



Strategies and Partnerships

to Beat Malaria

VESTERGAARD°##

## **ASTMH 2024 Sponsored Symposia**

Are you registered to attend the ASTMH 2024 Annual Meeting in-person? These Sponsored Symposia are held in conjunction with the 2024 Annual Meeting and are open to all in-person attendees. These sessions add value to the Annual Meeting attendee experience.

Sponsored Symposia are held alongside of the 2024 Annual Meeting. so you can take the time to learn, connect with speakers, and network with speakers and colleagues. Don't forget to start or end your day with breakfast or refreshments while attending!

View the details below for the topics, dates, times, room assignments, full agenda, presentations and speakers for the Sponsored Symposia you plan to attend.



Science and Legacy

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Management: A Clinical and

Microbiologist Point of View

to Zero Deaths



# One Health: From Plagues and Pestilence to Pesticides, Pharmaceuticals and Public Health

Convention Center - Room 383/384/385 (3rd Floor)

Thursday, November 14 7:30 p.m. - 9:15 p.m.

Join this session for a timely and dynamic conversation with an interactive discussion period about One Health as it relates to tropical medicine, hygiene and global health. Using the 10 plagues of Egypt and the science-based understanding of their origins as a conversational guide, attendees will hear how science-based chemistries were harnessed to develop medicines, drugs of abuse, and pesticides that revolutionized quality of life and added 35 years of life-expectancy in the 21st century. The session will then focus on challenges of today regarding zoonoses in Africa and the logistics of getting vaccines and diagnostics to patients in low resource settings.

Sponsored by Bayer U.S. Crop Science

One Health: From Plagues and Pestilence to Pesticides, Pharmaceuticals and Public Health

Kelly Bristow, MS, RDN, LD Bayer Crop Science, Chesterfield, MO, United States

#### One Health and Toxicology

Sasha K. Kaiser, MD Washington Poison Center, Seattle, WA, United States

#### **One Health and Tropical Diseases**

Vivi Maketa, MD

University of Kinshasa, Department of Tropical Medicine, Kinshasa, Congo, Democratic Republic of the



# The Rising Tide: Dengue Fever and Climate Change

Convention Center - Room 354/355 (3rd Floor)

Thursday, November 14 7:30 p.m. - 9:15 p.m.

Dengue fever, a mosquito-borne viral infection, has seen a dramatic increase in cases globally over the past few decades, closely linked to climate change, which has created favorable conditions for the proliferation of the Aedes mosquitoes that transmit the disease. The World Health Organization (WHO) reports a ten-fold increase in dengue cases from 500,000 in 2000 to over 5.2 million in 2019, with nearly 5 million cases and over 5,000 dengue-related deaths reported across more than 80 countries in 2023. Dengue is now endemic in 129 countries, with Asia bearing approximately 70% of the global disease burden. Climate change factors such as rising global temperatures, increased rainfall and humidity, and extreme weather events like floods and droughts enhance mosquito survival, virus replication, and transmission rates. The Americas reported 4.1 million cases in 2023, making it the most affected region globally, while the Aedes mosquito has established itself in 22 European countries, leading to sporadic outbreaks. Africa and Asia continue to experience high transmission rates, presenting significant public health challenges. The interplay between climate change and the spread of dengue fever underscores the urgent need for integrated public health strategies, including addressing climate change, improving vector control, and enhancing surveillance systems to mitigate the impact of dengue worldwide. The objective of this symposium is to hear from experts on this important topic and gaining insights into their battle against this growing and expanding epidemic.

#### Introduction

Luis Gonzalez, MD, PhD Abbott, Abbott Park, IL, United States

Use of Rapid Tests in an Epidemic Area: Lessons Learned

Mauricio Nogueira, MD, PhD Faculdade de Medicina de SJ Rio Preto (FAMERP), Sao Jose do Rio Preto, Brazil

The 2023 Dengue Outbreak in Bangladesh: Lessons Learned

Mohammad Shafiul, PhD icddr,b, Dhaka, Bangladesh

The Impact of Climate Change on Global Dengue Burden

Erin Mordecai, PhD Biology Department, Stanford University, Stanford, CA, United States

#### Q&A

Luis Gonzalez, MD, PhD Abbott, Abbott Park, IL, United States



## Results from Large-Scale Trials of the Sarabi Attractive Targeted Sugar Bait to Reduce Malaria Burden in Kenya, Mali and Zambia

Convention Center - Room 343/344 (3rd Floor)

Friday, November 15

7 a.m. - 8:45 a.m.

The Westham Sarabi attractive targeted sugar bait (ATSB) is designed to attract sugar-foraging mosquitoes and kill them with an ingestion toxicant. When deployed as part of a community-wide attract and kill vector control strategy, ATSBs may shorten the lifespan of female Anopheles malaria vectors and reduce malaria burden. Three independent 2-arm community-randomized controlled trials were conducted in Zambia (November 2021-June 2023), Kenya (March 2022-March 2024), and Mali (May 2022-January 2024). In the control arm, standard-of-care vector control was reinforced consisting of ensuring high coverage of including insecticide-treated nets (ITN), with indoor residual spray in areas that did not receive ITN also deployed in Zambia (mosaic approach). Arm 2 received reinforced standard-of-care vector control plus ATSB stations installed on exterior walls of all eligible household structures. ATSBs were monitored and replaced as needed for 6- to 7-month deployment periods. Deployment was seasonal in Zambia (November-June) and Mali (May-January) and year-round in Kenya. The primary outcome was clinical malaria incidence among cohorts of children aged 12 months to 14 years in Zambia and Kenya and 5 to 14 years in Mali. Secondary outcomes included Plasmodium falciparum infection prevalence among people ages 6 months and older, and entomological outcomes including density, parity, and entomological inoculation rate. Results from all 3 trials will be examined together providing opportunity to discuss ATSB impact across 3 very different study contexts with important variations that may influence ATSB efficacy. These important study site variations include differences in primary malaria vectors, patterns and intensity of malaria transmission, current malaria control strategies, population and housing density, climate, vegetation, and sugar availability for malaria vectors. Implications for malaria vector control policy and programs, as well as the evolving ATSB learning agenda will be discussed.

#### Sponsored by IVCC

Chair

Angela F. Harris, PhD *IVCC, Liverpool, United Kingdom* 

Co-Chair

Busiku Hamainza, PhD Zambia Ministry of Health, Lusaka, Zambia

#### The impact of ATSB deployment in Western Kenya

Sarah Staedke, PhD Liverpool School of Tropical Medicine, Liverpool, United Kingdom

#### **ATSB deployment in Western Kenya**

Daniel McDermott, PhD Vector Biology, Liverpool School of Tropical Medicine, Liverpool, United Kingdom

#### The impact of ATSB deployment in Western Kenya

Caroline A. Ogwang, MSc

Kenya Medical Research Institute, Kisumu, Kenya

#### The entomologic impact of ATSB deployment in Western Kenya

Eric Ochomo, PhD

Kenya Medical Research Institute, Centre for Global Health Research, Kisumu, Kenya

#### The impact of ATSB deployment in Mali

Seydou Doumbia, PhD

University of Sciences, Techniques, and Technology of Bamako, Bamako, Mali

#### The epidemiologic impact of ATSB deployment in Mali

Sophie Sarrassat, PhD

London School of Tropical Medicine and Hygiene, London, United Kingdom

#### The epidemiologic impact of ATSB deployment in Mali

Immo Kleinschmidt, PhD

London School of Hygiene and Tropical Medicine, London, United Kingdom

#### The entomologic impact of ATSB deployment in Mali

Mohamed Traore, PhD

University of Sciences, Techniques, and Technology of Bamako, Bamako, Mali

#### The entomologic impact of ATSB deployment in Mali

Gunter Muller, PhD

University of Sciences, Techniques, and Technology of Bamako, Bamako, Mali

#### The impact of ATSB deployment in Zambia

Megan Littrell, PhD

PATH, Washington, DC, United States

#### **ATSB deployment in Zambia**

Erica Orange, MPH

Malaria and Neglected Tropical Diseases, PATH, Seattle, WA, United States

#### The epidemiologic impact of ATSB deployment in Zambia

Ruth Ashton, PhD

Tulane University School of Public Health and Tropical Medicine, New Orleans, LA, United States

#### The entomologic impact of ATSB deployment in Zambia

Javan Chanda, MPH

PATH, Lusaka, Zambia



#### Asymptomatic Malaria in Pregnancy: An Urgent Problem to Resolve

Convention Center - Room 354/355 (3rd Floor)

Friday, November 15

7 a.m. - 8:45 a.m.

Asymptomatic malaria poses a significant yet often overlooked threat to maternal and fetal health, particularly in endemic regions. Despite the absence of overt clinical symptoms, asymptomatic malaria can lead to severe complications such as maternal anemia, low birth weight, and increased perinatal mortality. Pregnant women are especially vulnerable due to immunological changes and the sequestration of malaria parasites in the placenta. Studies indicate that the prevalence of asymptomatic malaria in pregnant women can be as high as 20.09% in some regions. This condition significantly increases the risk of maternal anemia, with infected women being 2.28 times more likely to be anemic. Furthermore, malaria during pregnancy is responsible for 5-12% of all low-birth-weight cases and contributes to 35% of preventable low birth weight, leading to 75,000 to 200,000 infant deaths annually. Pregnant women with malaria also face higher odds of adverse outcomes, including low birth weight (1.99 times more likely), preterm birth (1.65 times more likely), and stillbirths (1.40 times more likely). This symposium aims to shed light on the epidemiology, pathophysiology, and potential interventions for asymptomatic malaria in pregnancy, emphasizing the need for enhanced screening and treatment protocols to safeguard maternal and neonatal health.

#### **Sponsored by Abbott**

7:00AM - 8:45AM

#### Introduction

Luis Gonzalez, MD, PhD

Abbott, Abbott Park, IL, United States

#### **Consequences of Antenatal Malaria Infection on Pregnancy Outcome**

Steve Taylor, MD, MPH
Duke University, Durham, NC, United States

#### **Evidence of Test and Treat Approaches for the Control of Malaria in Pregnancy**

Julie R. Gutman, MD, MSc Malaria Branch, CDC, Atlanta, GA, United States

#### Update on INTREPID Study in the Democratic Republic of Congo (DRC)

Jean Okitawutshu, MD, MPH, PhD Community Health, University of Kinshasa, Kinshasa, Congo, Democratic Republic of the

# Asymptomatic Malaria in Pregnancy and Associated Risk Factors in Majang Zone, Gambella, Southwest Ethiopia: A Hard-to-Reach Malaria Hotspot

Aklilu Alemayehu Jimma University, Jimma, Ethiopia

#### Q&A

Luis Gonzalez, MD, PhD

Abbott, Abbott Park, IL, United States



# When Neglected Tropical Diseases Go Global: Focus on Chikungunya and Mpox

Convention Center - Room 383/384/385 (3rd Floor)

Friday, November 15

7 a.m. - 8:45 a.m.

#### When Neglected Tropical Diseases Go Global: Focus on Chikungunya and Mpox

Chikungunya is a debilitating mosquito-transmitted disease that has emerged as a global public threat. The disease, which is associated with high morbidity, continues to expand globally due to climate change, viral adaptations and globalisation. In this session, we will review the epidemiology, clinical presentation, diagnostics, and management of chikungunya.

The rapid spread of mpox clade IIb to non-endemic regions of the world led to the first global mpox epidemic in 2022-2023 and the declaration of a Public Health Emergency of International Concern (PHEIC) by the WHO. In August 2024, the WHO declared the mpox clade Ib outbreak in the Democratic Republic of the Congo a PHEIC. In this session we will review the epidemiology and disease burden of mpox and provide an update about the current situation with a focus on endemic countries in Africa.

#### **Sponsored by Bavarian Nordic**

Chair

David H. Hamer, MD, FACP, FIDSA, FASTMH, FISTM Boston University, School of Public Health, Boston, MA, United States

Chikungunya Revealed: Epidemiology, Climate Change Impact, and Critical Diagnostic Insights for Optimal Patient Care

Aileen Y. Chang, MD, MSPH, FACP

The George Washington University, School of Medicine and Health Sciences, Washington, DC, United States

#### Emergence of mpox in the post-smallpox era

Placide Mbala, MD, MSPH, PhD

University of Kinshasa, Kinshasa, Congo, Democratic Republic of the



## Malaria Prevention: A Trilogy of Tools to Accelerate to Zero Deaths

Convention Center - Room 395/396 (3rd Floor)

Friday, November 15

7 a.m. - 8:45 a.m.

Malaria prevention is a key pillar of efforts to drive to elimination. The toolbox is expanding, with new medical innovations such as vaccines, medicines in development and novel insecticides. Each tool plays a unique role in addressing the specific needs of at-risk and underserved populations. An integrated and complimentary approach is the only way to meet the needs of all.

#### Sponsored by Medicines for Malaria Venture and TDR

#### **Introductory Remarks**

John Reeder, PhD

Special Programme for Research and Training in Tropical Diseases (TDR), Geneva, Switzerland

#### **Introductory Remarks**

George Jagoe

Medicines for Malaria Venture, Geneva, Switzerland

#### **Introductory Remarks**

Daniel Ngamije

World Health Organization, Geneva, Switzerland

#### Gender-sensitive approaches to malaria prevention

Margaret Gyapong

Institute of Health Research at the University of Health and Allied Sciences, HO, Volta Region, Ghana

#### Optimizing delivery and uptake of seasonal malaria chemoprevention and malaria vaccines

Fatimata Bintou Sall

University of Thies, Thies, Senegal

The role of insecticide-treated nets and indoor residual spraying with a focus on new innovations in vector control.

Justin McBeath

Innovative Vector Control Consortium, Liverpool, United Kingdom

Development and rollout of RTS,S; discussion on new innovations in the pipeline and integration with other tools.

Ashley Birkett
PATH, Seattle, WA, United States

#### The development and rollout of R21 and pipeline vaccines from Oxford, and integration with other tools

Adrian Hill
Oxford University, Oxford, United Kingdom

#### The role of medicines in malaria prevention

Cristina Donini, PhD Medicines for Malaria Venture, Geneva, Switzerland

#### Implementation research for access to malaria prevention tools

Seydou Doumbia
University of Sciences, Techniques, and Technology of Bamako, Bamako, Mali

#### Field perspectives on the integration of malaria prevention tools

Keziah Malm, PhD National Malaria Control Programme of Ghana, Accra, Ghana





## The Next Chapter of Progress: Integrating New Tools, Strategies, and Partnerships to Beat Malaria

Convention Center - Room 388/389 (3rd Floor)

Friday, November 15

7 a.m. - 8:45 a.m.

Following the introduction of long-lasting insecticide treated bed nets at the start of this millennium, malaria death rates have been cut by half. However, progress has stalled in recent years for several reasons including insecticide resistance, population growth, suboptimal access and coverage of interventions, humanitarian and health emergencies, insufficient funding, and competing financial and health priorities. A new generation of tools, including dual-active ingredient bed nets, as well as vaccines and spatial repellents, are proving effective and will have a key role to play in achieving malaria elimination. For example, in Western Mozambique we have already seen the use of dual-ingredient nets reduce malaria incidence by 56%. Heartening data such as this indicates that bending the curve to get malaria elimination back in sight is possible, but new tools can only have impact through integrated, community-driven strategies to increase access and usage, and a commitment to the transformative partnerships that are needed to deliver them. This session will dive into this new wave of innovation, consider solutions to the access challenges, and present expert perspectives on what is needed in the years to come, as we work together to consign malaria to the history books.

#### Sponsored by Vestergaard and United to Beat Malaria

#### Ushering in a new wave of innovation for impact

Meera Venkatesan

President's Malaria Initiative (USAID/CDC), Washington, DC, United States

#### Impact relies on access, usage, and integrated approach

Godwin Ntadom

National Malaria Elimination Program, Nigeria, Nigeria

#### What is the suite of innovations and approaches needed to eliminate malaria?

Keziah Malm, PhD

National Malaria Control Programme of Ghana, Accra, Ghana

#### Ushering in a new wave of innovation for impact

**Baltazar Candrinho** 

National Malaria Control Program Manager, Maputo, Mozambique

#### Impact relies on access, usage, and integrated approach

Amelia Bertozzi-Villa

Institute for Disease Modeling, Gates Foundation, Seattle, WA, United States

#### Ushering in a new wave of innovation for impact

Patrick Sieyes Vestergaard, Lausanne, Switzerland

What is the suite of innovations and approaches needed to eliminate malaria?

Duncan Kobia Vestergaard, Kenya, Kenya

What is the suite of innovations and approaches needed to eliminate malaria?

Tom C. Putzer SC Johnson, Racine, WI, United States



# Tropical Fever Syndromic Diagnostics to Enhance Patient Management: A Clinical and Microbiologist Point of View

Convention Center - Room 352 (3rd Floor)

Friday, November 15

7 a.m. - 8:45 a.m.

# Tropical Fever Syndromic Diagnostics to Enhance Patient Management: A Clinical and Microbiologist Point of View

bioMérieux SA, in collaboration with BIOFIRE Defense, is developing a syndromic molecular panel for tropical fever testing. Syndromic molecular testing has consistently shown improved patient outcomes, offering the potential to accelerate and enhance patient management. The Global Fever Panel is accurate, easy to use, and with its rapid turnaround time could provide valuable results to clinicians and patients in various clinical settings. This Global Fever Syndromic Molecular Panel would play a crucial role in detecting infectious disease outbreaks and enhancing public health, significantly impacting patient care. This symposium will explore the impact of the Global Fever Panel implementation and the benefits of tropical fever syndromic testing for detecting critical pathogens in endemic regions and among travelers. In this bioMérieux Symposium, two specialists on tropical diseases will deliver presentations.

#### Sponsored by bioMérieux SA

#### Introduction

Glaucia Paranhos-Baccalà, PhD bioMérieux SA, Marcy l'Etoile, Rhone-Alpes, France

#### Introduction

Ruben Marrero-Vasquez, PharmD bioMérieux SA, Denver, CO, United States

#### The Role of the Global Fever Panel in the Travel Clinic

Bradley A. Connor, MD

Weill Cornell Medical College/The New York Center for Travel and Tropical Medicine, New York, NY, United States

Can we finally bring tropical disease testing closer to patients? Evaluating the BIOFIRE Defense Global Fever Panel in a national reference lab

Marc R. Couturier, PhD, D(ABMM)

ARUP Laboratories and University of Utah, Salt Lake City, UT, United States



# Professor Dominic Kwiatkowksi - Science and Legacy

Convention Center - Room 388/389 (3rd Floor)

Friday, November 15 6:15 p.m. – 8 p.m.

Sponsored by the Bill & Melinda Gates Foundation

Food and Beverage Sponsored by the Bill & Melinda Gates Foundation

A pioneer and global leader in malaria genomics, Professor Dominic Kwiatkowski's career fostered new insights into malaria biology, new tools for malaria control, and a new generation of malaria genomics researchers. He founded and led the Malaria Genomic Epidemiology Network (MalariaGEN), a global data sharing and capacity building community, from its inception until his untimely passing in April 2023. His vision and efforts to unite a community to share data in order to build knowledge and resources more powerful than would be possible alone was once considered revolutionary. Since the COVID-19 pandemic, during which he provided valuable leadership, his data sharing ideals have become the established norm. Here we consider his influence and legacy on the field of genomic epidemiology of malaria through contributions from current leaders across the broad range of his impact.

#### **Welcome and Opening Remarks**

Abdoulaye Djimdé, PhD Pathogens Genomic Diversity Network Africa, Bamako, Mali

#### The early (pre-MalariaGEN) career of Dominic Kwiatkowski

Terrie Taylor, DO Michigan State University, East Lansing, MI, United States

#### Capacity building for malaria genomics and data sharing in Africa – the MalariaGEN vision

Lucas Amenga-Etego, PhD West African Centre for Cell Biology of Infectious Pathogens (WACCBIP), Accra, Ghana

#### Insights from thousands of Anopheles genome

Daniel E. Neafsey, PhD Harvard T.H. Chan School of Public Health, Boston, MA, United States

#### MalariaGEN and the future

Cristina Ariani, PhD
Wellcome Sanger Institute, United Kingdom

#### Closing remarks and launch of Dominic Kwiatowski Fellowship

Estee Torok, MA MBBS PhD FRCP FRCPath
Bill & Melinda Gates Foundation, London, United Kingdom