON THE BIJAGOS ARCHIPELAGO OF GUINEA-BISSAU

Harry Hutchins<sup>1</sup>, John Bradley<sup>1</sup>, Elizabeth Pretorius<sup>1</sup>, Eunice Teixeira da Silva<sup>2</sup>, Hristina Vasileva<sup>1</sup>, Robert T. Jones<sup>1</sup>, Mamadou Ousmane Ndiath<sup>3</sup>, Harouna dit Massire Soumare<sup>3</sup>, David Mabey<sup>1</sup>, Jose Ernesto Nante<sup>4</sup>, Cesario Martins<sup>2</sup>, James G. Logan<sup>1</sup>, Hannah Slaters<sup>1</sup>, Chris Drakeley<sup>1</sup>, Umberto D'Alessandro<sup>3</sup>, Amabelia Rodrigues<sup>2</sup>, Anna Last<sup>1</sup>

<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>Projecto de Saude Bandim, Bissau, Guinea-Bissau, <sup>3</sup>Medical Research Council Unit, The Gambia, Fajara, Gambia, <sup>4</sup>Ministério de Saúde, Bissau, Guinea-Bissau, <sup>5</sup>PATH, Seattle, WA, United States

3:30 p.m.

5690

### MONITORING SUSTAINED IMPACT ONE YEAR AFTER MASS DRUG ADMINISTRATION IN A LOW-MODERATE MALARIA TRANSMISSION SETTING OF SENEGAL WITH OPTIMIZED CONTROL INTERVENTIONS

Abdoulaye Diallo<sup>1</sup>, Ari Fogelson<sup>2</sup>, El-hadji Ba Konko Ciré<sup>1</sup>, Amadou Seck<sup>1</sup>, Tidiane Gadiaga<sup>3</sup>, Michelle E. Roh<sup>4</sup>, Sylla Thiam<sup>1</sup>, Seynabou Gaye<sup>5</sup>, Ibrahima Diallo<sup>5</sup>, Aminata Colle Lo<sup>1</sup>, Elhadji Diouf<sup>1</sup>, Omar Gallo Ba<sup>1</sup>, Alioune Badara Gueye<sup>6</sup>, Xue Wu<sup>1</sup>, Paul Milligan<sup>2</sup>, Erin Eckert<sup>7</sup>, Roly Gosling<sup>2</sup>, Adam Bennett<sup>4</sup>, Jimee Hwang<sup>1</sup>, Doudou Sene<sup>5</sup>, Fatou Ba<sup>5</sup>, Serigne Amdy Thiam<sup>6</sup>, Bayal Cisse<sup>3</sup>, Katharine Sturm-Ramirez<sup>2</sup>, Jean Louis Ndiaye<sup>1</sup>, Michelle Hsiang<sup>4</sup>

<sup>1</sup>Université Iba Der Thiam de Thiès, Thiès, Senegal, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>District of Tambacounda, Ministry of Health and Social Action, Tambacounda, Senegal, <sup>4</sup>US President's Malaria Initiative, Impact Malaria, Washington, DC, United States, <sup>5</sup>Senegal National Malaria Control Programme, Ministry of Health and Social Action, Dakar, Senegal, <sup>6</sup>US President's Malaria Initiative, United States Agency for International Development, Dakar, Senegal, <sup>7</sup>US President's Malaria Initiative, US Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>8</sup>US President's Malaria Initiative, US Centers for Disease Control and Prevention, Dakar, Senegal

3:45 p.m.

5691

### TREATMENT OF UNCOMPLICATED MALARIA USING ARTEMISININ-BASED COMBINATION THERAPY IN THE FIRST TRIMESTER OF PREGNANCY: EXPERIENCE FROM TANZANIA

Abdallah Lusasi<sup>1</sup>, Geoffrey Makenga<sup>2</sup>, Sijenunu Aaron<sup>1</sup>, Samwel Lazaro<sup>1</sup>, Frank Chacky<sup>1</sup>, Naomi Serbantez<sup>3</sup>, Sigsbert Mkude<sup>2</sup>, Fabrizio Molteni<sup>4</sup>, Chonge Kitojo<sup>3</sup>

<sup>1</sup>National Malaria Control Programme, Dodoma, United Republic of Tanzania, <sup>2</sup>Population Services International (PSI), Dar es Salaam, United Republic of Tanzania, <sup>3</sup>U.S. President's Malaria Initiative, USAID, Dar es Salaam, United Republic of Tanzania, <sup>4</sup>Swiss Tropical Public Health Institute, Dar es Salaam, United Republic of Tanzania

4 p.m.

5692

### ANTI-GAMETOCYTE ACTIVITY AND POST-TREATMENT PROTECTIVE EFFICACY OF ARTEMETHER-LUMEFANTRINE VS. DIHYDROARTEMISININ-PIPERAQUINE FOR UNCOMPLICATED MALARIA: PRELIMINARY RESULTS OF A MULTI-DOSE PHARMACOKINETIC/PHARMACODYNAMIC TRIAL

Jean-Bertin B. Kabuya<sup>1</sup>, Jay Sikalima<sup>2</sup>, Luc Kambale Kamavu<sup>3</sup>, Proscovia Miiye Banda<sup>3</sup>, Amary Fall<sup>4</sup>, Heba H. Mostafa<sup>4</sup>, Liusheng Huang<sup>5</sup>, Francesca Aweeka<sup>5</sup>, Jeffrey A. Bailey<sup>6</sup>, Jonathan J. Juliano<sup>7</sup>, Philip E. Thuma<sup>8</sup>, Gershom Chongwe<sup>1</sup>, Theresa A. Shapiro<sup>9</sup>, William J. Moss<sup>9</sup>, Matthew M. Ippolito<sup>4</sup>

<sup>1</sup>Tropical Diseases Research Centre, Ndola, Zambia, <sup>2</sup>CHAZ, Lusaka, Zambia, <sup>3</sup>Saint Paul's General Hospital, Nchelenge, Zambia, <sup>4</sup>Johns Hopkins School of Medicine, Baltimore, MD, United States, <sup>5</sup>University of California, San Francisco, San Francisco, CA, United States, <sup>6</sup>Brown University, Providence, RI, United States, <sup>7</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>8</sup>Macha Research Trust, Macha, Zambia, <sup>9</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

4:15 p.m.

5693

### PHARMACOMETRIC ASSESSMENT AND DOSE-OPTIMIZATION OF PRIMAQUINE IN THE RADICAL CURE OF PLASMODIUM VIVAX MALARIA IN CHILDREN: AN INDIVIDUAL PATIENT DATA META-ANALYSIS

Joel Tarning<sup>1</sup>, Palang Chotsiri<sup>1</sup>, Kanoktip Puttaraksa<sup>1</sup>, Robert J. Commons<sup>2</sup>, Julie A. Simpson<sup>3</sup>, Karen I. Barnes<sup>4</sup>, Philippe J. Guerin<sup>5</sup>, ric N. Price<sup>6</sup>, Paediatric Primaquine Study Group<sup>5</sup>

<sup>1</sup>Mahidol Oxford Tropical Medicine Research Unit, Bangkok, Thailand, <sup>2</sup>Global Health Division, Menzies School of Health Research, Charles Darwin University, Darwin, Australia, <sup>3</sup>Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, University of Melbourne, Melbourne, Australia, <sup>4</sup>University of Cape Town, Cape Town, South Africa, <sup>5</sup>WorldWide Antimalarial Resistance Network, Centre for Tropical Medicine and Global Health, University of Oxford, Oxford, United Kingdom

4:30 p.m.

5694

### FDA-APPROVED KINASE INHIBITORS AS POTENTIAL ADJUNCTIVE THERAPY CANDIDATES FOR ENDOTHELIAL DYSFUNCTION IN CEREBRAL MALARIA

Luana S. Ortolan<sup>1</sup>, Priyanka Bansal<sup>1</sup>, Veronica Primavera<sup>1</sup>, Sabrina Epiphany<sup>2</sup>, Alexis Kaushansky<sup>1</sup>, Joseph D. Smith<sup>1</sup>

<sup>1</sup>Seattle Children's Research Institute, Seattle, WA, United States, <sup>2</sup>Universidade de Sao Paulo, Sao Paulo, Brazil

## Scientific Session 35

### American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP): Protozoan Immunology

Grand Hall K - Ballroom Level (East Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

Supported with funding from the Burroughs Wellcome Fund

#### CHAIR

Manuel Llinas  
Pennsylvania State University, University Park, PA, United States

Dylan Pillai  
University of Calgary, Calgary, AB, Canada

3 p.m.

5695

**MULTI-OMIC PROFILING OF CUTANEOUS LEISHMANIASIS INFECTIONS REVEALS MICROBIOTA-DRIVEN MECHANISMS UNDERLYING DISEASE SEVERITY**

Camila Farias Amorim<sup>1</sup>, Victoria M. Lovins<sup>2</sup>, Tej Pratap Singh<sup>1</sup>, Fernanda O. Novais<sup>3</sup>, Jordan C. Harris<sup>2</sup>, Alexandro S. Lago<sup>4</sup>, Lucas P. Carvalho<sup>4</sup>, Edgar M. Carvalho<sup>4</sup>, Daniel P. Beiting<sup>1</sup>, Phillip Scott<sup>1</sup>, Elizabeth A. Grice<sup>2</sup>

<sup>1</sup>Department of Pathobiology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, PA, United States, <sup>2</sup>Department of Dermatology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, United States, <sup>3</sup>Department of Microbial Infection and Immunity, College of Medicine, The Ohio State University, Columbus, OH, United States, <sup>4</sup>Laboratório de Pesquisas Clínicas do Instituto de Pesquisas Gonçalo Muniz – Fiocruz, Salvador, Brazil

3:15 p.m.

5696

**REPROGRAMMING EIF4A-DEPENDENT MRNA TRANSLATION TO CONTROL LEISHMANIA INFECTION**

Leonardo Cortazzo da Silva<sup>1</sup>, Camila Almeida Cardoso<sup>1</sup>, Visnu Chaparro<sup>1</sup>, Louis-Phillipe Leroux<sup>1</sup>, Amin Azimin<sup>2</sup>, Reza Salavati<sup>2</sup>, Jerry Pelletier<sup>2</sup>, Lauren Brown<sup>3</sup>, John Porco<sup>3</sup>, Maritza Jaramillo<sup>1</sup>

<sup>1</sup>INRS – Centre Armand-Frappier Santé Biotechnologie, Laval, QC, Canada, <sup>2</sup>McGill University, Montreal, QC, Canada, <sup>3</sup>Boston University, Boston, MA, United States

3:30 p.m.

5697

**BORRELIA BURGDORFERI CO-EXPOSURE ENHANCES IN VITRO HOST CELL SUSCEPTIBILITY TO L. INFANTUM AND INDUCES TH17-LIKE CELL RESPONSES IN L. INFANTUM-SEROPOSITIVE DOGS**

Danielle Pessoa-Pereira<sup>1</sup>, Breanna M. Scorza<sup>1</sup>, Karen Cyndari<sup>2</sup>, Erin A. Beasley<sup>1</sup>, Christine A. Petersen<sup>1</sup>

<sup>1</sup>University of Iowa, Iowa City, IA, United States, <sup>2</sup>University of Iowa Hospitals and Clinics, Iowa City, IA, United States

3:45 p.m.

5698

**STAT6-DEPENDENT/IL-5-MEDIATED EOSINOPHILIA PRIMED BY PRE-EXPOSURE TO UNINFECTED SANDFLY VECTOR BITES ENHANCE SUBSEQUENT LEISHMANIA INFECTION**

Chukwunonso O. Nzelu<sup>1</sup>, Matheus B. H. Carneiro<sup>1</sup>, Claudio Meneses<sup>2</sup>, Gabriella Gee<sup>1</sup>, Leon Melo<sup>1</sup>, Nathan C. Peters<sup>1</sup>

<sup>1</sup>Snyder Institute for Chronic Diseases, Department of Microbiology, Immunology, and Infectious Diseases, Cumming School of Medicine and Faculty of Veterinary Medicine, University of Calgary, Canada, Calgary, AB, Canada, <sup>2</sup>Vector Molecular Biology Section, Laboratory of Malaria and Vector Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Rockville, MD, USA, Rockville, MD, United States

4 p.m.

5699

**DISSECTING PROTECTIVE NK CELL RESPONSES TO TRYPANOSOMA CRUZI INFECTION IN THE HUMAN SKIN**

Jessica Barton<sup>1</sup>, Keshia Kroh<sup>1</sup>, Helena Fehling<sup>2</sup>, Hanna Lotter<sup>2</sup>, Andrea Vanegas Ramirez<sup>3</sup>, Beate Volkmer<sup>4</sup>, Rüdiger Greinert<sup>4</sup>, Thomas Jacobs<sup>1</sup>, Rosa I. Gálvez<sup>1</sup>

<sup>1</sup>Protozoa Immunology, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>2</sup>Department of Molecular Biology and Immunology, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>3</sup>Department of Dermatology, Bundeswehr Hospital Hamburg & Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>4</sup>Centre of Dermatology, Elbe Clinics Buxtehude, Buxtehude, Germany

4:15 p.m.

5700

**INHIBITION OF SRC SIGNALING INDUCES AUTOPHAGIC KILLING OF TOXOPLASMA GONDII INDEPENDENT OF EGF RECEPTOR**

Alyssa Hubal<sup>1</sup>, Jose-Andres Portillo<sup>1</sup>, Anusha Vendhoti<sup>1</sup>, Sarah Vos<sup>1</sup>, Charles Shaffer<sup>2</sup>, Carlos Subauste<sup>1</sup>

<sup>1</sup>Case Western Reserve University School of Medicine, Cleveland, OH, United States, <sup>2</sup>Case Western Reserve University, Cleveland, OH, United States

4:30 p.m.

5701

**LOSS OF SIGLEC-7 CORRELATES WITH ENHANCED NATURAL KILLER CELL FUNCTION AND PROTECTION FROM MALARIA SYMPTOMS**

Jenna Dick<sup>1</sup>, Jules Sangala<sup>1</sup>, Benjamin Zandstra<sup>1</sup>, Peter Crompton<sup>2</sup>, Geoffrey Hart<sup>1</sup>

<sup>1</sup>University of Minnesota, Minneapolis, MN, United States, <sup>2</sup>National Institutes of Health, Bethesda, MD, United States

**Symposium 36**

**Neurocysticercosis: An Inflammatory Topic**

Grand Hall L - Ballroom Level (East Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

Neurocysticercosis (NCC) is the most common helminthic infection of the central nervous system caused by the larval stage of the pork tapeworm, Taenia solium. The clinical manifestations are pleomorphic and dependent on location, stage of parasite and burden of disease. The host inflammatory response is critical to both the presentation and response to treatment, but not well understood. There is increasing evidence that calcified NCC plays a large role in both cause and maintenance of seizures and epilepsy. Emerging data also suggests a causal association between inflammation due to calcified parenchymal NCC, perilesional edema and seizures. This symposium will bring participants up to date on the current knowledge of inflammation in NCC using both the animal model and clinical cases to lay the groundwork for a discussion on the role of anti-inflammatory agents and their use in the treatment of NCC.

**CHAIR**

Christina Coyle  
Albert Einstein College of Medicine, Bronx, NY, United States

Hector H. Garcia  
Universidad Peruana Cayetano Heredia, Lima, Peru

3 p.m.

**INTRODUCTION**

3:10 p.m.

**UNDERSTANDING TREATMENT RELATED BRAIN INFLAMMATION IN NEUROCYSTICERCOSIS: DATA FROM ANIMAL MODEL**

Manuela Verastegui  
Universidad Peruana Cayetano Heredia, Lima, Peru

3:40 p.m.

**INFLAMMATION DRIVING THE CLINICAL PRESENTATION IN NCC: LESSONS FROM THE BEDSIDE**

Christina M. Coyle  
Albert Einstein College of Medicine, Bronx, NY, United States



**4 p.m.**  
**PERILESIONAL EDEMA AROUND CALCIFIED CYSTICERCOSIS LESIONS**Hector Garcia  
*Universidad Peruana Cayetano Heredia, Lima, Peru***4:20 p.m.**  
**MODULATING THE HOST RESPONSE IN NEUROCYSTICERCOSIS**Theodore E. Nash  
*National Institutes of Health, Bethesda, MD, United States***Scientific Session 37****Bacteriology: Cholera***Plaza Ballroom - Lobby Level (East Tower)***Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone****CHAIR**Wilfredo Rafael Matias  
*Massachusetts General Hospital, Boston, MA, United States*Denise Chac  
*University of Washington, Seattle, WA, United States***3 p.m.** **5702****GUT MICROBIOTA-DERIVED METABOLITES ALTER HUMAN-DERIVED MACROPHAGE STIMULATION AND MAY INCREASE IMMUNE RESPONSES TO ORAL CHOLERA VACCINE**Denise Chac<sup>1</sup>, Susan M. Markiewicz<sup>2</sup>, Ashraful I. Khan<sup>2</sup>, Fahima Chowdhury<sup>2</sup>, Emily Pruitt<sup>1</sup>, Taufiqur R. Bhuiyan<sup>2</sup>, Regina C. LaRocque<sup>3</sup>, Jason B. Harris<sup>3</sup>, Libin Xu<sup>1</sup>, Edward T. Ryan<sup>3</sup>, Firdausi Qadri<sup>2</sup>, Ana A. Weil<sup>1</sup>  
<sup>1</sup>University of Washington, Seattle, WA, United States, <sup>2</sup>International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh, <sup>3</sup>Massachusetts General Hospital, Boston, MA, United States**3:15 p.m.** **5703****ASCERTAINING TRUE CHOLERA BURDEN AND SUBNATIONAL CHOLERA RISK WITH A NOVEL CONTINUOUS DISEASE ENDEMICITY INDEX**Neda Jalali<sup>1</sup>, Sandra Mendoza Guerrero<sup>2</sup>, Andrew Azman<sup>3</sup>, Elizabeth Lee<sup>3</sup>, Steven Stoddard<sup>4</sup>, Sean Moore<sup>1</sup>  
<sup>1</sup>University of Notre Dame, South Bend, IN, United States, <sup>2</sup>Emergent BioSolutions, Gaithersburg, MD, United States, <sup>3</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>4</sup>Emergent BioSolutions, Redwood City, CA, United States**3:30 p.m.** **5704****ENHANCED CHOLERA SURVEILLANCE AS A TOOL FOR IMPROVING VACCINATION CAMPAIGN EFFICIENCY**Hanmeng Xu<sup>1</sup>, Kaiyue Zou<sup>1</sup>, Juan Dent<sup>1</sup>, Kirsten E. Wiens<sup>2</sup>, Espoir B. Malembaka<sup>1</sup>, Lee Hampton<sup>3</sup>, Andrew S. Azman<sup>1</sup>, Elizabeth C. Lee<sup>1</sup>  
<sup>1</sup>Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Temple University, Philadelphia, PA, United States, <sup>3</sup>Gavi, the Vaccine Alliance, Geneva, Switzerland**3:45 p.m.** **5705****RE-EMERGENCE OF CHOLERA IN HAITI LINKED TO ENVIRONMENTAL V. CHOLERA O1 OGAWA STRAINS**Carla N. Mavian<sup>1</sup>, Massimiliano Tagliamonte<sup>1</sup>, Meer T. Alam<sup>1</sup>, Nazmus Sakib<sup>1</sup>, Melanie N. Cash<sup>1</sup>, Juan Perez Jimenez<sup>1</sup>, Alberto Riva<sup>1</sup>, Eric J. Nelson<sup>1</sup>, Emilie T. Cato<sup>1</sup>, Jayakrishnan Ajayakumar<sup>2</sup>, Andrew Curtis<sup>2</sup>, V. Madsen Beau De Rochars<sup>1</sup>, Vanessa Rouzier<sup>3</sup>, Jean William Pape<sup>3</sup>, J. Glenn Morris Jr<sup>1</sup>, Marco Salemi<sup>1</sup>, Asfar Ali<sup>1</sup>  
<sup>1</sup>University of Florida, Gainesville, FL, United States, <sup>2</sup>Case Western Reserve University, Cleveland, OH, United States, <sup>3</sup>Weill Cornell Medical College, Les Centres GHESKIO Haiti, New York, NY, United States**4 p.m.** **5706****EFFECTIVENESS OF THE EUVICHOL® ORAL CHOLERA VACCINE AT 2 YEARS: A CASE-CONTROL AND BIAS-INDICATOR STUDY IN HAITI**Wilfredo R. Matias<sup>1</sup>, Yodeline Guillaume<sup>1</sup>, Gertrude Cene Augustin<sup>2</sup>, Kenia Vissieres<sup>2</sup>, Ralph Ternier<sup>2</sup>, Damien M. Slater<sup>1</sup>, Jason B. Harris<sup>1</sup>, Molly F. Franke<sup>2</sup>, Louise C. Ivers<sup>1</sup>  
<sup>1</sup>Massachusetts General Hospital, Boston, MA, United States, <sup>2</sup>Zanmi Lasante, Port-au-Prince, Haiti, <sup>3</sup>Harvard Medical School, Boston, MA, United States**4:15 p.m.** **5707****THE EFFECTIVENESS OF ONE DOSE OF ORAL CHOLERA VACCINE: MATCHED CASE-CONTROL STUDIES FROM UVIRA, DEMOCRATIC REPUBLIC OF CONGO**Espoir Bwenge Malembaka<sup>1</sup>, Patrick Musole Bugeme<sup>1</sup>, Chloe Hutchins<sup>2</sup>, Hanmeng Xu<sup>1</sup>, Juan Dent Husle<sup>1</sup>, Maya N. Demby<sup>1</sup>, Karin Gallandat<sup>2</sup>, Jaime M. Saidi<sup>3</sup>, Baron Bashige Rumedeka<sup>1</sup>, Moïse Itongwa<sup>1</sup>, Esperance Tshiwedi<sup>4</sup>, Faïda Kitoga<sup>4</sup>, Amanda K. Debes<sup>5</sup>, Justin Lessler<sup>6</sup>, Oliver Cumming<sup>2</sup>, Placide O. Welo<sup>7</sup>, Daniel Mukadi-Bamuleka<sup>4</sup>, Jackie Knee<sup>2</sup>, Andrew S. Azman<sup>1</sup>  
<sup>1</sup>Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>2</sup>Department of Disease Control, London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Zone de Santé d'Uvira, Ministère de la Santé Publique, Uvira, Democratic Republic of the Congo, <sup>4</sup>Institut National de Recherche Biomédicale, Goma, Democratic Republic of the Congo, <sup>5</sup>Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States, <sup>6</sup>Department of Epidemiology, Gillings School of Global Public Health, and University of North Carolina Population Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, United States, <sup>7</sup>PNECHOL-MD, Community IMCI, Ministry of Health, Kinshasa, Democratic Republic of the Congo**4:30 p.m.** **5708****SINGLE DOSE ORAL VAXCHORA VACCINE (CVD103-HGR) FOR THE PREVENTION OF CHOLERA IN TRAVELERS**James M. McCarty<sup>1</sup>, Lisa Bedell<sup>1</sup>  
<sup>1</sup>Stanford University, Stanford, CA, United States, <sup>2</sup>Emergent BioSolutions, Gaithersburg, MD, United States**Symposium 38****Clinical Pearls in the Diagnosis and Management of Tropical Infections***Crystal Ballroom A - Lobby Level (West Tower)***Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone**

This session will cover relevant topics related to neglected infectious and tropical diseases prevalent in the region. This session is aimed to infectious disease specialists in general. This symposium will address the following topics: the impact of erroneous or delayed treatment of neglected infectious and tropical diseases and management of hepatic hydatid disease;

the treatment challenges of hepatic hydatid disease and endemic mycoses of Latin America; the most important clinical pearls to recognize endemic mycoses in Latin America and diagnosis and management of patients with complicated cutaneous and mucocutaneous leishmaniasis. In addition, the symposium will review the treatment challenges of complicated leishmaniasis and free-living amoebas: *Balamuthia mandrilaris*; the diagnosis pearls and treatment available for *Balamuthia mandrilaris* and how to overcome challenges in the management of *P. vivax* malaria, as well as current developments and future directions. Finally, the symposium will explore the treatment challenges of *P. vivax* malaria, including the appropriate use of antimalarial drugs and measures to prevent relapse and transmission. The session will conclude with a roundtable discussion that will allow participants to ask some questions on the topics discussed, as well as the speakers emphasizing key messages.

#### **CHAIR**

Theresa J. Ochoa  
*Universidad Peruana Cayetano Heredia, Lima, Peru*  
Carlos Seas  
*Universidad Peruana Cayetano Heredia, Lima, Peru*

#### **3 p.m. INTRODUCTION**

#### **3:10 p.m. MANAGEMENT OF HEPATIC HYDATID DISEASE**

Pedro Legua  
*Universidad Peruana Cayetano Heredia, Lima, Peru*

#### **3:25 p.m. ENDEMIC MYCOSES OF LATIN-AMERICAN**

Carlos Seas  
*Universidad Peruana Cayetano Heredia, Lima, Peru*

#### **3:40 p.m. DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH COMPLICATED CUTANEOUS AND MUCOCUTANEOUS LEISHMANIASIS**

Martin Montes  
*Universidad Peruana Cayetano Heredia, Lima, Peru*

#### **3:55 p.m. FREE-LIVING AMOEBAS: BALAMUTHIA MANDRILARIS**

Eduardo Gotuzzo  
*Universidad Peruana Cayetano Heredia, Lima, Peru*

#### **4:10 p.m. OVERCOMING CHALLENGES IN THE MANAGEMENT OF *P. VIVAX* MALARIA: CURRENT DEVELOPMENT AND FUTURE DIRECTION**

Sapha Barkati  
*Universidad Peruana Cayetano Heredia, Lima, Peru*

## **Symposium 39**

### **American Committee on Clinical Tropical Medicine and Travelers' Health (Clinical Group - ACCTMTH) Symposium I: Vincenzo Marcolongo Lecture: Dengue - The Latest in Vaccines and Other Prevention Tools**

*Crystal Ballroom B - Lobby Level (West Tower)*  
**Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone**

**Supported with funding from the International Association for  
Medical Assistance to Travellers (IAMAT)**



This session features the Vincenzo Marcolongo Lecture, which honors Dr. Vincenzo Marcolongo, the founder of IAMAT - the International Association for Medical Assistance to Travelers in 1960. Dr. Marcolongo's lifelong work was devoted to the medical needs of travelers. Through IAMAT and numerous publications, Dr. Marcolongo

worked tirelessly to inform travelers of health risks and raise awareness of travelers' health. His foresight, compassion and generosity continue to serve as inspiration for IAMAT's work. To quote Dr. Vincenzo Marcolongo, "Distinguished physicians and respected medical institutions, with a sense of solidarity which makes them like one family, are now working in harmony to assist the traveler who may require medical assistance on his journey... The need for peace and understanding between the peoples of the world has never been as great as now. Peace can come only with understanding, and travel is an important means of acquiring it."

The incidence of dengue fever worldwide continues to increase, and about half of the world's population is at risk, with an estimated 100-400 million infections per year. Dengue fever remains an ongoing challenge for endemic disease transmission in over 100 countries in parts of Africa, east Asia, the eastern Mediterranean, and South America as well as for travelers to these endemic areas. International travel and trade are facilitating the geographical spread of mosquito vectors and the introduction of dengue to new areas. Although much of the illness is on the milder spectrum, for severe or life-threatening dengue, early access to care and judicious fluid management can be lifesaving, especially given the lack of targeted therapeutics. Increased understanding of dengue epidemiology and immune response, as well as the availability of partially effective vaccines, candidate vaccines in the pipeline, and novel approaches to mosquito control have the potential to inform and significantly improve the effectiveness of dengue control. Gabriela Paz Bailey will deliver the Marcolongo Lecture and provide an update on the latest trends in dengue epidemiology and risk, as well as new information related to mosquito control efforts and vaccines.

**CHAIR**

Mark Kortepeter  
USUHS, Bethesda, MD, United States

**3 p.m.****INTRODUCTION TO VINCENZO MARCOLONGO LECTURE**

Mark Kortepeter  
USUHS, Bethesda, MD, United States

**3:10 p.m.****VINCENZO MARCOLONGO LECTURE: DENGUE: THE LATEST IN VACCINES AND OTHER PREVENTION TOOLS****Gabriela Paz-Bailey, MD, PhD, MSc, DTM&H**

Chief of the Dengue Branch  
Division of Vector-Borne Diseases  
National Center for Emerging and Zoonotic  
Infectious Diseases (NCEZID)  
Centers for Disease Control and Prevention  
San Juan, Puerto Rico

Gabriela Paz-Bailey, MD, PhD, MSc, DTM&H is the Chief of the Dengue Branch (DB), Division of Vector-Borne Diseases (DVBD), National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) in San Juan, Puerto Rico. Dr. Paz-Bailey completed a degree in Medicine and Surgery at the University of San Carlos of Guatemala. She continued her graduate studies at the London School of Hygiene & Tropical Medicine in London, England, where she pursued a Master of Science in Tropical Medicine and International Health, and a PhD in Clinical Epidemiology. She joined the Centers for Disease Control and Prevention (CDC) in 2000 as an Epidemic Intelligence Service Officer.

Dr. Paz-Bailey has over two decades of experience in public health and epidemiology in the United States, Central America, Africa, and Asia. She has studied the natural history of several infectious diseases, focusing on their acquisition and response to therapies. These include tuberculosis, Chagas disease, HIV, hepatitis B and C viruses, herpes viruses, and arboviral diseases such as dengue and Zika. She has focused her efforts on strengthening surveillance systems and comprehensive treatment and prevention programs, and has authored over 190 publications. She now leads dengue research and program development for the CDC, including dengue transmission dynamics, evaluation of novel mosquito control interventions, and dengue vaccine policy and implementation. Dr. Paz-Bailey is passionate about working on disease control and prevention and the use of science-based tools to improve public health.

**3:55 p.m.****ACCTMTH ANNUAL BUSINESS MEETING****4:25 p.m.****NETWORKING RECEPTION****Scientific Session 40****Viruses - Immunology**

Regency Ballroom A - Ballroom Level (West Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

**CHAIR**

Aravinda M. de Silva  
University of North Carolina School of Medicine, Chapel Hill, NC, United States

Nell G. Bond  
Tulane University SOM, New Orleans, LA, United States

**3 p.m.****5709****LONG TERM MUSCULOSKELETAL MANIFESTATIONS ARE ASSOCIATED WITH A DYSREGULATED IMMUNE RESPONSE IN POST-EBOLA SYNDROME (PES)**

**Nell G. Bond**<sup>1</sup>, Sarah T. Himmelfarb<sup>1</sup>, Emily J. Engel<sup>1</sup>, Foday Alhasan<sup>2</sup>, Michael A. Gbokie<sup>2</sup>, Lansana Kanneh<sup>2</sup>, Mambu Momoh<sup>2</sup>, Ibrahim M. Kanneh<sup>2</sup>, John D. Sandi<sup>2</sup>, Samuel C. Ficenc<sup>1</sup>, James E. Robinson<sup>1</sup>, Jeffery G. Shaffer<sup>3</sup>, Robert F. Garry<sup>1</sup>, Jalene Velasquez<sup>4</sup>, Bronwyn M. Gunn<sup>4</sup>, Robert Samuels<sup>2</sup>, Donald S. Grant<sup>2</sup>, John S. Schieffelin<sup>1</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, <sup>4</sup>Washington State University, Pullman, WA, United States

**3:15 p.m.****5710****EXPLORING BAT INNATE IMMUNE CELL RESPONSES TO FILOVIRUSES**

**Ivet A. Yordanova**<sup>1</sup>, Jonathan C. Guito<sup>2</sup>, Markus Kainulainen<sup>2</sup>, César Albariño<sup>2</sup>, Jonathan S. Towner<sup>2</sup>, Joseph B. Prescott<sup>1</sup>  
<sup>1</sup>Center for Biological Threats and Special Pathogens, Robert Koch Institute, Berlin, Germany, <sup>2</sup>Viral Special Pathogens Branch, Centers for Disease Control and Prevention, Atlanta, GA, United States

**3:30 p.m.****5711****COMPUTATIONAL DESIGN OF STABILIZED RBD ANTIGENS ENABLES POTENTLY NEUTRALIZING SARS-COV-2 VACCINES**

**Thayne Henderson Dickey**<sup>1</sup>, Rui Ma<sup>1</sup>, Wai-Kwan Tang<sup>1</sup>, Sachy Orr-Gonzalez<sup>2</sup>, Tarik Ouahes<sup>2</sup>, Palak Patel<sup>1</sup>, Holly McAleese<sup>2</sup>, Brandi L. Richardson<sup>2</sup>, Elizabeth Eudy<sup>3</sup>, Brett Eaton<sup>3</sup>, Michael J. Murphy<sup>3</sup>, Jennifer L. Kwan<sup>4</sup>, Nichole D. Salinas<sup>1</sup>, Michael R. Holbrook<sup>3</sup>, Lynn E. Lambert<sup>3</sup>, Niraj H. Tolia<sup>1</sup>  
<sup>1</sup>Host-Pathogen Interactions and Structural Vaccinology Section, Laboratory of Malaria Immunology and Vaccinology, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States, <sup>2</sup>Vaccine Development Unit, Laboratory of Malaria Immunology and Vaccinology, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States, <sup>3</sup>Integrated Research Facility, Division of Clinical Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Frederick, MD, United States, <sup>4</sup>Epidemiology and Population Studies Unit, Laboratory of Clinical Immunology and Microbiology, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States

Thursday  
October 19

3:45 p.m.

5712

### EPSTEIN BARR VIRUS SYNERGIZES WITH *PLASMODIUM FALCIPARUM* MALARIA TO INDUCE ABERRANT EXPRESSION OF ACTIVATION INDUCED CYTIDINE DEAMINASE

Bonface Ariera, Sidney Ogolla, Rosemary Rochorford  
University of Colorado Anschutz medical campus, Aurora, CO, United States

4 p.m.

5713

### ANTIBODY FC CORRELATES OF PROTECTION AGAINST SEVERE DENGUE DISEASE

Elias M. Duarte<sup>1</sup>, Antonio G. Dias Jr.<sup>1</sup>, Jose Victor Zambrana<sup>2</sup>, Sandra Bos<sup>1</sup>, Vicky Roy<sup>3</sup>, Rosie Aogo<sup>4</sup>, Leah Katzelnick<sup>4</sup>, Guillermina Kuan<sup>5</sup>, Angel Balmaseda<sup>6</sup>, Galit Alter<sup>7</sup>, Eva Harris<sup>1</sup>

<sup>1</sup>Division of Infectious Disease and Vaccinology, School of Public Health, University of California, Berkeley, Berkeley, CA, United States, <sup>2</sup>Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI, United States, <sup>3</sup>Ragon Institute of MGH, MIT, and Harvard, Cambridge, MA, United States, <sup>4</sup>Viral Epidemiology and Immunity Unit, Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, Bethesda, MD, United States, <sup>5</sup>Centro de Salud Sócrates Flores Vivas, Ministerio de Salud, Managua, Nicaragua, <sup>6</sup>Laboratorio Nacional de Virología, Centro Nacional de Diagnóstico y Referencia, Ministerio de Salud, Managua, Nicaragua

4:15 p.m.

5714

### ANTIBODY CORRELATES OF SEVERE DISEASE IN SECONDARY DENGUE VIRUS INFECTION AFTER A PRIMARY ZIKA VIRUS INFECTION: A POSSIBLE ROLE FOR IGA

Jaime A. Cardona-Ospina<sup>1</sup>, Sandra Bos<sup>1</sup>, Gregorio Dias Jr.<sup>1</sup>, Jose Victor Zambrana<sup>2</sup>, Vicky Roy<sup>3</sup>, Elias Duarte<sup>1</sup>, Guillermina Kuan<sup>4</sup>, Angel Balmaseda<sup>5</sup>, Galit Alter<sup>7</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>Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, MI, United States, <sup>3</sup>Ragon Institute of MGH, MIT, and Harvard, Cambridge, MA, United States, <sup>4</sup>Centro de Salud Sócrates Flores Vivas, Ministerio de Salud, Managua, Nicaragua, <sup>5</sup>Laboratorio Nacional de Virología, Centro Nacional de Diagnóstico y Referencia, Ministerio de Salud, Managua, Nicaragua

4:30 p.m.

5715

### IN-DEPTH ANALYSIS OF THE IMMUNOGENICITY OF A SINGLE DOSE OF DENGXAXIA IN BASELINE DENGUE-NAIVE CHILDREN IN CEBU, PHILIPPINES

Laura J. White<sup>1</sup>, Lindsay Dahora<sup>1</sup>, Elizabeth Adams<sup>1</sup>, Emily Freeman<sup>1</sup>, Lucas Laszacs<sup>1</sup>, Ruby Shah<sup>1</sup>, Lakshmanane Premkumar<sup>1</sup>, Odio Camila<sup>2</sup>, Leah Katzelnick<sup>2</sup>, Jedas Daag<sup>3</sup>, Maria Vinna Crisostomo<sup>3</sup>, Kristal-An Agrupis<sup>3</sup>, Michelle Ylade<sup>3</sup>, Jacqueline Deen<sup>4</sup>, Aravinda de Silva<sup>1</sup>

<sup>1</sup>University of North Carolina, Chapel Hill, NC, United States, <sup>2</sup>National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD, United States, <sup>3</sup>Institute of Child Health and Human Development, National Institutes of Health, University of the Philippines, Manila, Philippines

## Symposium 41

### Neglected Tropical Diseases at Home: Leishmania spp. in the United States

Regency Ballroom B - Ballroom Level (West Tower)

Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone

Disease caused by infection with *Leishmania* spp. parasites is a prime example of a One Health concern as it affects both humans (leishmaniasis) and animals (leishmaniosis) and is spread by sandfly vectors with species-specific environmental requirements. In the United States, leishmaniasis is considered an exotic illness occurring among people who have traveled or lived abroad. However, movement of people and animals across borders and

environmental changes could facilitate establishment of infection in new areas. Increasing numbers of autochthonous cases of cutaneous leishmaniasis caused by *L. mexicana* are reported and both vectors and animal reservoirs (primarily *Neotoma* spp.) have been documented in the southern U.S. Climate modeling studies have indicated that climate change will allow for northern expansion of sandfly vectors, which will likely increase the incidence of autochthonous cutaneous leishmaniasis in the U.S. Lack of awareness among U.S. physicians for endemic cutaneous leishmaniasis delays diagnosis and could result in inappropriate treatment of patients. Additionally, dogs are a major reservoir for zoonotic visceral leishmaniasis caused by *Leishmania infantum*, a potentially fatal disease affecting an estimated 90,000 people each year in over 80 endemic countries. The parasite has been expanding into non-endemic areas globally due to climate change and increasing world trade and international movement of dogs. Currently, few countries conduct surveillance for animal leishmaniasis or have control programs in place. In the U.S., hunting hounds have maintained infection through vertical transmission without apparent spread to sandflies, although one U.S. sandfly species (*Lutzomyia shannoni*) has demonstrated competence as a vector of *L. infantum* in South America. Importation of dogs from endemic areas brings concerns about the risk of zoonotic transmission to veterinary staff and dog owners, household transmission between pets, and establishment of an enzootic cycle in the U.S. if suitable vectors are present. Globally, both leishmaniasis and leishmaniosis are considered neglected tropical diseases. Likewise, there is a lack of knowledge and awareness of endemic leishmaniasis and leishmaniosis in the U.S. To address this knowledge gap, this symposium will present the full spectrum of leishmaniasis and leishmaniosis in the U.S. with an overview of autochthonous human and animal cases and domestic sandfly vector distribution and competence. Additionally, a new risk assessment tool for importation of dogs into the U.S. from endemic areas and the implications for human and animal health will be presented.

#### CHAIR

Anne Straily  
US Centers for Disease Control and Prevention, Atlanta, GA, United States

3 p.m.

#### INTRODUCTION

3:05 p.m.

#### HUMAN AND VETERINARY LEISHMANIA SPP. AND RESULTANT CASES IN THE UNITED STATES

Christine Petersen  
University of Iowa, Iowa City, IA, United States

3:25 p.m.

#### LEISHMANIASIS AS AN ENDEMIC HUMAN DISEASE IN THE UNITED STATES

Bridget McIlwee  
Springfield Clinic, Springfield, IL, United States

**3:45 p.m.****ECOLOGY, DISTRIBUTION, VECTOR COMPETENCE, AND CONTROL OF SAND FLIES IN THE U.S.**Scott Bernhardt  
*Utah State University, Logan, UT, United States***4:05 p.m.****ASSESSING THE RISKS OF L. INFANTUM ENTRY AND SPREAD IN THE U.S. FROM IMPORTED DOGS**David Marquez  
*Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States***Symposium 42****Spatial Repellents to Prevent Mosquito-Borne Disease: Active Compound Discovery and Entomological Studies***Regency Ballroom C - Ballroom Level (West Tower)*  
**Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone**

Long available for commercial use, spatial repellents are an underrecognized product class for malaria vector control currently under evaluation by the World Health Organization (WHO). These are products that can be hung up to diffuse active ingredients, commonly insecticides, to reduce contact between humans and mosquitoes. Evidence on safety, efficacy, and user acceptability continues to support the entry of spatial repellents into the malaria and dengue vector control arsenal in the near future, and it is time for this product class to enter the mainstream radar of important vector control tools that can offer protection from mosquito-borne disease. Here we cover the history of spatial repellent research and where we are today, focusing on the active ingredients available and those in the pipeline, as well as the evidence base from entomology semi-field and field studies. Our first speaker, Nicole Achee, will provide an overview of spatial repellent history, active ingredients in use today, and research priorities required to support their potential and continued widescale rollout. How has the evidence base been growing, where are we today? Which use case scenarios are under consideration and, looking ahead, what more do we need to know? Our second speaker, Johnson Kyeba Swai, will describe work conducted on evaluation of transfluthrin in semi-field, experimental huts and community studies. He will discuss which factors are most important to consider when designing these entomological studies to measure the protective efficacy of spatial repellents measured by reduction in landings as well as blood feeding inhibition and mortality. Our third speaker, Gissella Vasquez will provide an overview of field studies for spatial repellent devices giving an example of research conducted in the Peruvian Amazon. Dr Vasquez will emphasize challenges found in field research and share best practices for addressing those challenges. Our final speakers Dan Kline and Ingrid Chen will present a comprehensive assessment of the spatial repellent evidence base against the backdrop of entomological research, for which methods have evolved substantially over the past two decades. We present results from the meta-analysis 'Volatile pyrethroids against mosquitoes,' the first consolidation of research findings on the active ingredient class used in most spatial repellent products under development.

**CHAIR**Ingrid Chen  
*University of California, San Francisco, San Francisco, CA, United States*Daniel L. Kline  
*USDA-ARS,CMAVE, Gainesville, FL, United States***3 p.m.****INTRODUCTION****3:10 p.m.****SPATIAL REPELLENT HISTORY, ACTIVE INGREDIENTS IN USE TODAY, AND RESEARCH PRIORITIES**Nicole L. Achee  
*University of Notre Dame, Notre Dame, IN, United States***3:30 p.m.****KEY FACTORS TO CONSIDER WHEN DESIGNING ENTOMOLOGICAL EVALUATIONS OF VOLATILE PYRETHROID-BASED SPATIAL REPELLENTS**Johnson Kyeba Swai  
*Ifakara Health Institute, Bagamoyo, United Republic of Tanzania***3:50 p.m.****FIELD EVALUATION OF SPATIAL REPELLENT DEVICES AGAINST MOSQUITOES IN THE PERUVIAN AMAZON: APPROACHES AND CHALLENGES**Gissella M. Vasquez  
*NAMRU-6, Callao 2, Peru***4:10 p.m.****META-ANALYSIS OF VOLATILE PYRETHROIDS AGAINST MOSQUITOES: A SYNTHESIS OF THE ENTOMOLOGICAL EVIDENCE BASE**Ingrid Chen  
*University of California, San Francisco, San Francisco, United States***Symposium 43****Targeting "Gaps in Protection" to Prevent Malaria in Hard to Reach Communities: A Staged Approach to Test New Vector - Control Tools, and Insights Toward Future Evaluation***Regency Ballroom D - Ballroom Level (West Tower)*  
**Thursday, October 19, 3 p.m. - 4:45 p.m. U.S. Central Time Zone**

This symposium represents the collective works of Project BITE (Bite Interruption Toward Elimination) and serves as a template for addressing gaps in vector control tool protection, which can be applied more broadly. In the current global scenario of climate change, urbanization, and the alarming expansion of hard-to-reach, mobile, and displaced populations, more effective and appropriate tools are urgently needed. Malaria elimination requires aggressive and creative application of effective vector control tools, especially in populations that are most difficult to reach. The WHO Global Vector Control Response calls for "programs to optimize the delivery of interventions tailored to the local context". Project BITE used a staged approach to evaluate several novel tools, including Volatile Pyrethroid Spatial Repellents, etofenprox-treated clothing, and topical repellent. This staged approach consisted of a series of experiments including semi-field studies, entomological field studies and human behavioral research, in order to understand

the entomological effectiveness as well as the acceptability and suitability of the tools for the target populations. Finally, these tools were combined into a Forest Pack, designed and delivered to the most at-risk populations in Cambodia as they target malaria elimination by 2025. At each stage, modelling was utilized to predict the potential impact on the malaria burden, with the new data further informing the models. Semi-field and field experiments found that all tools were effective at reducing mosquito landing – and even more so when used in combination – offering personal protection for the intervention user. Each tool also had impacts on “secondary” endpoints such as mortality, prolonged blood-feeding inhibition and egg-laying, which indicates the tools may also offer community protection. Implementation research revealed that while the majority of people were satisfied with the tools, the distribution, delivery, and proper usage of them – especially the treated clothing – presents an obstacle to be overcome. Project BITE is a demonstration of how a staged approach to evaluation can be used to generate important data on effectiveness and acceptability of new tools, or combinations of tools, aimed at protecting the most vulnerable populations from disease. When traditional epidemiological data, via a randomized controlled trial or other form of study, is not practical, we must consider what other options are available to produce relevant, complementary evidence. There is an urgent need for new tools to prevent mosquito borne disease in targeted, context-appropriate ways. A shift in the paradigm of evaluating and approving new tools is needed.

#### **CHAIR**

David J. McIver

*Malaria Elimination Initiative, Institute for Global Health Sciences, University of California, San Francisco, San Francisco, CA, United States*

Allison Tatarsky

*Malaria Elimination Initiative, Institute for Global Health Sciences, University of California, San Francisco, San Francisco, CA, United States*

#### **3 p.m.**

##### **INTRODUCTION**

#### **3:10 p.m.**

##### **EVALUATION OF NOVEL VECTOR CONTROL TOOLS IN A SEMI-FIELD SETTING, USING MULTIPLE DIVERSE ENDPOINTS**

Alongkot Ponlawat

*Armed Forces Medical Research Institute of Medical Sciences, Bangkok, Thailand*

#### **3:30 p.m.**

##### **PROGRESSING TO FIELD BASED ENTOMOLOGICAL EVALUATION OF NOVEL VECTOR CONTROL TOOLS, INCLUDING COMBINED INTERVENTIONS**

Dyna Doum

*Health Forefront Organization, Phnom Penh, Cambodia*

#### **3:50 p.m.**

##### **INTEGRATION OF HUMAN BEHAVIOR DATA WITH ENTOMOLOGICAL DATA TO IDENTIFY GAPS IN PROTECTION AND GUIDE INTERVENTION SELECTION, TARGETING, AND TAILORING**

Elodie Vajda

*Malaria Elimination Initiative, Institute for Global Health Sciences, University of California, San Francisco, San Francisco, CA, United States*

#### **4:10 p.m.**

##### **A MODELLING FRAMEWORK TO EVALUATE THE POTENTIAL IMPACT OF NOVEL VECTOR CONTROL TOOLS BASED ON SEMI-FIELD AND FIELD DATA**

Emma Fairbanks

*Swiss Tropical and Public Health Institute, Allschwil, Switzerland*

#### **4:30 p.m.**

##### **WHERE DO WE GO FROM HERE? HOW DO WE SHIFT THE EVALUATION PARADIGM TOWARD BUILDING COMPLEMENTARY EVIDENCE WHEN TRADITIONAL EPIDEMIOLOGICAL DATA COLLECTION IS NOT FEASIBLE**

Allison Tatarsky

*Malaria Elimination Initiative, Institute for Global Health Sciences, University of California, San Francisco, San Francisco, CA, United States*

### **Richard Hunt Sculpture Tour**

*Meet in Hotel Lobby at Wacker Drive Entrance*

**Thursday, October 19, 3:30 p.m. – 5 p.m.**

Please join us along with the Green Task Force for a Chicago Art Walk featuring the work of Chicago's own famous sculptor, Richard Hunt. According to Kinshasha Holman Conwill, Director of the Studio Museum in Harlem, "Hunt has been a major figure in American Art for forty years. His sculpture and public commissions have earned a singular place in the cultural landscape and public imagination." Jesus Lopes, a staff artist in Richard Hunt's Studio, will lead the tours. The tours will be held on Thursday, October 19 at 3:30 pm - 5 pm and Friday, October 20 at 3:30 pm - 5 pm. Meet in the lobby of the Hyatt Regency Chicago at the Wacker Drive entrance.

### **Poster Session A Dismantle**

*Riverside Center - Exhibit Level (East Tower) and Grand Hall GHI – Ballroom Level (East Tower)*

**Thursday, October 19, 4 p.m. - 5:15 p.m.**

### **Break**

**Thursday, October 19, 4:45 p.m. - 5:15 p.m.**

## Scientific Session 44

### Global Health: Global Health Security and Emerging Infectious Diseases

Grand Ballroom A - Ballroom Level (East Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

#### CHAIR

Clive Brown

Centers for Disease Control and Prevention, Atlanta, GA, United States

Stephen K. Balinandi

Uganda Virus Research Institute, Entebbe Wakiso District, Uganda

5:15 p.m.

5716

#### ACUTE PUBLIC HEALTH THREATS GLOBALLY: A 10-YEAR WORLD HEALTH ORGANIZATION ANALYSIS

Neil J. Saad<sup>1</sup>, Blanche Greene-Cramer<sup>1</sup>, Adedoyin Awofisayo-Okuyelu<sup>1</sup>, Dubravka Selenic Minet<sup>1</sup>, Maria Almiron<sup>2</sup>, Krista Swanson<sup>2</sup>, Masaya Kato<sup>3</sup>, Tshewang Dorji<sup>3</sup>, Tamano Matsui<sup>4</sup>, Manilay Phenxay<sup>4</sup>, Aura Corpuz<sup>5</sup>, Jeremias Naiene<sup>5</sup>, Jukka Pukkila<sup>6</sup>, Silviu Ciobanu<sup>6</sup>, Etien Koua<sup>7</sup>, George Sie Williams<sup>7</sup>, Oliver Morgan<sup>8</sup>, Ibrahim Socé Fall<sup>1</sup>, Abdi Rahman Mahamud<sup>1</sup>, Esther L. Hamblion<sup>1</sup>, on behalf of the World Health Organization Public Health Intelligence Teams<sup>9</sup>

<sup>1</sup>World Health Organization, Geneva, Switzerland, <sup>2</sup>World Health Organization Regional Office for the Americas, Washington DC, WA, United States, <sup>3</sup>World Health Organization Regional Office for South-East Asia, New Delhi, India, <sup>4</sup>World Health Organization Regional Office for the Western Pacific, Manila, Philippines, <sup>5</sup>World Health Organization Regional Office for the Eastern Mediterranean, Cairo, Egypt, <sup>6</sup>World Health Organization Regional Office for Europe, Copenhagen, Denmark, <sup>7</sup>World Health Organization Regional Office for Africa, Brazzaville, Republic of the Congo, <sup>8</sup>World Health Organization, Berlin, Germany, <sup>9</sup>Opeayo OgunDIRAN, Jean-Pierre Kimenyi, Enrique Perez, Mahmoud Hassan, Ka Yeung Cheng, Lauren MacDonald, Amarnath Babu, Tika Sedai, Viema Biakula, Ariuntuya Ochirpurev, Alessandro Miglietta, Anastasia Smirnova, Etsub Tahelew, Harsh Lata, Kaja Kaasik, Lidia Ezerska, Tatiana Metcalf, Felix Moek, Switzerland

5:30 p.m.

5717

#### DETECTION OF HUMAN CASES OF CRIMEAN-CONGO HEMORRHAGIC FEVER DURING AN ONGOING MULTIDISTRICT OUTBREAK OF EBOLA VIRUS DISEASE IN UGANDA, 2022-23

Stephen K. Balinandi<sup>1</sup>, Shannon Whitmer<sup>2</sup>, Sophia Mulei<sup>1</sup>, Luke Nyakarahuka<sup>1</sup>, Caitlin Cossaboom<sup>2</sup>, Alex Tumusiime<sup>1</sup>, Jackson Kyondo<sup>1</sup>, Jimmy Baluku<sup>1</sup>, David Muwanguzi<sup>3</sup>, Daniel Kadobera<sup>4</sup>, Julie R. Harris<sup>4</sup>, Alex R. Ario<sup>4</sup>, Henry B. Kyobe<sup>5</sup>, Pontiano Kaleebu<sup>1</sup>, Julius J. Lutwama<sup>1</sup>, Joel Montgomery<sup>2</sup>, John D. Klena<sup>2</sup>, Trevor R. Shoemaker<sup>2</sup>

<sup>1</sup>Uganda Virus Research Institute, Entebbe, Uganda, <sup>2</sup>Viral Special Pathogens Branch, Centers for Disease Control and Prevention, Atlanta, GA, United States, <sup>3</sup>Ministry of Health, Kampala, Uganda, <sup>4</sup>Uganda Public Health Fellowship Program, Kampala, Uganda

5:45 p.m.

5718

#### A COMPREHENSIVE REVIEW OF CLINICAL PRESENTATIONS OF NIPAH VIRUS INFECTION: EVIDENCE GENERATED FROM NIPAH VIRUS OUTBREAKS OF 2023, BANGLADESH

Syed M. Satter<sup>1</sup>, Wasik R. Aquib<sup>1</sup>, Arifa Nazneen<sup>1</sup>, Dewan I. Rahman<sup>1</sup>, Fateha A. Ema<sup>1</sup>, Ahmed N. Alam<sup>2</sup>, Mahbubur Rahman<sup>2</sup>, Mohammad M. Rahman<sup>2</sup>, Md O. Qayum<sup>2</sup>, Mohammad R. Hassan<sup>2</sup>, Ariful Islam<sup>3</sup>, Sushmita Dutta<sup>2</sup>, Nabila N. Chowdhury<sup>2</sup>, Md Z. I. Noman<sup>2</sup>, Abir S. Mahmood<sup>2</sup>, Md S. B. Alam<sup>2</sup>, Md M. Hassan<sup>2</sup>, Immamul Muntasir<sup>2</sup>, Sabrina J. Mily<sup>2</sup>, Sakia Haque<sup>2</sup>, Shownam Barua<sup>2</sup>, Ahmad R. Sharif<sup>2</sup>, Sharmin Sultana<sup>2</sup>, John D. Klena<sup>4</sup>, Mohammed Z. Rahman<sup>1</sup>, Sayera Banu<sup>1</sup>, Joel M. Montgomery<sup>4</sup>, Tahmina Shirin<sup>2</sup>

<sup>1</sup>icddr, Dhaka, Bangladesh, <sup>2</sup>Institute of Epidemiology, Diseases Control and Research (IEDCR), Dhaka, Bangladesh, <sup>3</sup>EcoHealth Alliance, Atlanta, GA, United States, <sup>4</sup>Viral Special Pathogens Branch, Division of High Consequence Pathogens and Pathology, Centers for Disease Control and Prevention (CDC), Atlanta, GA, United States

6 p.m.

5719

#### ENVIRONMENTAL SURVEILLANCE TO DETERMINE COVID-19 PREVALENCE IN DISTRICTS IN NORTHERN GHANA WITH NO REPORTED COVID 19 CASES: EVIDENCE TO INFORM PUBLIC HEALTH INTERVENTIONS

Habib Yakubu<sup>1</sup>, Christine Moe<sup>1</sup>, Stephen Hilton<sup>1</sup>, Liu Pengbo<sup>1</sup>, Sarah Durry<sup>1</sup>, Marlene Wolfe<sup>1</sup>, Yuke Wang<sup>1</sup>, Mike Osei-Atwenebaona<sup>2</sup>, Patrick Kuma Aboagye<sup>3</sup>, Dennis Laryea<sup>3</sup>, Hannah Ampadu<sup>3</sup>, Franklin Asiedu Bekoe<sup>3</sup>, Ebenezer Ato Kwamena Senaya<sup>4</sup>, Benedict Tuffuor<sup>4</sup>, Samuel Armoo<sup>2</sup>, Lady Asantewa Adomako<sup>2</sup>, Nana Aso Amonoo<sup>2</sup>, Mark Akrong<sup>2</sup>  
<sup>1</sup>Centre for Global Safe Water, Sanitation and Hygiene, Hubert Department of Public Health, Rollins School of Public Health at Emory University, Atlanta, GA, United States, <sup>2</sup>Council for Scientific and Industrial Research-Water Research Institute, Accra, Ghana, <sup>3</sup>Ghana Health Service, Accra, Ghana, <sup>4</sup>Training, Research and Networking for Development, Accra, Ghana

6:15 p.m.

5720

#### MEASLES ANTIBODY RESPONSE AND DURATION IN INFANTS WITH HIGH EARLY-LIFE MALARIA EXPOSURE COMPARED WITH LOW MALARIA EXPOSURE

Samantha E. Tulenko<sup>1</sup>, Catherine S. Forconi<sup>2</sup>, Sylvia Becker-Dreps<sup>1</sup>, Jessie K. Edwards<sup>1</sup>, John Michael Ong'echa<sup>3</sup>, Juliana A. Otieno<sup>4</sup>, Hellen Barsosio<sup>3</sup>, Peyton Thompson<sup>1</sup>, Emily W. Gower<sup>1</sup>, Ann M. Moormann<sup>2</sup>

<sup>1</sup>University of North Carolina, Chapel Hill, NC, United States, <sup>2</sup>University of Massachusetts Chan Medical School, Worcester, MA, United States, <sup>3</sup>Kenya Medical Research Institute, Kisumu, Kenya, <sup>4</sup>Jaramogi Oginga Odinga Teaching and Referral Hospital, Kisumu, Kenya

6:30 p.m.

5721

#### MACROLIDE RESISTANCE 36 MONTHS AFTER MASS AZITHROMYCIN ADMINISTRATION IN A CLUSTER-RANDOMIZED TRIAL IN NIGER

Ashley Hazel<sup>1</sup>, Ahmed M. Arzika<sup>2</sup>, Amza Abdou<sup>3</sup>, Ramatou Maliki<sup>2</sup>, Seth Blumberg<sup>1</sup>, Elodie Lebas<sup>1</sup>, Travis C. Porco<sup>1</sup>, Thomas M. Lietman<sup>1</sup>, Jeremy D. Keenan<sup>1</sup>

<sup>1</sup>University of California, San Francisco, San Francisco, CA, United States, <sup>2</sup>The Carter Center, Niger, Niamey, Niger, <sup>3</sup>Programme Nationale de Santé Oculaire, Niamey, Niger

6:45 p.m.

5722

#### RISK FACTORS FOR COLONIZATION WITH EXTENDED-SPECTRUM CEPHALOSPORIN RESISTANT AND CARBAPENEM RESISTANT ENTEROBACTERIALES AMONG HOSPITALIZED PATIENTS IN BANGLADESH: ANTIBIOTIC RESISTANCE IN COMMUNITIES AND HOSPITALS -ARCH- STUDY

Syeda Mah-E-Muneer<sup>1</sup>, Fahmida Chowdhury<sup>1</sup>, Kamal Hossain<sup>1</sup>, Rachel M. Smith<sup>2</sup>, Ashley R. Styczynski<sup>2</sup>

<sup>1</sup>icddr, Dhaka, Bangladesh, <sup>2</sup>CDC, Atlanta, GA, United States

Thursday  
October 19

## Symposium 45

### Diversity and Importance of Nonhuman Primate Malaria Parasites: Tenth Anniversary Symposium in Honor of Dr. William E. Collins

Grand Ballroom B - Ballroom Level (East Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

Dr. William "Bill" E. Collins, Ph.D., passed away on September 28, 2013. Bill was a legendary malariologist. He was an ASTMH member (1961-2013) and worked in the U.S. Public Health Service for over fifty years, including CDC (1973-2013). His work involved seminal contributions to malaria biology, entomology, vaccine development, therapeutic studies, and drug trials using nonhuman primate models. He co-authored the book *The Primate Malaria* (Coatney GR, Collins WE, Warren M, Contacos PG originally published 1971) that summarized the knowledge on different species of *Plasmodium* in primates, including humans. Throughout his research, he developed and preserved unique biological materials of different human and nonhuman malaria parasites and generously shared them with anyone who needed them for their research. His efforts were invaluable for many subsequent discoveries, including genome sequencing, fundamental research on parasite biology, and the development of new tools for malaria diagnosis that are much needed in control and elimination. The scientific community honored Bill by naming a subspecies, *Plasmodium vivax collinsi*, and a great ape malaria parasite, *Plasmodium billcollinsi*, after him. What can we learn from studying nonhuman primates' malaria parasites? The species causing malaria in humans originated independently, involving different lineages or clades that share recent common ancestors with other species in nonhuman primates. As a result, the parasites that primarily cause malaria in humans show remarkable biological differences. The *Plasmodium* species found in nonhuman primates provide critical information to understand the molecular basis of phenotypic differences among the human malaria parasites, such as their mechanisms of invasion of the red blood cell, pathogenesis, treatment, and transmission biology. In addition, some nonhuman primate malaria parasites are of public health importance as they are part of zoonotic infections. The most notorious is *Plasmodium knowlesi* in Southeast Asia, but other species in the region, such as *Plasmodium cynomolgi* and *Plasmodium inui*, may also infect humans. There are also anthrozoönotic infections in South America. In particular, *Plasmodium brasilianum* (known as *Plasmodium malariae* in humans) and *Plasmodium simium*, which originated from *Plasmodium vivax*. Bill Collins summarized all these complexities by saying, "We learn from all the parasites." Thus, this symposium honors him by revising our knowledge of nonhuman malaria parasites.

#### CHAIR

Ananias A. Escalante

Temple University, Philadelphia, PA, United States

Venkatachalam Udhayakumar

Independent Consultant, Decatur, GA, United States

5:15 p.m.

#### INTRODUCTION

5:25 p.m.

#### INTRODUCTION: BILL COLLINS LEGACY IN THE STUDY OF NONHUMAN PRIMATE MALARIA PARASITES

Venkatachalam Udhayakumar

Independent Consultant, Decatur, GA, United States

5:35 p.m.

#### MALARIA, MAN AND MONKEYS: PAST, PRESENT, AND FUTURE

Balbir Singh

Malaria Research Centre, Universiti Malaysia, Sarawak, Malaysia

5:55 p.m.

#### PLASMODIUM PITHECI MALARIA IN BORNEAN ORANG-UTANS

Karmele Llano Sánchez

IAR Indonesia Foundation – Yayasan Inisiasi Alam Rehabilitasi Indonesia (YIARI), Ketapang, West Kalimantan, Indonesia

6:15 p.m.

#### THE IMPORTANCE OF NONHUMAN PRIMATE MALARIA PARASITE GENOMICS FOR THE STUDY OF HUMAN MALARIA

Jane Carlton

New York University, New York, NY, United States

6:35 p.m.

#### DIVERSITY AND ORIGIN OF PRIMATE MALARIA PARASITES

Ananias A. Escalante

Temple University/Institute for Genomics and Evolutionary Medicine, Philadelphia, PA, United States

## Symposium 46

### Innovations in Modelling and Analytics to Accelerate Development of a New Generation of Malaria Interventions

Grand Hall J - Ballroom Level (East Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

New tools are needed to address the persistent threat of malaria, particularly as resistance to our current toolbox of interventions and treatments becomes more prevalent. Malaria modelling and analytics has emerged as a critical component for accelerating the development of new tools, identifying ideal product properties, supporting improved monitoring and surveillance, and facilitating conversations and collaboration between academia, industry, global regulators, and funding bodies. This symposium brings together experts in the field to discuss the latest developments and innovations in malaria modelling and analytics, and their applications in shaping a next generation of malaria interventions and product strategies. Presenters will speak to how innovations in modelling and analytics are accelerating decisions on discovery, selection, testing, and clinical trials for novel malaria tools: next-generation medical products, next-generation vector control tools, gene-drive modified mosquitoes, and genomic tools. Experts will also address how advances in computation and machine learning are being deployed for malaria intervention development, as well as the intelligent use of cutting-edge genomics tools and surveillance technologies for decision-making support. Through



these conversations, this symposium will provide a platform for the exchange of ideas on malaria modelling and analytics as a development accelerator.

#### CHAIR

Melissa A. Penny  
*Swiss Tropical and Public Health Institute, Basel, Switzerland*  
John Marshall  
*University of California, Berkeley, Berkeley, CA, United States*

#### 5:15 p.m. INTRODUCTION

#### 5:25 p.m. MODELLING FOR DEFINING TARGET PRODUCT PROFILE CRITERIA AND CLINICAL TRIAL PROPERTIES FOR NEXT-GEN MALARIA VACCINES

Josephine Malinga  
*Swiss Tropical and Public Health Institute, Allschwil, Switzerland*

#### 5:45 p.m. MODELING AND ANALYTICS TO SUPPORT THE TRANSITION OF GENE DRIVE MOSQUITO PROJECTS FROM LAB TO FIELD

John Marshall  
*University of California, Berkeley, Berkeley, CA, United States*

#### 6:05 p.m. KEY CONSIDERATIONS FOR USING AI AND INFRARED SPECTROSCOPY FOR MALARIA SURVEILLANCE

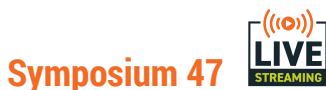
Issa Mshani  
*Ifakara Health Institute, Morogoro, United Republic of Tanzania*

#### 6:25 p.m. MACHINE LEARNING APPLICATIONS FOR TRACKING KEY BIOLOGICAL THREATS TO MALARIA CONTROL

Sophia Mwinyi  
*Ifakara Health Institute, Morogoro, United Republic of Tanzania*

#### 6:45 p.m. INVESTIGATING THE IMPACT OF *PLASMODIUM FALCIPARUM* CS DIVERSITY ON MALARIA IMMUNITY AND VACCINE/MAB PROTECTIVE EFFICACY

Daniel Neafsey  
*Harvard TH Chan School of Public Health, Boston, MA, United States*



### Enhancing Development and Evaluation of New Vector Control Technologies Through Social and Behavioral Research: Insights from Spatial Repellent, Endectocide, and New Net Trials

*Grand Ballroom CDEF - Ballroom Level (East Tower)*  
**Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone**

In recent years progress has stalled in the fight against malaria. New tools will be critical to sustaining gains and several promising technologies are on the immediate horizon. However, to be effective these interventions need to be feasible to implement within the context of resource limited health systems and flexible enough to be delivered through a variety of mechanisms that are

acceptable to communities across a range of different social, economic and cultural contexts. In recent years, there has been a positive trend toward funding significant social and behavioral research components alongside rigorous epidemiological and entomological evaluations of new malaria vector control interventions. This symposium will showcase the social science components of three Unitaid - funded projects: Advancing Evidence for Global Implementation of Spatial Repellents (AEGIS), Broad One Health Endectocide-based Malaria Intervention in Africa (BOHEMIA), and the New Nets Project. These multi-country projects are designed to generate the evidence needed for a World Health Organization recommendation for first-in-class products in promising new intervention classes. Researchers across projects will present different methodological approaches, results to date, and how findings might be used to enhance future research and implementation. The symposium will also include a brief presentation on why Unitaid invests in social science research to inform product development and introduction and to foster inclusive and demand-driven partnerships for innovation. Maximizing alignment with the priorities of affected countries, communities, and civil society groups is central to Unitaid's 2023-2027 Strategy and critical to informing its investments. Finally, a short panel discussion will be included touching on key lessons learned across projects, limitations of social science research in the context of epidemiological trials, and how the global malaria community can continue to move towards rethinking malaria, engaging with both endemic country health systems and the most vulnerable and working together to co-produce locally appropriate malaria prevention strategies.

#### CHAIR

April Monroe  
*Johns Hopkins Center for Communication Programs, Baltimore, MD, United States*

#### 5:15 p.m. INTRODUCTION

#### 5:20 p.m. AEGIS KENYA SOCIAL SCIENCE: RATIONALE, METHODS, INTERIM RESULTS AND IMPLICATIONS

Prisca Oria  
*Kenya Medical Research Institute, Kisumu, Kenya*

#### 5:30 p.m. SOCIAL SCIENCE INSIGHTS FROM THE BROAD ONE HEALTH ENDECTOCIDE-BASED MALARIA INTERVENTION IN AFRICA PROJECT

Caroline Jones  
*Kemri-Wellcome Trust Research Programme, Kilifi, Kenya*

#### 5:40 p.m. AT THE INTERSECTION OF HUMAN AND MOSQUITO BEHAVIORS: A RAPID REVIEW OF THE SOCIAL SCIENCE RESEARCH COMPONENTS OF THE NEW NETS PROJECT

Joseph Wagman  
*PATH, Washington, DC, United States*

5:50 p.m.

**INVESTING IN SOCIAL SCIENCE RESEARCH TO INFORM PRODUCT DEVELOPMENT AND INTRODUCTION AND FOSTER INCLUSIVE AND DEMAND-DRIVEN PARTNERSHIPS FOR INNOVATION**

Kelsey Barrett  
Unitaid, Geneva, Switzerland

**Scientific Session 48**

**Kinetoplastida and Other Protozoa: Epidemiology**

Grand Hall K - Ballroom Level (East Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

**CHAIR**

Natalie Bowman  
University of North Carolina, Chapel Hill, NC, United States  
Diogo Valadares  
IMT - UFRN, Natal, Brazil

5:15 p.m.

5723

**MOLECULAR EPIDEMIOLOGY OF ASYMPTOMATIC CRYPTOSPORIDIUM, GIARDIA AND ENTAMOEBIA INFECTIONS: THREATS TO THE HEALTH OF NIGERIAN CHILDREN?**

Oluwaremilekun Grace Ajakaye<sup>1</sup>, Egie Enabulele<sup>2</sup>, Amana Onyekutu<sup>3</sup>, Ehizogie Adeyemi<sup>4</sup>, Emmanuel Effanga<sup>5</sup>, Joshua Balogun<sup>6</sup>, Muhammad Ali<sup>7</sup>, Samuel Dahal<sup>8</sup>, Timothy Auta<sup>9</sup>, Umoru Askira<sup>10</sup>, Victor Njom<sup>11</sup>, Michael Grigg<sup>12</sup>

<sup>1</sup>Adekunle Ajasin University, Akungba Akoko, Nigeria, <sup>2</sup>Texas Biomedical Research Institute, San Antonio, TX, United States, <sup>3</sup>Federal University of Agriculture, Makurdi, Nigeria, <sup>4</sup>University of Benin Teaching Hospital, Benin, Nigeria, <sup>5</sup>University of Calabar, Calabar, Nigeria, <sup>6</sup>Federal University Dutse, Dutse, Nigeria, <sup>7</sup>Kano state Polytechnic, Kano, Nigeria, <sup>8</sup>Jos University Teaching Hospital, Jos, Nigeria, <sup>9</sup>Federal University Dutsin-Ma, Dutsin-Ma, Nigeria, <sup>10</sup>University of Maiduguri Teaching Hospital, Maiduguri, Nigeria, <sup>11</sup>Enugu State University of Science and Technology, Enugu, Nigeria, <sup>12</sup>National Institute of Allergy and Infectious Diseases, NIH, Bethesda, MD, United States

5:30 p.m.

5724

**A CONTINENTAL PICTURE OF SLEEPING SICKNESS: USING MODELS FROM THE DRC TO ESTIMATE GLOBAL GAMBIENSE HUMAN AFRICAN TRYPANOSOMIASIS BURDEN AND PROJECTED RESOURCE USE AND COST UNDER VARIOUS CONTROL STRATEGIES**

Samuel A. Sutherland<sup>1</sup>, Ronald E. Crump<sup>1</sup>, Christopher N. Davis<sup>1</sup>, Ching-I Huang<sup>1</sup>, Marina Antillon<sup>2</sup>, Simon E.F. Spencer<sup>3</sup>, Paul E. Brown<sup>1</sup>, Emily H. Crowley<sup>1</sup>, Erick Mwamba Miaka<sup>4</sup>, Kat S. Rock<sup>1</sup>

<sup>1</sup>SBIDER, University of Warwick, Coventry, United Kingdom, <sup>2</sup>Swiss Tropical and Public Health Institute, Basel, Switzerland, <sup>3</sup>Department of Statistics, University of Warwick, Coventry, United Kingdom, <sup>4</sup>Programme National de Lutte contre la Trypanosomiase Humaine Africaine (PNLTHA), Kinshasa, Democratic Republic of the Congo

5:45 p.m.

5725

**CHAGATYPER: DEVELOPMENT OF A RAPID RESPONSE, SEMI-AUTOMATED, HIGH-RESOLUTION GENOTYPING PLATFORM FOR CHAGAS DISEASE**

Natalie Elkheir<sup>1</sup>, Clara Gyhrs<sup>2</sup>, Debbie Nolder<sup>1</sup>, Peter L. Chiodini<sup>1</sup>, David AJ Moore<sup>1</sup>, Martin Llewellyn<sup>2</sup>

<sup>1</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>2</sup>University of Glasgow, Glasgow, United Kingdom

6 p.m.

5726

**MOLECULAR-BASED EVIDENCE OF TRANSMISSION OF ATYPICAL TRYPANOSOMIASIS (A-HAT) IN HUMANS IN SELECTED COMMUNITIES IN THE SUHUM MUNICIPALITY OF GHANA**

Kofi Agyapong Addo  
Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, Kumasi, Ghana

6:15 p.m.

5727

**LEISHMANIA INFANTUM VERTICAL TRANSMISSION IN NATURALLY INFECTED DOGS FROM AN ENDEMIC REGION OF BRAZIL**

Diogo Valadares<sup>1</sup>, Flavio Coutinho<sup>1</sup>, Maria S.M. Amarante<sup>1</sup>, Ana Maria R. Oliveira<sup>1</sup>, Damila K. Melo<sup>1</sup>, Romeika K.R Lima<sup>2</sup>, Marcela Vidal<sup>2</sup>, Grant D. Brown<sup>3</sup>, Jacob J. Oleson<sup>3</sup>, Mary E. Wilson<sup>3</sup>, Christine A. Petersen<sup>3</sup>, Selma MB Jeronimo<sup>1</sup>

<sup>1</sup>IMT - UFRN, Natal, Brazil, <sup>2</sup>Canis&Catus, Natal, Brazil, <sup>3</sup>University of Iowa, Iowa City, IA, United States

6:30 p.m.

5728

**CLINICAL AND METAGENOMIC CHARACTERIZATION OF CEREBRAL TOXOPLASMOSIS IN THE PERUVIAN AMAZON.**

Hannah E. Steinberg<sup>1</sup>, Prashanth S. Ramachandran<sup>2</sup>, Andrea Diestra<sup>3</sup>, Lynn Pinchi<sup>4</sup>, Cusi Ferradas<sup>5</sup>, Daniela E. Kirwan<sup>6</sup>, Monica M. Diaz<sup>7</sup>, Micheal Sciaudone<sup>8</sup>, Annie Wapniarski<sup>2</sup>, Kelsey C. Zorn<sup>2</sup>, Maritza Calderón<sup>3</sup>, Lilia Cabrera<sup>4</sup>, Viviana Pinedo Cancino<sup>9</sup>, Micheal Wilson<sup>2</sup>, Cesar Ramal<sup>10</sup>, Robert H. Gilman<sup>11</sup>, Natalie M. Bowman<sup>7</sup>

<sup>1</sup>University of Illinois, Chicago, Chicago, IL, United States, <sup>2</sup>UCSF, San Francisco, CA, United States, <sup>3</sup>Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>4</sup>AB Prisma, Lima, Peru, <sup>5</sup>University of California Davis, Davis, CA, United States, <sup>6</sup>St George's, University of London, London, United Kingdom, <sup>7</sup>University of North Carolina, Chapel Hill, NC, United States, <sup>8</sup>Tulane University, New Orleans, LA, United States, <sup>9</sup>Universidad Nacional de la Amazonia Peruana, Iquitos, Peru, <sup>10</sup>Hospital Regional de Loreto, Iquitos, Peru, <sup>11</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

6:45 p.m.

5729

**RISK FACTORS FOR MOTHER-TO-CHILD TRANSMISSION OF TRYPANOSOMA CRUZI AND HEPATITIS B IN THE CROSS-BORDER AREA OF ARGENTINA AND PARAGUAY**

Yoshiko Takahashi<sup>1</sup>, Susana Avila<sup>2</sup>, Silvia Correa<sup>3</sup>, Karina Cardone<sup>2</sup>, Mariana Fernández<sup>2</sup>, Favio Crudo<sup>2</sup>, Miho Sato<sup>1</sup>, Hirotsugu Aiga<sup>1</sup>, Kenji Hirayama<sup>1</sup>, Maria V. Periago<sup>4</sup>

<sup>1</sup>School of Tropical Medicine and Global Health, Nagasaki University, Nagasaki, Japan, <sup>2</sup>Fundación Mundo Sano, Buenos Aires, Argentina, <sup>3</sup>Universidad Nacional de Salta, Salta, Argentina, <sup>4</sup>CONICET/Fundación Mundo Sano, Buenos Aires, Argentina

**Symposium 49**

**The Path to Evidence-Based Action to Reach Those Left Behind by Mass Drug Administration and Vaccination Programs**

Grand Hall L - Ballroom Level (East Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

The 2030 Agenda for Sustainable Development includes a target of 'achieving universal health coverage with access to quality services and medicines for all'. Large public health programs to eliminate neglected tropical diseases and expand routine immunization are, by most other metrics, global health success stories. However, some individuals remain left behind and are not covered through mass drug or vaccine distribution campaigns.

For example, in 2020, globally an estimated 12.5 million children were never vaccinated - called 'zero-dose children'. Within national lymphatic filariasis programs, data shows up to 45% of people in some sites reported that they were 'never treated' during any round of mass drug administration. These public health programs may use different terminology and have different target populations, yet many of the unreached groups overlap. These individuals face similar barriers accessing mass campaigns, as well as expressing decreased demand due to rumors or misunderstanding of risk. Not only does the exclusion of these groups contribute to ongoing disease transmission and inability to meet disease control or elimination goals, but it also impedes progress towards the Sustainable Development Goals. The session will begin by presenting current efforts underway to identify and reach those left behind. It will then showcase country examples of efforts to collect data and respond to never treatment / zero-dose, as well as highlight recent programmatic data analysis on the links between never treatment in LF programs and infection status. The session will demonstrate the pathway of evidence to action in order to identify and reach the never treated/zero-dose individuals.

**CHAIR**

Alison Krentel  
School of Epidemiology and Public Health, University of Ottawa, Ottawa, ON, Canada  
Dziedzom K. De Souza  
Noguchi Memorial Institute for Medical Research, Accra, Ghana

**5:15 p.m.**  
**INTRODUCTION**

**5:25 p.m.**  
**REACHING THOSE WHO ARE LEFT BEHIND IN MASS PUBLIC HEALTH CAMPAIGNS: USING EVIDENCE TO GENERATE ACTION**  
Alison Krentel  
University of Ottawa, Ottawa, ON, Canada

**5:35 p.m.**  
**RESULTS FROM THE GAVI ZERO-DOSE LEARNING AGENDA: BANGLADESH AND MALI EXPERIENCES**  
Heidi W. Reynolds  
Gavi, the Vaccine Alliance, Geneva, Switzerland

**5:50 p.m.**  
**WHAT CAN PROGRAMMATIC DATA TELL US ABOUT LINKS BETWEEN NEVER TREATMENT AND INFECTION?**  
Molly Brady  
RTI International, Washington, DC, United States

**6:05 p.m.**  
**THE CASE OF CROSS-BORDER NEVER TREATMENT AMONG COUNTRIES IN THE SOUTH-EAST ASIA REGION**  
Aya Yajima  
World Health Organization South-East Asia Regional Office (SEARO), New Delhi, India

**6:20 p.m.**  
**ASSESSING THE NEVER-TREATED IN GHANA AND THE POTENTIAL IMPACTS ON THE LYMPHATIC FILARIASIS ELIMINATION EFFORTS**  
Dziedzom K. De Souza  
Noguchi Memorial Institute for Medical Research, University of Ghana, Accra, Ghana

**Scientific Session 50**

**Bacteriology: Systemic Infections/Infection-Malnutrition Interplay**

Plaza Ballroom - Lobby Level (East Tower)  
Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

**CHAIR**

Muntasir Alam  
icddr,b, Dhaka, Bangladesh  
Stephanie Brennhofner  
University of Virginia, Charlottesville, VA, United States

**5:15 p.m.** **5730**

**ETIOLOGY, GAPS, AND CHALLENGES IN THE DIAGNOSIS AND MANAGEMENT OF SEPSIS AMONG UNDER-FIVES ENROLLED IN THE KENYA CHILD HEALTH AND MORTALITY PREVENTION SURVEILLANCE NETWORK (CHAMPS) PROGRAM**  
Harun Odhiambo Owuor<sup>1</sup>, Dickens Onyang'o<sup>2</sup>, Richard Omore<sup>1</sup>, Beth Tippet Barr<sup>3</sup>, Victor Akelo<sup>4</sup>  
<sup>1</sup>Kenya Medical Research Institute, Kisumu, Kenya, <sup>2</sup>Kisumu County Department of Health, Kisumu, Kenya, <sup>3</sup>Nyanja Health Research Institute, Malawi, Malawi, <sup>4</sup>Center for Disease Control, Atlanta, GA, United States

**5:30 p.m.** **5731**

**GENOMIC CHARACTERIZATION OF EXTRAINTESTINAL PATHOGENIC ESCHERICHIA COLI ISOLATED FROM STILLBIRTHS AND EARLY NEONATAL DEATHS: AN OBSERVATION FROM CHAMPS BANGLADESH**  
Muntasir Alam<sup>1</sup>, Md. Fakhruddin<sup>1</sup>, Md Saiful Islam<sup>1</sup>, Afruna Rahman<sup>1</sup>, Arpita Shyama Deb<sup>1</sup>, Nairita Ahsan Faruqui<sup>1</sup>, Mohammad Zahid Hossain<sup>1</sup>, Shams El Arifeen<sup>1</sup>, Emily S. Gurley<sup>2</sup>, Mustafizur Rahman<sup>1</sup>  
<sup>1</sup>icddr,b, Dhaka, Bangladesh, <sup>2</sup>Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States

**5:45 p.m.** **5732**

**URECA-LAMP: RAPID, CHEAP AND EFFECTIVE POINT-OF-CARE SCREENING OF CEPHALOSPORIN AND CARBAPENEM RESISTANCE FOR LOW MIDDLE-INCOME COUNTRIES**  
Ricardo Castellanos, Hitendra Kumar, Ryan Chaffee, Yoonjung Lee, Gisele Peirano, Johann Pitout, Keekyoung Kim, Dylan R. Pillai  
University of Calgary, Calgary, AB, Canada

**6 p.m.** **5733**

**DEVELOPMENT OF A KLEBSIELLA PNEUMONIAE NEONATAL SEPSIS MOUSE MODEL TO EVALUATE VACCINES**  
Jernelle C. Miller, Scott C. Baliban, Alan S. Cross, Sharon M. Tennant  
Center for Vaccine Development and Global Health, University of Maryland School of Medicine, Baltimore, Baltimore, MD, United States

Thursday  
October 19

6:15 p.m.

5734

### FIRST REPORT OF OXA-181-PRODUCING ENTEROBACTERIALES IN LATIN AMERICA

Diego Cuicapuza<sup>1</sup>, Guillermo Salvatierra<sup>2</sup>, Alejandra Dávila-Barclay<sup>1</sup>, Luis Alvarado<sup>2</sup>, Norah Tocasca<sup>3</sup>, Daniel Aguilar<sup>3</sup>, Juan Carlos Gómez-de-la-Torre<sup>2</sup>, Andres G. Lescano<sup>4</sup>, Pablo Tsukayama<sup>1</sup>, Jesús Tamariz<sup>5</sup>

<sup>1</sup>Laboratorio de Genómica Microbiana, Facultad de Ciencias y Filosofía, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>2</sup>Laboratorio Clínico Roe, Lima, Peru, <sup>3</sup>Instituto Nacional de Enfermedades Neoplásicas, Lima, Peru, <sup>4</sup>Emerge, Emerging Diseases and Climate Change Research Unit, School of Public Health and Administration, Universidad Peruana Cayetano Heredia, Lima, Peru, <sup>5</sup>Laboratorio de Resistencia Antibiótica e Inmunopatología, Universidad Peruana Cayetano Heredia, Lima, Peru

6:30 p.m.

5735

### THE RELATIONSHIP BETWEEN CO-MORBID MALNUTRITION AND DIARRHEAL ILLNESS AMONG HOSPITALIZED TANZANIAN CHILDREN UNDER FIVE YEARS OF AGE

Stephanie A. Brennhofe<sup>1</sup>, Sifaeli Katengu<sup>2</sup>, Godfrey Guga<sup>2</sup>, Yotham Z. Michaeli<sup>2</sup>, Miriam Temu<sup>2</sup>, Frederick Habiye<sup>2</sup>, James A. Platts-Mills<sup>1</sup>, Estomih R. Mduma<sup>2</sup>, Elizabeth T. Rogawski McQuade<sup>3</sup>

<sup>1</sup>University of Virginia, Charlottesville, VA, United States, <sup>2</sup>Haydom Lutheran Hospital, Haydom, United Republic of Tanzania, <sup>3</sup>Emory University, Atlanta, GA, United States

6:45 p.m.

5736

### ETIOPATHOLOGY OF STUNTING: INFANT GUT CHARACTERIZATION AND MICROBIAL INFLUX ROUTES IN A MOTHER-INFANT COHORT IN CENTRAL-AFRICA

Violeta Moya-Alvarez<sup>1</sup>, Amine Ghazlane<sup>2</sup>, Pascale Vonaesch<sup>3</sup>, Daniel Mad-Bondo<sup>4</sup>, Bertrand Kongoma<sup>4</sup>, Serge Djorie<sup>5</sup>, Philippe Sansonetti<sup>2</sup>

<sup>1</sup>Institut de Recherche pour le Développement, Paris, France, <sup>2</sup>Institut Pasteur, Paris, France, <sup>3</sup>Université de Lausanne, Lausanne, Switzerland, <sup>4</sup>Maternité Henri Izamo, Bangui, Central African Republic, <sup>5</sup>Institut Pasteur de Bangui, Bangui, Central African Republic

## Symposium 51

### Clinical Development of Monoclonal Antibodies that Target Malaria Sporozoites

Crystal Ballroom A - Lobby Level (West Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

Building on the recent success of the anti-malaria sporozoite monoclonal antibody (mAb) CIS43LS in malaria naïve and malaria exposed populations and early progress seen with the next generation antibody L9LS, the reality of a prophylactic mAb for malaria is within reach. The aim of this symposium is to bring together leaders in the field to present results from pivotal phase 2 trials of CIS43LS and L9LS in Mali and Kenya, and to review progress in the development of the MAM01 mAb. The symposium will also explore how modeling can inform future study designs and predict use case scenarios. The symposium will provide a forum for the community to discuss next steps in the clinical development and registration of mAbs including potential targeted populations. Each presenter will provide an overview on prior experience exploring some of these concepts in prior and current projects, but also will discuss important concepts to explore in future mAb clinical trials.

### CHAIR

Aissata Ongoiba  
ICERMALI, Bamako, Mali

Sara A. Healy  
NIH/NIAID/LIG, Rockville, MD, United States

5:15 p.m.

### INTRODUCTION

5:25 p.m.

### MAM01: THE DEVELOPMENT FOR SEASONAL PASSIVE IMMUNIZATION INTERVENTION

Kayla Andrews  
Bill & Melinda Gates Medical Research Institute, Cambridge, MA, United States

5:45 p.m.

### SECONDARY ANALYSES OF A PHASE 2 TRIAL OF THE ANTI-MALARIA MONOCLONAL ANTIBODY CIS43LS IN MALI

Safiatou N. Doumbo  
MRTC/ICERMALI, Bamako, Mali

6:05 p.m.

### MALI L9LS PEDIATRIC EFFICACY RESULTS

Aissata Ongoiba  
MRTC/ICERMALI, Bamako, Mali

6:25 p.m.

### L9LS ANTIMALARIA MONOCLONAL ANTIBODY IN KENYAN CHILDREN: INTERIM RESULTS

Titus K. Kwambai  
US Centers for Disease Control, Kisumu, Kenya, Kisumu, Kenya

6:45 p.m.

### MODELLING TO INFORM DEVELOPMENT AND USE OF MALARIA MAB INTERVENTIONS

Narimane Nekkab  
Swiss Tropical and Public Health Institute, University of Basel, Allschwil, Switzerland

## Symposium 52

### American Committee on Clinical Tropical Medicine and Travelers' Health (Clinical Group - ACCTMTH) Symposium II: Ask the Tropical Medicine Clinical Consultant

Crystal Ballroom B - Lobby Level (West Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

This symposium will provide practical content focused on everyday clinical issues busy clinicians might face and for which they might need to reach out for some management advice. The session will feature some less frequently addressed topics and content areas. Each speaker will discuss practical questions related to their field of interest, including issues to consider in the differential diagnosis, methods to make a diagnosis, and potential management.

### CHAIR

Mark Kortepeter  
USUHS, Bethesda, MD, United States

Miriam Barshak  
Massachusetts General Hospital, Massachusetts Eye and Ear, Boston, MA, United States

**5:15 p.m.**  
**INTRODUCTION****5:25 p.m.**  
**TROPICAL EYE INFECTIONS**Miriam Barshak  
*Massachusetts General Hospital, Massachusetts Eye and Ear, Boston, MA, United States***5:50 p.m.**  
**TROPICAL NEUROLOGY - CYSTIC LESIONS**Anna Cervantes-Arslanian  
*Boston University, Boston Medical, Boston, MA, United States***6:15 p.m.**  
**EXOTIC SKIN DISEASES**Aisha Sethi  
*Yale University School of Medicine, New Haven, CT, United States***6:40 p.m.**  
**TOPICS IN GLOBAL PEDIATRICS**Nadia Sam-Agudu  
*Global Pediatrics Program, University of Minnesota Medical School and Institute of Human Virology Nigeria in Abuja, Minneapolis, MN, United States***Scientific Session 53****Viruses - Viral Diagnostics, Therapeutics and Antivirals***Regency Ballroom A - Ballroom Level (West Tower)*  
**Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone****CHAIR**Darci Smith  
*Naval Medical Research Command, Ft. Detrick, MD, United States*Priscila Mayrelle da Silva Castanha  
*University of Pittsburgh, Pittsburgh, PA, United States***5:15 p.m.** **5737****DISCOVERY OF A SMALL MOLECULE THAT MIMICS A UNIQUE ZIKA-NEUTRALIZING EPITOPE FROM A LARGE LIBRARY OF RANDOM MOLECULAR SHAPES****Priscila Mayrelle Da Silva Castanha**<sup>1</sup>, Patrick J. McEaney<sup>2</sup>, Yongseok Park<sup>1</sup>, Anthea Bouwer<sup>1</sup>, Elton Chaves<sup>3</sup>, Roberto Lins<sup>3</sup>, Nicholas G. Paciaroni<sup>4</sup>, Paige Dickson<sup>2</sup>, Graham Carlson<sup>4</sup>, Marli T. Cordeiro<sup>3</sup>, Tereza Magalhães<sup>5</sup>, Jodi Craig<sup>1</sup>, Ernesto T A Marques Jr.<sup>1</sup>, Thomas Kodadek<sup>2</sup>, Donald S. Burke<sup>1</sup>  
<sup>1</sup>University of Pittsburgh, Pittsburgh, PA, United States, <sup>2</sup>The Herbert Wertheim UF Scripps Institute for Biomedical Innovation and Technology, Jupiter, FL, United States, <sup>3</sup>Aggeu Magalhaes Institute, Oswaldo Cruz Foundation, Recife, Brazil, <sup>4</sup>Deluge Biotechnologies, Jupiter, FL, United States, <sup>5</sup>Department of Entomology, Texas A&M University, College Station, TX, United States**5:30 p.m.** **5738****PHARMACOKINETICS, TOLERABILITY AND SAFETY OF FAVIPIRAVIR COMPARED TO RIBAVIRIN FOR THE TREATMENT OF LASSA FEVER: A RANDOMIZED CONTROLLED OPEN LABEL PHASE II CLINICAL TRIAL****Mirjam Groger**<sup>1</sup>, Kevin Okwaraeke<sup>2</sup>, Peter Akhiden<sup>3</sup>, Meike Pahlmann<sup>1</sup>, Christine Kleist<sup>4</sup>, Cédric Mbavu<sup>1</sup>, Julia Hinzmann<sup>1</sup>, Veronika Schlicker<sup>1</sup>, Femi Oluwasola Babatunde<sup>5</sup>, Ndapewa Ithete<sup>1</sup>, Osahogie Edeawe<sup>3</sup>, Francisca Naana Sarpong<sup>1</sup>, Camille Fritzell<sup>6</sup>, Alexandre Du vignaud<sup>5</sup>, Denis Malvy<sup>6</sup>, Sylvanus Okogbenin<sup>3</sup>, Marie Jaspard<sup>5</sup>, Sebastian G. Wicha<sup>4</sup>, Stephan Günther<sup>1</sup>, Michael Ramharter<sup>1</sup>, Oluwafemi Ayodeji<sup>2</sup>, Cyril Erameh<sup>3</sup>  
<sup>1</sup>Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>2</sup>Federal Medical Centre Owo, Owo, Nigeria, <sup>3</sup>Irrua Specialist Teaching Hospital, Irrua, Nigeria, <sup>4</sup>University of Hamburg, Hamburg, Germany, <sup>5</sup>Institut National de la Santé et de la Recherche Médicale 1219, Bordeaux, France**5:45 p.m.** **5739****A BEAD-BASED MULTIPLEX SAMPLE-SPARING ANTIBODY ASSAY FOR DETECTING CURRENT AND PAST DENGUE AND ZIKA VIRUS INFECTIONS****Edwing C. Cuadra**<sup>1</sup>, Izabella N. Castillo<sup>1</sup>, Demetrios L. Samaras<sup>1</sup>, Lindsay C. Dahora<sup>1</sup>, Filemon Bucardo<sup>2</sup>, Megan E. Reller<sup>3</sup>, Aravinda M. de Silva<sup>1</sup>, Premkumar Lakshmanane<sup>1</sup>  
<sup>1</sup>University of North Carolina, Chapel Hill, NC, United States, <sup>2</sup>National Autonomous University of Nicaragua at León, Nicaragua, Leon, Nicaragua, <sup>3</sup>Duke Global Health Institute, Duke University, Durham, NC, United States**6 p.m.** **5740****DEVELOPMENT AND EVALUATION OF NOVEL NANOBODIES AGAINST ZIKA VIRUS INFECTION****Shuofeng Yuan, Jianli Cao, Jasper Fuk-Woo Chan**  
*The University of Hong Kong, Hong Kong, Hong Kong***6:15 p.m.** **5741****GENERATION OF THERAPEUTIC HUMAN MONOCLONAL ANTIBODIES AGAINST HANTAVIRUSES FROM HUMAN-IMMUNE-SYSTEM HUMANIZED DRAGA MICE****Ahmad Faisal Karim**<sup>1</sup>, Sounak Ghosh Roy<sup>1</sup>, Teodor D. Brumeanu<sup>2</sup>, Joseph Golden<sup>3</sup>, Jay Hooper<sup>3</sup>, Sofia A. Casares<sup>1</sup>  
<sup>1</sup>Naval Medical Research Command (NMRC), Silver Spring, MD, United States, <sup>2</sup>Uniformed Services University of the Health Sciences, Bethesda, MD, United States, <sup>3</sup>US Army Medical Research Institute for Infectious Diseases, Fort Detrick, MD, United States**6:30 p.m.** **5742****A NON-WHOLE GENOME SEQUENCING APPROACH FOR MONITORING SARS-COV-2 VARIANTS IN BURKINA FASO & KENYA****Caitlin Greenland-Bews**<sup>1</sup>, Sonal Shah<sup>2</sup>, Alice J. Fraser<sup>2</sup>, Samuel S. Serme<sup>3</sup>, Kephass Otieno<sup>4</sup>, Issiaka Soulama<sup>5</sup>, Alphonse Ouedraogo<sup>3</sup>, Issa Nebie<sup>6</sup>, Tegwen Marlais<sup>2</sup>, Alfred B. Tiono<sup>3</sup>, Emily Adams<sup>1</sup>, Simon Kariuki<sup>4</sup>, Sodiomon B. Sirima<sup>3</sup>, Chris Drakeley<sup>2</sup>, Feiko O. ter Kuile<sup>4</sup>, Thomas Edwards<sup>1</sup>, **David J. Allen**<sup>2</sup>  
<sup>1</sup>Liverpool School of Tropical Medicine, Liverpool, United Kingdom, <sup>2</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom, <sup>3</sup>Groupe de Recherche Action en Santé (GRAS), Ouagadougou, Burkina Faso, <sup>4</sup>Kenya Medical Research Institute, Kisumu, Kenya

6:45 p.m.

5743

### DETECTION OF BLOOD BIOMARKERS OF NEUROLOGICAL INJURY IN HUMAN CASES OF VIRAL ENCEPHALITIS AND SEVERE DISEASE

Maggie L. Bartlett<sup>1</sup>, Heather Poeck-Goux<sup>1</sup>, Linwood Johnson<sup>1</sup>, Kevin L. Schully<sup>1</sup>, Melissa Gregory<sup>2</sup>, Joost Brandsma<sup>2</sup>, Josh G. Chenoweth<sup>2</sup>, Danielle V. Clark<sup>2</sup>, Amy Y. Vittor<sup>2</sup>, Ronald Hayes<sup>4</sup>, Jean-Paul Carrera<sup>5</sup>, **Darci R. Smith<sup>1</sup>**  
<sup>1</sup>Naval Medical Research Command, Ft. Detrick, MD, United States, <sup>2</sup>The Henry Jackson Foundation, Bethesda, MD, United States, <sup>3</sup>University of Florida, Gainesville, FL, United States, <sup>4</sup>Banyan Biomarkers, San Diego, CA, United States, <sup>5</sup>Gorgas Memorial Institute, Panama City, Panama

## Scientific Session 54

### One Health II: The Interconnection Between People, Animals, Plants and Their Shared Environment

Regency Ballroom B - Ballroom Level (West Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

#### CHAIR

Christina M. Bergey  
Rutgers University, Piscataway, NJ, United States  
Koya Allen  
Booz Allen Hamilton, Stuttgart, Germany

5:15 p.m.

5744

### PATTERNS OF SARS-COV-2 ACTIVE INFECTIONS AMONG HUMANS AND COHABITATING DOMESTIC ANIMALS OF EAST CENTRAL TEXAS DURING THE EARLY OMICRON WAVE

**Francisco C. Ferreira<sup>1</sup>**, Lisa D. Auckland<sup>1</sup>, Rachel E. Busselman<sup>1</sup>, Edward Davila<sup>1</sup>, Wendy Tang<sup>1</sup>, Nathan Sarbo<sup>2</sup>, Hayley D. Yaglom<sup>2</sup>, Heather Centner<sup>2</sup>, Italo B. Zecca<sup>2</sup>, Ria R. Ghai<sup>2</sup>, Casey B. Behravesh<sup>2</sup>, Rebecca S. B. Fischer<sup>1</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>Translational Genomics Research Institute, Flagstaff, AZ, United States, <sup>3</sup>Centers for Disease Control and Prevention, Atlanta, GA, United States

5:30 p.m.

5745

### REAL-TIME DATA COLLECTION FOR EFFICIENT MICROPLANNING AND MONITORING OF NATIONAL DOG RABIES VACCINATION IN BANGLADESH

**Sazid Ibna Zaman<sup>1</sup>**, MD Nurullah<sup>1</sup>, S. M. Golum Kaiser<sup>2</sup>, Kamrul Islam<sup>2</sup>, Hasan Sayedul Mursalin<sup>2</sup>, Md. Ismail Hossain<sup>1</sup>, Kazi Nujhat Naila<sup>2</sup>, Richard James Maude<sup>1</sup>  
<sup>1</sup>Mahidol-Oxford Tropical Medicine Research Unit (MORU), Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand, <sup>2</sup>Zoonotic Disease Control Program, CDC, DGHS, Dhaka, Bangladesh, <sup>3</sup>Department of Geography and Environment, Faculty of Earth and Environmental Sciences, University of Dhaka, Dhaka, Bangladesh

5:45 p.m.

5746

### GENETIC ADAPTATION OF NONTYPHOIDAL SALMONELLA IN HUMANS, ANIMALS AND IN THE ENVIRONMENT-ANTHROPONOTIC TRANSMISSION?

**Denise Dekker<sup>1</sup>**, Thorsten Thye<sup>1</sup>, John Luingu<sup>2</sup>, Daniel Minja<sup>2</sup>, Sandra Simon<sup>3</sup>, Ralf Krumkamp<sup>1</sup>, Linda Ofori<sup>4</sup>, Samwel Gesase<sup>2</sup>, Richard Phillips<sup>5</sup>, Charity Wiawe-Akenten<sup>6</sup>, Ellis Paintsil<sup>5</sup>, Joyce Mbwana<sup>2</sup>, Antje Flieger<sup>2</sup>, Jürgen May<sup>1</sup>  
<sup>1</sup>Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>2</sup>National Institute for Medical Research, Tanga, United Republic of Tanzania, <sup>3</sup>Robert Koch Institute, Wernigerode, Germany, <sup>4</sup>Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, <sup>5</sup>Kumasi Center for Collaborative Research, Kumasi, Ghana, <sup>6</sup>Kumasi Center for Collaborative Research, Kumasi, Germany

6 p.m.

5747

### MOLECULAR AND SEROLOGICAL EVIDENCE OF CRIMEAN-CONGO HEMORRHAGIC FEVER VIRUS IN LIVESTOCK AND TICKS IN CAMEROON

**Francine Berlangue Sado Yousseu<sup>1</sup>**, Huguette Simo<sup>2</sup>, François-Loïc Cosset<sup>3</sup>, Natalia Bezerra de Freitas<sup>3</sup>, Basile KAMGANG<sup>1</sup>, Philip J. McCall<sup>4</sup>, Roland NDIP NDIP<sup>5</sup>, Vincent Legros<sup>3</sup>, Charles S. Wondji<sup>1</sup>  
<sup>1</sup>Centre for Research in Infectious Diseases, Yaounde, Cameroon, <sup>2</sup>Centre Pasteur of Cameroon, Yaounde, Cameroon, <sup>3</sup>Centre international de recherche en infectiologie, Lyon, France, <sup>4</sup>Liverpool School of Tropical Medicine and Hygiene, Liverpool, United Kingdom, <sup>5</sup>University of Buea, Buea, Cameroon

6:15 p.m.

5748

### MOLECULAR CHARACTERIZATION OF EXTENDED - SPECTRUM BETA - LACTAMASE PRODUCING KLEBSIELLA PNEUMONIAE AMONG CHILDREN AND LIVESTOCK IN RURAL KOROGWE, TANZANIA

**Neyaz Ahmed Khan<sup>1</sup>**, Joyce Mbwana<sup>2</sup>, Thorsten Thye<sup>3</sup>, John Lusingu<sup>2</sup>, Hagen Frickmann<sup>4</sup>, Charity W. Akenten<sup>5</sup>, Joseph Kaseka<sup>2</sup>, Maïke Lamshöft<sup>3</sup>, Samwel Gesase<sup>2</sup>, Daniel Minja<sup>2</sup>, Jürgen May<sup>2</sup>, Ralf Krumkamp<sup>3</sup>, Wolfgang Streit<sup>6</sup>, Denise Dekker<sup>1</sup>  
<sup>1</sup>One Health Bacteriology group, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>2</sup>National Institute for Medical Research, Tanga, United Republic of Tanzania, <sup>3</sup>Department Infectious Disease Epidemiology, Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>4</sup>Department of Microbiology, Virology and Hygiene, University Medicine Rostock, Rostock, Germany, <sup>5</sup>Kumasi Centre for Collaborative Research in Tropical Medicine, Kumasi, Ghana, <sup>6</sup>Department of Biology, University of Hamburg, Hamburg, Germany

6:30 p.m.

5749

### RECONSTRUCTING RODENT CONTACT NETWORKS FROM TRAPPING DATA TO UNDERSTAND LASSA FEVER TRANSMISSION NETWORKS

**David Simons<sup>1</sup>**, Rory Gibb<sup>2</sup>, Umaru Bangura<sup>3</sup>, Ravi Goyal<sup>4</sup>, Rashid Ansumana<sup>5</sup>, Deborah Watson-Jones<sup>6</sup>, Richard Kock<sup>1</sup>, Kate E. Jones<sup>2</sup>  
<sup>1</sup>The Royal Veterinary College, London, United Kingdom, <sup>2</sup>University College London, London, United Kingdom, <sup>3</sup>Bernhard Nocht Institute for Tropical Medicine, Hamburg, Germany, <sup>4</sup>University of California San Diego, San Diego, CA, United States, <sup>5</sup>Njala University, Bo, Sierra Leone, <sup>6</sup>London School of Hygiene & Tropical Medicine, London, United Kingdom

6:45 p.m.

5750

### HEALTHY CHILDREN, HEALTHY CHIMPS: A RESEARCH-PRACTICE PARTNERSHIP FOR REDUCING RESPIRATORY DISEASE TRANSMISSION FROM HUMANS TO CHIMPANZEES IN UGANDA

**Taylor Weary<sup>1</sup>**, Tressa Pappas<sup>2</sup>, Patrick Tusiime<sup>2</sup>, Shamilah Tuhaise<sup>3</sup>, Elizabeth Ross<sup>3</sup>, James Gern<sup>2</sup>, Tony Goldberg<sup>1</sup>  
<sup>1</sup>University of Wisconsin School of Veterinary Medicine, Madison, WI, United States, <sup>2</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, United States, <sup>3</sup>The Kasiisi Project, Fort Portal, Uganda

## Scientific Session 55

### Mosquitoes- Bionomics, Behavior and Surveillance

Regency Ballroom C - Ballroom Level (West Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

#### CHAIR

Gloria Salome Gabriel Shirima  
Nelson Mandela African Institution of Science and Technology, Arusha, United Republic of Tanzania  
Hector Manuel Sanchez  
University of California Berkeley, Berkeley, CA, United States

5:15 p.m.

5751

**ASSESSING SHIFTS IN BITING PATTERNS OF ANOPHELES GAMBIAE AND ANOPHELES FUNESTUS, THE MAJOR MALARIA VECTORS IN SOUTHEASTERN TANZANIA**Janice S. Maige<sup>1</sup>, Alphonse A. Assenga<sup>2</sup>, Tegemeo Gavana<sup>2</sup>, Gloria S.G Shirima<sup>3</sup>, Protas Sayo<sup>2</sup>, Yeromin Mlacha<sup>2</sup>, Samson S. Kiware<sup>4</sup>, Prosper Chaki<sup>2</sup><sup>1</sup>University of Dar es Salaam, Dar es Salaam, United Republic of Tanzania, <sup>2</sup>Ifakara Health Institute, Dar es Salaam, United Republic of Tanzania, <sup>3</sup>The Nelson Mandela African Institution of Science and Technology, Arusha, United Republic of Tanzania, <sup>4</sup>Pan-African Mosquito Control Association, Nairobi, Kenya

5:30 p.m.

5752

**THE ROLE OF SEROTONIN IN MOSQUITO SWARMING AND AUDITORY PERCEPTION OF MATES**

David A. Ellis, Judit Bagi, Scott Tytheridge, Marta Andres

University College London, London, United Kingdom

5:45 p.m.

5753

**A SEMI-FIELD SYSTEM TO DEFINE THE CHEMOSENSORY BASIS OF MALARIA TRANSMISSION AT HIGH DEFINITION**Diego Giraldo<sup>1</sup>, Stephanie Rankin-Turner<sup>1</sup>, Abel Corver<sup>2</sup>, Genevieve M. Tauxe<sup>1</sup>, Anne L. Gao<sup>1</sup>, Dorian M. Jackson<sup>1</sup>, Limonty Simubali<sup>3</sup>, Christopher Book<sup>2</sup>, Jennifer C. Stevenson<sup>3</sup>, Philip E. Thuma<sup>2</sup>, Rajiv C. McCoy<sup>2</sup>, Andrew Gordus<sup>2</sup>, Monicah M. Mburu<sup>3</sup>, Edgar Simulundu<sup>3</sup>, Conor J. McMeniman<sup>1</sup><sup>1</sup>W. Harry Feinstone Department of Molecular Microbiology and Immunology, Johns Hopkins Malaria Research Institute, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, United States, <sup>2</sup>Department of Biology, Johns Hopkins University, Baltimore, MD, United States, <sup>3</sup>Macha Research Trust, Choma District, Zambia

6 p.m.

5754

**IS THE INVASION AND SPREAD OF THE URBAN MALARIA VECTOR ANOPHELES STEPHENSI INTO AND ACROSS AFRICA MEDIATED BY WINDBORNE MIGRATION?**Tovi Lehmann<sup>1</sup>, Roland Bamou<sup>1</sup>, Jason Chapman<sup>2</sup>, Don Reynolds<sup>3</sup>, Peter Armbruster<sup>4</sup>, Adama Dao<sup>5</sup>, Alpha Yaro<sup>6</sup>, Tom Burkot<sup>7</sup>, Yvonne-Marie Linton<sup>8</sup><sup>1</sup>NIH, Bethesda, MD, United States, <sup>2</sup>Exeter University, Exeter, United Kingdom, <sup>3</sup>University of Greenwich, Greenwich, United Kingdom, <sup>4</sup>Georgetown University, Washington, DC, United States, <sup>5</sup>Mali ICEMR, Bamako, Mali, <sup>6</sup>ICER Mali, Bamako, Mali, <sup>7</sup>James Cook University, Cairns, Australia, <sup>8</sup>WRAIR, Silver Spring, MD, United States

6:15 p.m.

5755

**VECTOR AND HOST DIVERSITY SHAPE WEST NILE VIRUS TRANSMISSION IN URBAN GREEN SPACES ALONG AN URBAN-RURAL TRANSECT**Andrew Mackay<sup>1</sup>, Jiayue Yan<sup>1</sup>, Chang-Hyun Kim<sup>1</sup>, Seth Magle<sup>2</sup>, Maureen Murray<sup>2</sup>, Mike Ward<sup>1</sup>, Chris M. Stone<sup>1</sup><sup>1</sup>University of Illinois Urbana-Champaign, Champaign, IL, United States, <sup>2</sup>Urban Wildlife Institute, Lincoln Park Zoo, Chicago, IL, United States

6:30 p.m.

5756

**MGSURVE: A FRAMEWORK TO OPTIMIZE TRAP PLACEMENT FOR GENETIC SURVEILLANCE OF MOSQUITO POPULATIONS**Hector Manuel Sanchez Castellanos<sup>1</sup>, David L. Smith<sup>2</sup>, John M. Marshall<sup>1</sup><sup>1</sup>University of California Berkeley, Berkeley, CA, United States, <sup>2</sup>Institute for Health Metrics and Evaluation, Seattle, WA, United States

6:45 p.m.

5757

**DESIGN AND PRELIMINARY FIELD VALIDATION OF A HANDHELD TOOL FOR AUTOMATED MORPHOLOGICAL IDENTIFICATION OF MOSQUITO SPECIES, SEX, AND ABDOMINAL STATUS BY VILLAGE HEALTH TEAMS (VHTS) IN UGANDA, FOR COMMUNITY-BASED VECTOR SURVEILLANCE**Soumyadipta Acharya<sup>1</sup>, Deming Li<sup>1</sup>, Shruti Hegde<sup>1</sup>, Aravind S. Kumar<sup>1</sup>, Saisamhita Dasari<sup>1</sup>, Bhavya Gopinath<sup>1</sup>, Carter J. Gaulke<sup>1</sup>, Sunny Patel<sup>1</sup>, Rebecca Rosenberg<sup>1</sup>, Janis Iourovitski<sup>1</sup>, Summer Duffy<sup>1</sup>, Christina Hummel<sup>1</sup>, Onanyang David<sup>2</sup>, Kaweesa James<sup>2</sup>, Kigongo Siriman<sup>2</sup>, Batte D. Jovan<sup>2</sup>, Venkat Mukthineni<sup>1</sup>, Khalil Merali<sup>1</sup>, Radha V. Taralekar<sup>1</sup><sup>1</sup>Johns Hopkins University, Center for Bioengineering innovation and Design, Baltimore, MD, United States, <sup>2</sup>Vector Borne and Neglected Tropical Diseases Control Division, Ministry of Health, Kampala, Uganda**Symposium 56****Genetic and Genomic Approaches to Elucidate Evolutionary Selection and Drive the Elimination Agenda**

Regency Ballroom D - Ballroom Level (West Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

Malaria parasites have coevolved with humans and the mosquito vector over tens of thousands of years. This co-evolution continues to impact the fitness of man, mosquito, and malaria parasite. The introduction of antimalarial drugs to kill malaria parasite blood stage parasites has resulted in the evolution of drug resistant parasites over a very short period. This evolution has driven waves of drug susceptible parasite attrition and expansion of drug resistant parasite populations. Resistant parasites spread across continents and thwart malaria control efforts. Drug pressure has fundamentally altered the *Plasmodium falciparum* parasite genome and as an example, mutations in *pfprt* that drive chloroquine and aminoquinoline resistance are fixed in large parts of Southeast Asia. Similarly, the introduction of insecticidal drugs to kill the mosquito malaria vector has driven the evolution of insecticide resistant mosquitoes and these signatures of resistance have spread. The malaria parasite, human host and mosquito vector genomes have now all been sequenced, and this has enabled the systematic investigation of gene function as well as genetic signatures of natural and intervention induced selection. More recently, technical breakthroughs and reduced costs have accelerated data generation and facilitated rapid intervention responses to the spread of drug resistance in parasite species, insecticide resistance in vector species and the human genetic determinants of parasite carriage. In this symposium we will discuss recent insights into signatures and mechanisms of parasite, host, and vector genetic adaptation to infection. Dr. Charles Wondji will describe efforts to understand mosquito vector genetics and how the genome is evolving in the face of insecticide pressure. Dr. Silvia Kariuki will describe how polymorphisms in blood group variants protect carriers from severe malaria disease. Dr. Toshihiro Mita will describe how parasite genome sequencing and both *in vivo* and *in vitro* drug susceptibility measurements are being used to uncover novel mutations associated with artemisinin resistance in Africa. Dr. Ashley Vaughan will describe how experimental genetic crosses between *P. falciparum* strains

Thursday  
October 19

and bulk segregant analyses can uncover novel mechanisms of drug resistance. Finally, Dr. Matthias Marti will demonstrate the power of genome-wide association studies in uncovering a link between the spread of drug resistance and the genetics of malaria transmission.

#### CHAIR

Matthias Marti  
University of Zurich, Zurich, Switzerland

Ashley Vaughan  
Seattle Children's Research Institute, Seattle, WA, United States

#### 5:15 p.m. INTRODUCTION

#### 5:25 p.m. A GENETIC LINK BETWEEN MALARIA TRANSMISSION AND DRUG RESISTANCE IDENTIFIED BY GENOME-WIDE ASSOCIATION STUDY

Matthias Marti  
University of Zurich, Zurich, Switzerland

#### 5:45 p.m. UNCOVERING NOVEL CO-EVOLUTIONARY MECHANISMS OF *PLASMODIUM FALCIPARUM* DRUG RESISTANCE USING EXPERIMENTAL GENETIC CROSSES

Ashley Vaughan  
Seattle Children's Research Institute, Seattle, WA, United States

#### 6:05 p.m. HOST RESISTANCE TO MALARIA

Silvia Kariuki  
KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya

#### 6:25 p.m. GENETIC DRIVERS OF RESISTANCE ESCALATION IN MALARIA VECTORS

Charles Wondji  
Liverpool School of Tropical Medicine, Liverpool, United Kingdom

#### 6:45 p.m. TRACKING THE EMERGENCE OF ARTEMISININ RESISTANCE IN THE REPUBLIC OF UGANDA

Toshihiro Mita  
Juntendo University, Tokyo, Japan

### Special Session 57

#### Ponder to Probe: A Climate-Health Networking Event

Roosevelt 3B - Concourse Level (East Tower)

Thursday, October 19, 5:15 p.m. - 7 p.m. U.S. Central Time Zone

The ASTMH Committee on Global Health (ACGH) invites you to come speak your mind on contemporary global health issues! Peer-networking is an essential skill needed to establish and advance your global health and tropical medicine career. Networking is needed at every stage of your career and the connections you establish with peers today can be the foundation of future employment, career advancement, key collaborations, successful grants and major scientific advances of tomorrow. This peer-to-peer networking event will center around an informal

debate on current key topics of interest to the tropical medicine community, including current infectious disease threats, career challenges and other hot topics pertaining to those pursuing a career in the field of global health. The session will allow participants to present their views on 2-3 pre-determined topics elicited from ACGH members based on current events, field research, scientific discovery, career challenges and general inquiry. Participants will ponder over these issues, probe alternative views, and share ideas in a relaxed setting, while getting to know their peers. Topics discussed can become conversation starters for further networking after the session and throughout the remainder of the annual meeting. This session is recommended for students, early career professionals and experts so topics can be discussed from a range of various perspectives.

#### Break

Thursday, October 19, 7 p.m. - 7:30 p.m. U.S. Central Time Zone

### Symposium 58

#### An AJTMH Tropical Bookshelf Panel with Daisy Hernandez, Author of *The Kissing Bug – A True Story about an Insect, a Family and a Nation's Neglect of a Deadly Disease*

Grand Hall J - Ballroom Level (East Tower)

Thursday, October 19, 7:30 p.m. - 8:30 p.m. U.S. Central Time Zone

*This session does not carry CME credit.*

Daisy Hernández is the author of *The Kissing Bug: A True Story of a Family, an Insect, and a Nation's Neglect of a Deadly Disease* (Tin House, 2021), which won the PEN/Jean Stein Book Award and was selected as an inaugural title for the National Book Foundation's Science + Literature Program. The book was named a top 10 nonfiction book of 2021 by Time magazine and was a finalist for the New American Voices Award. She has spoken about the subject of her book—Chagas disease, neglected diseases in general and racial disparities in healthcare—on MSNBC, and at the Carter Center and the Pan American Health Organization.

#### CHAIR

Claire Panosian  
UCLA David Geffen School of Medicine, Los Angeles, CA, United States

#### 7:30 p.m. INTRODUCTION

#### 7:35 p.m. MEET THE AUTHOR

Daisy Hernandez  
Northwestern University, Chicago, IL, United States

#### 7:50 p.m. QUESTIONS AND ANSWERS WITH THE AUTHOR - MODERATORS

Claire Panosian  
UCLA David Geffen School of Medicine, Los Angeles, CA, United States

Christine Petersen  
University of Iowa, Iowa City, IA, United States



**8:10 p.m.****PANEL DISCUSSION**

Norman Beatty

*University of Florida, Gainesville, FL, United States*

Sarah Hamer

*Texas A&M University, College Station, TX, United States***Friday, October 20****Registration***Grand Ballroom Foyer - Ballroom Level (East Tower)***Friday, October 20, 7 a.m. - 5 p.m. U.S. Central Time Zone****Speaker Ready Room (Closed 11 a.m. - Noon)***Grand Suite 2AB - Ballroom Level (East Tower)***Friday, October 20, 7 a.m. - 5 p.m. U.S. Central Time Zone****TropStop - Student/Trainee Lounge***Grand Hall MN – Ballroom Level (East Tower)***Friday, October 20, 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***Horner and Ogden - Third Floor (West Tower)***Friday, October 20, 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)***Friday, October 20, 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)***Friday, October 20, 7 a.m. - 7 p.m. U.S. Central Time Zone****Burroughs Wellcome Fund-ASTMH Fellowship Committee Meeting***Michigan Boardroom, Concourse Level, East Tower***7 a.m. - 8 a.m. U.S. Central Time Zone****Trainee Membership Committee Meeting***McCormick - Third Floor (West Tower)***Friday, October 20, 7 a.m. - 8 a.m.**