Malaria: From Innovation to Eradication

February 19–23, 2017 | Speke Conference Centre | Kampala | Uganda

Scientific Organizers:
Marcel Tanner, Swiss Tropical and Public Health Institute, Switzerland
Sarah K. Volkman, Harvard T.H. Chan School of Public Health, USA
Marcus V.G. Lacerda, Tropical Medicine Foundation Dr. Heitor Vieira Dourado, Brazil
Salim Abdulla, Ifakara Health Institute, Tanzania

Organized in collaboration with MESA – Malaria Eradication Scientific Alliance.
Part of the Keystone Symposia Global Health Series, supported by the Bill & Melinda Gates Foundation

The evidence base and research agenda for malaria elimination and eradication are fast-evolving. Of foremost concern is the threat of resistance of the mosquito to pyrethroid insecticides and emerging data showing multi-drug resistance in Southeast Asia. An evolving area, with much to be understood, is the epidemiology of sub-microscopic infections and how they fuel onward transmission. There is also a lot of progress; for example, in the development pipeline there are candidates for a single-dose cure that can also provide protection and block transmission, and there are novel classes of insecticides. Finally, in implementation science, there is plenty to examine, from mass drug administration of anti-malarials to re-purposing ivermectin to reduce residual transmission. This Keystone Symposia meeting examines the scientific progress being made toward the goals of eliminating and eradicating malaria, from biological challenges and discoveries, to the development of the next generation of tools, to potentially transformative strategies to eliminate malaria. The ultimate goal of the meeting is to provide a unique and needed space for the malaria community to challenge hypotheses and share emerging data and insights from the different disciplines in a retreat-like setting where scientists can network, think creatively and exchange ideas. For the sustainability needed to meet the challenge of eradicating malaria, fostering these fruitful exchanges and lasting scientific partnerships is absolutely critical.

Session Topics:
- Identifying, Characterizing the Reservoir and Measuring Transmission
- Modeling and Mobility
- Combining and Tailoring Intervention Packages for Elimination Settings
- Biological Systems and Health Systems
- Tools for Elimination
- Tackling the Mosquito Vector
- Understanding Parasite Interactions with Human and Mosquito Hosts
- Surveillance Strategies

Global Health Travel Award Application Deadline: September 20, 2016
Scholarship Application & Discounted Abstract Deadline: October 19, 2016
Abstract & Local Registration Subsidy Application Deadline: November 17, 2016
Discounted Registration Deadline: December 20, 2016

Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Global Health Travel Awards are for investigators from low and middle income countries, and local registration subsidies are for investigators from Uganda and the surrounding area.

Meeting Hashtag: #KSmalaria
www.keystonesymposia.org/17B5
SUNDAY, FEBRUARY 19
Arrival and Registration

MONDAY, FEBRUARY 20
Keynote Address
*Marcel Tanner, Swiss Tropical and Public Health Institute, Switzerland
Pedro L. Alonso, World Health Organization, Switzerland
The Science Needed to Reach our Goals for Malaria Elimination

Identifying, Characterizing the Reservoir and Measuring Transmission
*Sarah K. Volkman, Harvard T.H. Chan School of Public Health, USA
Salim Abdulla, Ifakara Health Institute, Tanzania
Tackling Asymptomatics in Africa
Chris Drakeley, London School of Hygiene & Tropical Medicine, UK
Malaria Transmission: Characterizing and Emptying the Reservoir
Jetsumon Sattabongkot Prachumsoi, Mahidol University, Thailand
Transmission Stages in Plasmodium vivax
Ana Maria Fonseca, ISGLOBAL, Barcelona Institute for Global Health, Spain
Short Talk: Pregnancy-Specific Serology to Monitor Malaria Transmission in Elimination Contexts
Silvia Portugal, University Hospital Heidelberg, Germany
Short Talk: The Silent Reservoir of P. falciparum during the Dry Season

Workshop and Panel: New Diagnostics for Malaria Elimination. Organized in collaboration with PATH, FIND and the Bill & Melinda Gates Foundation
*Sophie Allauzen, Bill & Melinda Gates Foundation, USA
*Iveth Gonzalez, Foundation for Innovative New Diagnostics, Switzerland
*Gonzalo J. Domingo, PATH, USA

Modeling and Mobility
*Marcus V.G. Lacerda, Tropical Medicine Foundation Dr. Heitor Vieira Dourado, Brazil
Hannah Slater, Imperial College, UK
Modelling Malaria Elimination Strategies in Zambia
Stephan Karl, Walter and Eliza Hall Institute of Medical Research, Australia
Ability of Different Markers of Exposure to Detect Residual 'Pockets' of Transmission
Levicatus Mugenyi, Hasselt University-Belgium and IDRC-Uganda, Uganda
Short Talk: Estimating Age-time Dependent Malaria Force of Infection Accounting for Unobserved Heterogeneity

Poster Session 1

TUESDAY, FEBRUARY 21
Combining and Tailoring Intervention Packages for Elimination Settings
*Jimmy Opigo, Ministry of Health, Uganda, Uganda

Caterina Guinovart, Barcelona Institute for Global Health, Spain
Different Drug Administration Strategies and Reactive Case Investigation in Sub Saharan Africa

Melissa Penny, Swiss Tropical and Public Health Institute, Switzerland
Optimising New Malaria Interventions and Intervention Mixes for Different Settings

Gareth R. Jones, Clinton Health Access Initiative, Uganda
Short Talk: Assessing National Malaria Surveillance Systems Across East Africa

Krystal Lorna Nkusi Birungi, Uganda Virus Research Institute, Uganda
Short Talk: Population Dynamics-species Composition, Abundance and Diversity of Anopheles Malaria Vectors at Kiimi and Nsadzi Islands in Uganda

Health Systems
*Marcel Tanner, Swiss Tropical and Public Health Institute, Switzerland
Irene Misuka Masanja, Ifakara Health Institute, Tanzania
Understanding Access and Delivery - Responding to Efficacy Decay
Kathryn W. Roberts, Global Health Group at the University of California, San Francisco, Namibia
Surveillance as an Intervention: Geo-Spatial Approaches to Identify and Target Malaria Transmission
Valentina Buj, UNICEF, Kenya
Innovations in Malaria Service Delivery to Accelerate Progress towards Malaria Elimination

Sumadhya Deepika Fernando, Faculty of Medicine, University of Colombo, Sri Lanka
Short Talk: The Risk of Imported Malaria in Security Forces Personnel Returning from Overseas Missions in the Context of Prevention of Re-introduction of Malaria to Sri Lanka

Vladimir P. Zharov, University of Arkansas for Medical Sciences, USA
Short Talk: Ultrasonic Noninvasive Label-Free Photoacoustic Malaria Diagnosis and Eradication

Poster Session 2

WEDNESDAY, FEBRUARY 22
Tools for Elimination
*Salim Abdulla, Ifakara Health Institute, Tanzania
Marcus V.G. Lacerda, Tropical Medicine Foundation Dr. Heitor Vieira Dourado, Brazil
Drug-based Strategies for Malaria Elimination
Kelly Chibale, University of Cape Town, South Africa
Targeting the Plasmodia at Multiple Lifecycle Stages: A Chemotherapy Approach towards Malaria Eradication

Stephen L. Hoffman, Sanaria, USA
Rationale and Plans for Using a PfSPZ-Based Vaccine in Malaria Parasite Elimination Campaigns

Louis Schofield, James Cook University, Australia
Vaccines to Interrupt Transmission

Itziar Ubillos, ISGlobal, Barcelona Institute for Global Health, Spain
Short Talk: Immunogenicity Elicited by the Malaria Vaccine Candidate RTS,S/AS01E in African Children: Effect of Age, Malaria Transmission Intensity and Association with Protective Efficacy
Kafula Silumbe, Malaria Control and Elimination Partnership in Africa, PATH, Zambia

Pushing for Malaria Elimination by Steps: The Case of Zambia

* Session Chair † Invited but not yet accepted Program current as of February 8, 2019. Program subject to change. Meal formats are based on meeting venue. For the most up-to-date details, visit www.keystonesymposia.org/17B5.
**Umberto D'Alessandro**, MRC Unit The Gambia, Gambia  
*Short Talk: Malaria Residual Transmission After Mass Drug Administration with Dihydroartemisinin-Piperaquine in The Gambia*

**Didier Jean Leroy**, Medicines for Malaria Venture, Switzerland  
*Short Talk: Exploiting Consequences of Drug Resistance to Guide the Development of Next-Generation Antimalarials*

**Jetsumon Sattabongkot Prachumsri**, Mahidol University, Thailand  
*Tackling the Mosquito Vector*

- *Charles Wondji*, Liverpool School of Tropical Medicine, UK  
  Complex Genomic Evolution of Insecticide Resistance in Malaria Vectors: A Challenge for Vector Control

- *John Lucas*, Sumitomo Chemical Company, UK  
  Meeting the Challenge of Insecticide Resistance

- *Krijn Paaijmans*, ISGlobal, Barcelona Institute for Global Health, Spain  
  On Mosquitoes and Headless Chickens: Entomological Intelligence on the Road to Malaria Elimination

- *Sheila Ogoma Barasa*, US Army Medical Research Directorate, Kenya, Kenya  
  Short Talk: A Low Technology Emanator Treated with the Volatile Pyrethroid Transfluthrin Confers Long term Protection against Outdoor biting Vectors of Lymphatic Filariasis, Arboviruses and Malaria

**Poster Session 3**

**THURSDAY, FEBRUARY 23**

**Understanding Parasite Interactions with Human and Mosquito Hosts**

- *Sanjeev Krishna*, St. George's Hospital Medical School, UK  
  From Discovery to Implementation: Interventions that Block Malaria Parasite Transmission at the Bite

- *Rhoel R. Dinglasan*, University of Florida, USA  
  Leveraging Genomics to Advance the Malaria Elimination Agenda

- *Sarah K. Volkman*, Harvard T.H. Chan School of Public Health, USA  
  Alfred Cortes Closas, ISGlobal, Barcelona Institute for Global Health, Spain  
  Epigenetic Variation in Malaria Parasites: Sex, Drugs, and ... Adaptation

- *Abdoulaye Djimé*, University of Science, Techniques and Technologies, Mali  
  Significant Different Levels of Artemisinin Monotherapy Efficacy on *P. falciparum* in Mali

- *Didier Menard*, Institut Pasteur du Cambodge, Cambodia  
  Artemisinin and Drug Partner Resistance: From Phenotype to Genotype

**Surveillance Strategies**

- *Kimberly A. Lindblade*, World Health Organization, Switzerland  
  Impact of Malaria Control Interventions in Uganda

- *Moses R. Kamya*, Makerere University College of Health Sciences, Uganda  
  Malaria Surveillance as Intervention along the Pathway to Elimination

**Closing Keynote Address**

**Marcel Tanner**, Swiss Tropical and Public Health Institute, Switzerland  
*Global Travel, Migration, Impact and Risks of Malaria Re-Introduction*

**Meeting Wrap-Up: Outcomes and Future Directions (Organizers)**

**FRIDAY, FEBRUARY 24**

**Departure**