

# 7<sup>th</sup> Multilateral Initiative on Malaria Panafrikan Conference



«Two decades of progress, challenges  
and perspectives in ending Malaria»

**DETAILED PROGRAM**

**CICAD**

Centre International  
de Conférence Abdou Diouf

**April 15<sup>th</sup> to 20<sup>th</sup>, 2018**

D a k a r - S e n e g a l



[www.mim2018.com](http://www.mim2018.com)







## **Professor Emeritus, Rose G.F. Leke**

MIM SECRETARIAT CHAIR

On behalf of the Multilateral Initiative in Malaria (MIM), I cordially welcome you to the 7th edition of the MIM-Pan African Malaria Conference.

This edition of the MIM-Pan African Malaria Conference is unique for a few reasons. First, we are returning to the birth place of the MIM.

Yes, MIM was initiated in Dakar, Senegal in 1997. Secondly, this conference would be graced by the presence of several honorable guests including some of MIM founders. One of whom, Nobel Laureate Dr. Harold E. Varmus, would be delivering a keynote talk.

There is so much to look forward to and I encourage you all to seize this opportunity to meet with these honorable guests. Lastly, as you may know, this is a transformational moment for MIM.

It's time to review MIM's activities to better address current malaria research and control priorities and new funding landscape.

Throughout the conference, we would be holding consultative meetings to finalize on MIM's new organizational structure and priority activities.

On Day 4 of the conference, that is Wednesday, April 18, 2018, we would hold the MIM General Assembly. This meeting is open to all delegates and would begin at 4:15pm.

At this meeting, we would unveil the new plan. Your presence and opinion at this meeting would be very crucial.

As we transmute and set new priorities, we want to make sure we are doing what is best for you.

As of this conference, MIM will evolve into a membership society. We view this transformation as a wonderful opportunity to enable MIM to more effectively meet the needs of its members while addressing its longstanding vexing problem of financial instability resulting from the lack of a legal structure.

The MIM Society whose discussions started more than a decade ago has made progress with a northern secretariat at the University of Antwerp and the Southern Secretariat at the University of Yaounde I, in Cameroon.

It is envisaged that the MIM Society will have an elected rotatory Presidency. Hopefully with the numerous member benefits all of you would be registering into the society during this conference.

This transformation will also be an opportunity to revamp MIM's multilateral partnerships and open up to new partnerships. From inception, MIM has pushed forward the visibility of malaria as a global problem.

The effective control and subsequent elimination of malaria as a public health scourge will require a multifaceted and comprehensive approach.

Such an approach could span from intensive public health efforts such as scaling-of existing control measures to basic research to address the many unanswered question about the disease process and the human response.

Regardless of the approach that is being prioritized, more importantly, will be the continuous provision of training and research support to malaria researchers and institutions. Such a support will increase and sustain the capacity of researchers and Africa, to produce high quality research findings and translate these findings into policies for the effective control of malaria.

In the past, MIM through its various alliances has been very supportive in providing this much-needed help to African researchers and institutions. It's our hope that in the newly proposed format, we can double our efforts to train and support burgeoning African researchers and Institutions.

This is the reason I once again strongly call on all MIM past, present and new donors to move in step with the MIM and make it a truly multilateral initiative. Before I end, I will like to thank my Co-Chair, Dr. Peter de Vries (Holland), the new host Prof Jean-Pierre Van Geertruyden (Belgium), Prof Mbacham Wilfred (Executive Director) and Dr. Abanda Ngu (Manager) for their relentless efforts in holding up to the MIM dream and that of the birth of the MIM Society.

Thank you all and have a wonderful MIM Conference.



**Professor Emeritus, Rose G.F. LEKE**

Co-Chair of the MIM Secretariat



## Professor Oumar Gaye

PRESIDENT OF THE ORGANISING COMMITTEE

The University Cheikh Anta Diop (UCAD) has the pleasure of hosting the 7th Pan African Multilateral Initiative on Malaria (MIM) in April 2018 .Twenty years after the first MIM meeting, Dakar Senegal will once more be hosting this prestigious malaria conference ;

By adopting the theme 'Dakar II: Two decades of progress, challenges and perspectives in ending Malaria ; the 7th MIM conference will serve as an opportunity to review MIM's 20 years of contribution to the global goal of ending malaria in Africa, to better address current malaria research and control priorities .

.Leading and emerging malaria researchers are provided with a platform to show case their research exploits, to share experiences and novel ideas as well as to establish new research collaborations. Young African scientists will have the opportunity to interact with malaria experts.

Twenty years after the first MIM Conference which drew attention to major questions for malaria research, and identify ways to strengthen and sustain the research capacity of malaria endemic countries in Africa, several countries in Africa are now engaging towards malaria elimination.

Focus in Senegal, the first country report in the Roll Back Malaria Progress & Impact series describes how Senegal achieves a spectacular drop in its malaria burden. The exemplarity of the collaboration between scientists, the National Malaria programme and partners is a key of the succes.

The 7th MIM Pan African Malaria Conference will be held at the new and prestigious Dakar International Conference Center Abdou Diouf. The center is one of the most advanced conference facilities in West Africa. which could accomodate a massive turnout of up to 2500 delegates.

UCAD with the Ministry of Heath and its partners will ensure the successful organization of the Conference in Dakar, a multicultural diverse city full of vibrant arts and tradition

Every effort is being made to ensure the delegates attending the 7th MIM conference have a truly enriching experience, which rivals all previous MIM conference in terms of scientific content, exhibitors on display and social events.

**Professor Oumar GAYE**

University Cheikh Anta Diop



## **Professor Robert Guiguemde**

PRESIDENT OF THE INTERNATIONAL SCIENTIFIC COMMITTEE

The scientific committee members are happy to welcome all the participants at this 7th conference which is going to celebrate 20 years of the MIM.

The scientific program has been built in order to be in adequacy with the main theme of this 7th conference: Two decades of progress, challenges and perspective in ending Malaria. Its content take into account the main scientific acquisitions gathered during these 20 years.

Several innovations have been brought compared with the format of the previous editions as regards as well the themes and the sub-themes of the scientific sessions as the themes and the sub-themes of the symposia.

Taking into account the main theme of the conference a particular attention has been given to the communications related to the tools of the fight against malaria which can contribute significantly to the elimination of this burden. So are the works on the drug efficacy, the works on the efficacy of the mosquito nets, the works on the development of rapid diagnostic tests and the development of malaria vaccines.

Eminent malariologists have been sensibly chosen for giving the introductory plenary sessions and for chairing the panels discussions.

A total of 1083 communications were submitted. After a rigorous examination by reviewers it has been retained 352 communications for oral presentations, 731 for posters with 70 symposia.

At the end of the discussions from these different sessions the challenges to be addressed will be identified and the recommandations for the next steps to overcome them will be oriented.

For that purpose, the scientific committee wishes a fruitful participation to all, and hopes that this 7th conference will meet the expectations of all, and that the exchanges on the various communications will really contribute to the advance towards malaria elimination.

**Professor Robert GUIGUEMDE**

President of the National Academy of Sciences of Burkina Faso

## Monday, April 16, 2018

Time	Auditorium	Oval room	PC room	Meeting room 205
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:30	<b>Plenary session 2:</b> Malaria Control and Management - Dr. Pedro Alonso Health Systems - Prof. Fred Binka			
9:30 - 09:45	Turbo talks			
09:45 - 10:45	<b>Panel discussion 1</b> Malaria elimination challenges : Moderator - Prof Dyann Wirth Discussants - Dr. Kesetebirhan Admasu, Dr. Bruno Moonen, Prof Marcel Tanner, Prof Ogobara Doumbo			
10:45 - 11:15	Coffee break			
11:15 - 13:00	Scientific session 1	Scientific session 2	Scientific session 3	Scientific session 4
	<b>Control and Elimination 1</b> (Oral presentation 1-8)	<b>Health Sytems 1</b> (Oral presentation 9-16)	<b>Diagnosis and reagents 1</b> (Oral presentation 17-24)	<b>Surveillance 1</b> (Oral presentation 25-32)
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Symposium 3	Symposium 4	Symposium 5	Symposium 6
	<b>Control and Elimination</b> Understanding, detecting and interrupting malaria transmission to achieve elimination: conceptual approaches and strategic initiatives from the Institute Pasteur International Network (Pasteur Institute)	<b>Epidemiology</b> New findings on submicroscopic Plasmodium falciparum and Plasmodium vivax infections. (Imperial College)	<b>Drug efficacy</b> Benefiting from the diversity of field parasites in Africa to better guide the discovery and development of next generation antimalarials. (MMV)	<b>Malaria and Pregnancy</b> Testing Malaria Vaccines in Pregnant Women (NIAID)
16:15 - 16:45	Coffee break			
16:45 - 18:30	Symposium 10	Scientific session 8	Scientific session 9	Symposium 11
	<b>Control and Elimination</b> Primaquine for P. falciparum elimination: progresses and challenges (SANOFI)	<b>Epidemiology 1</b> (Oral presentation 49-56)	<b>Immunology 1</b> (Oral presentation 57-64)	<b>Surveillance</b> Using digital tools to strengthen the malaria supply chain (NOVARTIS)
18:30 - 19:30	Special Guest Session			



Time	Meeting room 201	Meeting room 202	Tente A	Tente B
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:30				
9:30 - 09:45				
09:45 -10:45				
10:45 - 11:15	Coffee break			
11:15 -13:00	Scientific session 5	Scientific session 6	Symposium 1	Symposium 2
	<b>Integrated vector management 1</b> (Oral presentation 33-40)	<b>Parasites and System biology 1</b> (Oral presentation 41-48)	<b>Control and Elimination</b> Durability of Long-Lasting Insecticidal Nets in Tanzania: Methodology Innovation and Operational Research (Norwegian University of Life Sciences)	<b>Research capacity</b> The First Clinical Trial in Equatorial Guinea: Lessons Learned in an Emerging Research Environment (Marathon EG)
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Scientific session 7	Symposium 7	Symposium 8	Symposium 9
	<b>Phytomedicines 1</b> (Oral presentation 73-80)	<b>Treatment and community management</b> Why eliminating malaria will require an integrated approach.(UNICEF)	<b>Surveillance 1</b> Digital health system strengthening approaches for improved malaria case management, surveillance, and response (Malaria Consortium)	<b>Integrated vector management</b> Next generation IRS: expanding the use of 3rd generation IRS products as part of the intervention toolbox for malaria control and elimination (PATH) 1.
16:15-16:45	Coffee break			
16:45 - 18:30	Scientific session 10	Scientific session 11	Scientific session 12	Symposium 12
	<b>Malaria and Pregnancy 1</b> (Oral presentation 65-72)	<b>Pharmacology 1</b> (Oral presentation 81-88)	<b>Pathogenesis and severe malaria 1</b> (Oral presentation 89-96)	<b>Diagnosis and reagents</b> Detection of sub-microscopic malaria infections using new point-of-care diagnostic tests(FIND)
18:30 - 19:30				

## Tuesday, April 17, 2018

Time	Auditorium	Oval room	PC room	Meeting room 205
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:00	<b>Plenary session 3</b> The last push towards malaria elimination: Engaging communities - Dr. Halima Abdullah Mwenesi			
09:00 - 09:30	Malaria Social and Health Economics - Prof. Jean Paul Moatti		Symposium 13	Symposium 14
09:30 - 09:45	Turbo talks			
09:45 - 10:45	<b>Panel discussion 2</b> Resource allocation and advocacy : Moderator - Prof. Awa Marie Coll Seck Discussants - Mrs Joy Phumaphi, Dr. Tore Godal, Dr Matishido Moeti, Mr Zakari Momodu, Dr Lutz Hegemann		<b>Control and Elimination 2</b> How to confirm absence of transmission in the last step towards elimination? (PATH) 2	<b>Malaria and Pregnancy</b> Malaria in pregnancy programmes: challenges and priorities in antimalarial drug development for African pregnant women (EDCTP)
10:45 - 11:15	Coffee break			
11:15 - 13:00	Scientific session 13	Symposium 18	Symposium 19	Symposium 20
	<b>Health System and Resource allocation</b> (Oral presentation 97-104)	<b>Drug Resistance</b> At the Crossroad of Antimalarial Drug Resistance: Challenges and Solutions (Guilin Pharma)	<b>Control and Elimination</b> malERA Refresh: How can we innovate to accelerate to elimination? (MESA)	<b>Diagnosis and reagent</b> Minimally invasive autopsies as a tool to determine malaria direct and indirect contribution as cause of death in endemic regions (IS Global)
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Symposium 23	Symposium 24	Symposium 25	Symposium 26
	<b>Drug resistance</b> Responding to the emergence of multi-drug resistance: an update on the Novartis drug discovery and development pipeline (NOVARTIS)	<b>Epidemiology and modelling</b> The role of Multiple First Line Therapies in the drive to malaria elimination (MMV)	<b>Control and Elimination</b> Malaria Surveillance and Elimination: Country-driven and country-owned (WHO)	<b>Malaria and Pregnancy</b> Estimating malaria transmission through exposure in pregnancy: a promising sentinel surveillance approach (IS Global)
16:15 - 16:45	Coffee break			
16:45 - 18:30	Scientific session 18	Symposium 29	Scientific session 19	Symposium 30
	<b>Social and health economics</b> (Oral presentation 129-136)	<b>Control and Elimination</b> Pyramax a new fixed dose ACT to fight against P.falciparum and P.vivax malaria (Shin poong Pharma)	<b>Control and Elimination 2</b> (Oral presentation 137-144)	<b>Integrated vector management</b> The Impact of IRS on Measures of Malaria Transmission and Incidence (Abt)
18:30 - 19:30	Special Guest Session			

Time	Meeting room 201	Meeting room 202	Tente A	Tente B
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:00				
09:00 - 09:30	Symposium 15		Symposium 16	Symposium 17
09:30 - 09:45	<b>Integrated vector management Achievements in Capacity Building for IRS in Africa (Abt)</b>		<b>Health system</b> Providing the LINKs to strengthen the use of data for malaria decision-making in sub-Saharan Africa (LINK project)	<b>Chemoprevention</b> ACCESS-SMC: Scaling-up Seasonal Malaria Chemoprevention in the Sahel: final results, lessons learned, and long-term outlook (Malaria Consortium)
09:45 - 10:45				
10:45 - 11:15	Coffee break			
11:15 - 13:00	Scientific session 14	Scientific session 15	Symposium 21	Symposium 22
	<b>Vector Biology 1</b> (Oral presentation 121-128)	<b>Surveillance, Treatment and community management</b> (Oral presentation 113-120)	<b>Research capacity</b> Gene drive for malaria control (Imperial College)	<b>Integrated vector management</b> Pan African Mosquito Control Association Symposium: African Entomological Capacity Analysis (PAMCA)
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Scientific session 16	Scientific session 17	Symposium 27	Symposium 28
	<b>Epidemiology 2</b> (Oral presentation 105-112)	<b>Diagnosis and Reagents 2</b> (Oral presentation 113-120)	<b>Research capacity</b> Fostering the next generation of malaria researchers in Africa: Gaps and emerging opportunities (WHO/TDR)	<b>Vector biology</b> Driving impact from entomology: Implications of entomological data on vector control implementation in southern Africa (CHAI)
16:15-16:45	Coffee break			
16:45 - 18:30	Scientific session 20	Scientific session 21	Symposium 31	Symposium 32
	<b>Malaria and Pregnancy 2</b> (Oral presentation 145-152)	<b>Drug Resistance 1</b> (Oral presentation 153-160)	<b>Treatment and community management</b> Overcoming barriers to access to malaria care through integrated community case management and engagement of the private sector (WHO)	<b>Diagnosis and reagents</b> Emerging diagnostic solutions to improve the quality of malaria diagnosis (WHO)
18:30 - 19:30				

## Wednesday, April 18, 2018

Time	Auditorium	Oval room	PC room	Meeting room 205
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:00	<b>Plenary session 4:</b> New Medicines for the Control and Elimination of Malaria - Dr. Timothy Wells			
09:00 - 09:30	Malaria Vector Biology and control - Hillary Ranson		Symposium 33	Symposium 34
09:30 - 09:45	Turbo talks		<b>Malaria and Pregnancy</b> Safety and efficacy of ACTs for the treatment of malaria in all trimesters of pregnancy and the impact of drug resistance on the effectiveness of intermittent preventive therapy with sulphadoxine-pyrimethamine for the prevention of malaria in pregnancy in sub-Saharan Africa (WWARN)	<b>Control and Elimination</b> Approaching elimination in Africa using population-wide interventions: lessons from the field (MESA)
09:45 - 10:45	<b>Panel discussion 3</b> Vector control : Moderator - Prof Lucien Manga Discussants - Prof Charles Wondji , Prof Jude Bigoga, Prof. Maharaz Rajendra			
10:45 - 11:15	Coffee break			
11:15 - 13:00	Symposium 37	Scientific session 23	Scientific session 24	Symposium 38
	<b>Control and Elimination</b> The role of reactive case detection strategies in malaria elimination (PATH) 4 (Oral presentation 1-8)	<b>Vector Biology 2</b> (Oral presentation 169-176)	<b>Integrated vector management 2</b> (Oral presentation 177-184)	<b>Drug efficacy:</b> DHA/PQP : Actualite clinique de cette combinaison therapeutique dans le traitement du paludisme. Presentation des dernieres etudes realisees en Afrique Noire Francophone (Apex Pharma)
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Scientific session 27	Scientific session 28	Symposium 41	Symposium 42
	<b>Control and Elimination 3</b> (Oral presentation 201-208)	<b>Vector Biology 3</b> (Oral presentation 209-216)	<b>Integrated vector management</b> Housing and malaria: progress in a randomized controlled trial to evaluate the impact of 'household screening + eave tubes' on malaria transmission in central Cote d'Ivoire (PSU)	<b>Integrated vector management</b> Decision making in National Malaria Control Programmes for the procurement and deployment of new vector control tools (Vestergaard)
16:15 - 19:30	MIM GENERAL ASSEMBLY			
	Sight seeing / Networking and satellite meetings			
19:30 - 22:30	MIM Night / Dinner			

Time	Meeting room 201	Meeting room 202	Tente A	Tente B
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:00				
09:00 - 09:30	Symposium 35	Scientific session 22		Symposium 36
09:30 - 09:45	<b>Surveillance</b> Strengthening the use of health information with technology: malaria surveillance with DHIS2 (PSI)	<b>Late Breaker 1</b> (Oral presentation 161-168)	<b>Malaria and Pregnancy</b> The potential of dihydroartemisinin-piperazine (DP) for intermittent preventive therapy (IPTp) to prevent malaria in pregnancy: results from recent trials in Africa (MMV)	<b>Health System</b> Optimizing health facility survey information to assess and improve quality of malaria care (MEASURE)
09:45 - 10:45				
10:45 - 11:15	Coffee break			
11:15 - 13:00	Scientific session 25	Scientific session 26	Symposium 39	Symposium 40
	<b>Drug Efficacy 1</b> (Oral presentation 193-200)	<b>Treatment and community management</b> (Oral presentation 185-192)	<b>Research capacity</b> Empowering African institutions and future malaria research leaders through capacity development and partnerships (EDCTP)	<b>Epidemiology and modelling</b> Pvixax in sub saharan Africa Moderator : Louis Miller
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Scientific session 29	Scientific session 30	Symposium 43	Symposium 44
	<b>Drug Efficacy 2</b> (Oral presentation 225-232)	<b>Parasites and System biology 2</b> (Oral presentation 233-240)	<b>Human anopheles:</b> Challenges of Malaria Elimination in Africa Molecular Epidemiology for Malaria Elimination (HSPH)	<b>Treatment and community management</b> Improving Severe Malaria Outcomes (MMV)
16:15 - 19:30	MIM GENERAL ASSEMBLY			
	Sight seeing / Networking and satellite meetings			
19:30 - 22:30	MIM Night / Dinner			

## Thursday, April 19, 2018

Time	Auditorium	Oval room	PC room	Meeting room 205
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 10:30				
10:30 - 11:00	<b>Plenary session 5</b> Malaria Vaccine - Prof. Stephen Hoffman Malaria ChemoPrevention - Sir. Brian Greenwood		Symposium 45	Symposium 46
11:00 - 11:30				
11:30 - 11:45	Turbo talks		<b>Drug efficacy</b> Pharmacoenhancers In Malaria Chemotherapy (Muranga Univ)	<b>Health system</b> From innovation to scale-up: Unitaids model to maximize the effectiveness of global health response (WHO)
11:45 - 12:45	<b>Panel discussion 4</b> Vaccines perspectives : Moderator - Prof. Ogobara Doumbo Discussants - Dr. Stephen Hoffman, Prof. Adrian Hill, Dr. Sodiomon Sirima, Dr Ashley Birkett			
12:45 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Scientific session 31	Symposium 51	Symposium 52	Symposium 53
	<b>Vaccine trials in sub-Saharan Africa</b> (Oral presentation 241-248)	<b>Chemoprevention</b> Seasonal Malaria Chemoprevention, what s next? (MMV)	Controlled Human Malaria Infection Model in sub- Saharan Africa	<b>Integrated vector            management</b> Technology and Vector Control: How Real-time Data, Mobile tools, and Mapping can Improve Operations and Results (Abt/PMI)
16:15 - 16:45	Coffee break			
16:45 - 18:30	Symposium 56	Scientific session 34	Symposium 57	Scientific session 35
	<b>Vaccines:</b> Introduction to the Malaria Vaccine Implementation Programme: The Pilot Implementation and Evaluation of the RTS,S/ AS01 Malaria Vaccine in Children in Ghana, Kenya, and Malawi Moderateur: Hamel Mary	<b>Chemoprevention</b> (Oral presentation 265-272)	<b>Social and health economic</b> Sanofi's Social and Behavior Change Communication (SBCC) initiatives and tools: Promoting & assessing a behavior change approaches for the fight against malaria [ SANOFI] 2	<b>Pathogenesis and severe            malaria 2</b> (Oral presentation 273-280)+C10:112
18:30 - 19:30	Young scientist session			

Time	Meeting room 201	Meeting room 202	Tente A	Tente B
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 10:30				
10:30 - 11:00	Symposium 47	Symposium 48	Symposium 49	Symposium 50
11:00 - 11:30	<b>Epidemiology and modelling</b> Monitoring plasmodium diversity for malaria elimination in Africa: Progress and updates from the Plasmodium diversity network Africa. (NIMR)	<b>Health Systems</b> Evaluating Malaria Programs in Changing Contexts: A review of methodological approaches and how future evaluations can adapt to address challenges (MEASURE Evaluation, ICF)	<b>Control and Elimiation</b> Interrupting malaria transmission within and across country borders: Lessons from the Southern Africa Elimination 8 Initiative (SE8)	<b>Vector biology</b> Integrating phenotypic and genomic approaches to identify and combat impacts of insecticide resistance (LSTM)
11:30 - 11:45				
11:45 - 12:45				
12:45 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Scientific session 32	Scientific session 33	Symposium 54	Symposium 55
	<b>Late Breaker Session 2</b> ((Oral presentation 249-256)	<b>Integrated vector management 3</b> (Oral presentation 257-264)	<b>Control and Elimination</b> One Merck for Malaria : The Integrated Malaria Program (Merck GHI)	<b>Control and Elimination:</b> Effectiveness and efficiency of reactive focal interventions for malaria elimination: current evidence (LSHTM)
16:15 - 16:45	Coffee break			
16:45 - 18:30	Scientific session 36	Scientific session 37	Symposium 58	Symposium 59
	<b>Epidemiology 3</b> (Oral presentation 281-288)	<b>Vector biology 4</b> (Oral presentation 289-296)	<b>Control and Elimination</b> Leaving no-one behind: achieving universal access to malaria interventions (WHO)	<b>Integrated vector management</b> Drivers and diversity of residual malaria transmission: implications for national malaria programs (Malaria Consortium)
18:30 - 19:30				

## Friday, April 16, 2018

Time	Auditorium	Oval room	PC room	Meeting room 205
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:00	<b>Plenary session 6:</b> Malaria vaccine : Adrian Hill			
09:00 - 09:30	Malaria Drug Resistance - Prof. Chris Plowe		Symposium 60	Scientific session 38
09:30 - 09:45	Turbo talks			
09:45 - 10:45	<b>Panel discussion 5</b> Research, training and capacity building : Moderator - Prof. Kevin Marsh Discussants - Dr Tom Kariuki, Dr. Isabella Ocholla, Dr Olumide Ogundahunsi, Pr Brian Greenwood, Wilfred Mbacham		<b>Vaccines:</b> Progress in Malaria Transmission-Blocking Vaccine Development Moderator : Duffy Patrick	<b>Control Elimination 4</b> (Oral presentation 297-304)
10:45 - 11:15	Coffee break			
	Scientific session 39	Symposium 65	Symposium 68	Scientific session 40
11:15 - 13:00	<b>Drug Resistance 2</b> (Oral presentation 313-320)	<b>Epidemiology and modelling</b> Assessing the feasibility of malaria burden reduction and elimination in Senegal & The Gambia: Application of the Elimination Scenario Planning Tool (Imperial College of London)	<b>Vaccines:</b> The pathway to licensure and implementation of Sanaria® PfSPZ Vaccine; Moderator : Ogobara Doumbo (MVI)	<b>Control Elim 5</b> (Oral presentation 321-328)
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
			Symposium 66	
14:30 - 16:15			<b>Vaccines:</b> Progress and challenges in bringing Sanaria® PfSPZ-CVac to Phase 3 clinical trials and licensure in Africa Moderator : Kremnser, Billingsley (MVI)	
16:15 - 17:15	Closing ceremony			



Time	Meeting room 201	Meeting room 202	Tente A	Tente B
07:30 - 08:30	Registration desk and exhibition opens			
08:30 - 09:00				
09:00 - 09:30	Symposium 61	Symposium 62	Symposium 63	Symposium 64
09:30 - 09:45	<b>Vector biology</b> Delivering vector control solutions and impact in challenged public health markets (IVC)	<b>Integrated vector management</b> Environmental Compliance Concerns and Solutions that Arise from Malaria Control via Indoor Residual Spraying (IRS) (Apt/PMI)	<b>Vector biology</b> A cluster-randomized trial to assess impact and cost-effectiveness of combining indoor residual spraying with long-lasting insecticidal nets for malaria control in central Mozambique (CISM)	<b>Integrated vector management</b> Controlling vector-borne diseases through the built environment (Durham University)
09:45 - 10:45				
10:45 - 11:15	Coffee break			
11:15 - 13:00	Scientific session 41	Scientific session 42	Scientific session 43	Symposium 67
	<b>Human Anopheles</b> (Oral presentation 305-312)	<b>Bio ethics and Research capacity</b> (Oral presentation 329-336)	<b>Malaria and Pregnancy 3</b> (Oral presentation 337-344)	<b>Child bed net use following implementation of malaria lesson plans and bed net distribution in primary schools on Bioko Island, Equatorial Guinea (MCDI)</b>
13:00 - 14:30	Lunch and poster session / Meet the professors, press conference			
14:30 - 16:15	Scientific session 44	Symposium 70	Symposium 71	Symposium 72
	<b>Immunology 2</b>	<b>Treatment and community management</b> Designing and implementing sustainable malaria case management and surveillance to strengthen the delivery of community and private health services: the importance of data to inform evidence-based planning (CHAI)	<b>Surveillance</b> Data sharing in malaria research, treatment and control: Case studies from sub-Saharan Africa (WWARN)	
16:15 - 17:15	Closing ceremony			

# Keynote Speakers



## Prof Harold Varmus

Co-recipient of the 1989 Nobel Prize in Physiology or Medicine for studies of the genetic basis of cancer

Harold Varmus, M.D., co-recipient of the 1989 Nobel Prize in Physiology or Medicine for studies of the genetic basis of cancer, joined the Meyer Cancer Center of Weill Cornell Medicine as the Lewis Thomas University Professor of Medicine in April, 2015. He is also a Senior Associate Member of the New York Genome Center, where he helps to develop programs in cancer genomics. Previously, Dr. Varmus was the Director of the National Cancer Institute for five years, the President of Memorial Sloan-Kettering Cancer Center for 10 years, and Director of the National Institutes of Health for six years.

A graduate of Amherst College and Harvard University in English literature and of Columbia University in medicine, he was further trained at Columbia University Medical Center, the National Institutes of Health, and the University of California San Francisco (UCSF), before becoming a member of the UCSF basic science faculty for over two decades. He is a member of the U.S. National Academies of Sciences and Medicine, is involved in several initiatives to promote science and health in developing countries, and serves on advisory groups for several academic, governmental, philanthropic, and commercial institutions. These positions currently include co-chair of the Mayor's LifeSci NYC and member of advisory boards for Chan-Zuckerberg Science and three biotechnology companies (Surrozen, Dragonfly, and PetraPharma).

The author of about 400 scientific papers and five books, including a recent memoir entitled *The Art and Politics of Science*, Varmus was a co-chair of President Obama's Council of Advisors on Science and Technology, a co-founder and Chairman of the Board of the Public Library of Science, and chair of the Scientific Board of the Gates Foundation Grand Challenges in Global Health.



## Dr Pedro L. Alonso

Director of the WHO Global Malaria Programme in Geneva, Switzerland

Dr Pedro L. Alonso is the Director of the WHO Global Malaria Programme in Geneva, Switzerland. The Global Malaria Programme is responsible for the coordination of WHO's global efforts to control and eliminate malaria and sets evidence-based norms, standards, policies and guidelines to support malaria-affected countries around the world. A national of Spain, Dr Alonso has spent over 30 years in public health. His scientific research work has focused on key determinants of morbidity and mortality in the most vulnerable population groups. He has published over 300 articles in international peer-reviewed journals – primarily on malaria treatment, vaccine trials and preventive therapies – and has served on several national and international committees. He is committed to capacity building of both institutions and individuals, primarily in Africa.

Prior to taking up the WHO position, Dr Alonso was Director of the Barcelona Institute for Global Health (ISGlobal), Professor of Global Health at the University of Barcelona, and President of the Governing Board of the Manhica Foundation and the Manhica Health Research Centre in Mozambique...



## Prof Fred Newton Binka

Clinical Epidemiology, School of Public Health, University of Health and Allied Sciences, Ho

Fred Binka is a Professor of Clinical Epidemiology, School of Public Health, University of Health and Allied Sciences, Ho. Previously he was the Coordinator of the WHO Emergency Response to Artemisinin Resistance in the Greater Mekong sub-region of Asia. He is the Foundation Vice-Chancellor of the University of Health and Allied Sciences, Ho, Ghana established by the Government of Ghana in March 2012.

He also served as Dean of the School of Public Health at the University of Ghana. He worked with the Ministry of Health in Ghana for over 20 years, during this period he established the internationally acclaimed Navrongo Health Research Centre, where he conducted several large-scale intervention studies including the Insecticide treated Bednets study, in Ghana. He also established, the Indepth-Network, made up of 54 field sites in 24 developing countries in Africa and Asia.

Professor Binka has served on more than a dozen WHO expert committees and panels, was Chair of the GAVI Independent Review committee for 4 years and member of the Malaria advisory Committee (MPAC), a Trustee of several International NGO's working on Health especially malaria, such as Innovative Vector Control Consortium (IVCC) and Malaria Consortium based in the UK. A member of the Board of the International Vaccine Institute (IVI), Seoul, Korea and a member of the past Council of the Ghana Health Service, Ministry of Health Ghana. Prof Binka was the first Recipient of Rudolf Geigy Award 2001 from the R. Geigy Foundation, the Ronald Ross Medal, 2010 from the London School of Hygiene and Tropical Medicine for his work on malaria and Honorary Fellowship of the American Society of Tropical Medicine and Hygiene in 2015.

He recently received national award from the President of Ghana, The Officer of the Order of the Volta (OV). His capacity development efforts also led to the Dr. Pascoal Moccumbi award by EDCTP in 2016.



## **Dr Halima Abdullah Mwenesi**

Director, Infectious Diseases Division, Global Health Programs

Halima Abdullah Mwenesi is Director, Infectious Diseases Division, Global Health Programs, Global Health, Population and Nutrition group, FHI 360; Washington, DC. She was awarded a PhD in Public Health and Policy for a study focused on understanding the psycho-social aspects and complexities of severe life-threatening malaria in the African Child in 1993; at the London School of Hygiene and Tropical Medicine, University of London, UK. Dr. Mwenesi's contribution to the social aspects of the disease at the Wellcome Trust, UK supported; University of Oxford – Kenya Medical Research Institute (KEMRI) field-hospital program at Kilifi formed the foundation for several decades of subsequent work and contributed to the success of the program, to become one of the leading institutions in Africa, including African science leaders, and is recognized internationally as a center of excellence. Her work pioneered new thinking in the fight against malaria at the household and community levels that continues to be relevant to this day.

While at KEMRI, Dr. Mwenesi rose to the position of Senior Research Scientist, and Head of the Applied Social Science Research Division, Centre for Public Health Research, winning grants from various international organizations and establishing collaborations with groups in Europe and the USA. In the mid-90's she was hired by the World Health Organization to coordinate an important program to introduce insecticide-treated nets for malaria control in Africa, coordinating operational research in 24 African countries. Her contribution in this endeavor has had lasting impact on malaria control especially at household and community level – with ITNs playing a major role in the reduction of malaria cases in Africa in the last 2 decades.

Dr. Mwenesi was then selected to become the second chairperson of the multilateral Initiative on Malaria/TDR Task Force on Malaria Research Capability Strengthening in Africa for five years (2001-2007) – maximizing the impact of scientific research on malaria in Africa through promoting capacity building and facilitating global collaboration and coordination of malaria research with an emphasis on South-North collaboration. Dr Mwenesi then worked with an international organization rising to the position of Technical Director on a project that lay the foundation for ITN private sector growth and technology transfer across Africa.

She has had an unwavering commitment to the development of science in Africa, serving as a senior advisor to many WHO, Wellcome Trust and regional Universities, including initiatives such as Developing Excellence in Leadership, Training and Science in Africa (DELTA), which works under the Alliance for Accelerating Excellence in Science in Africa (AESA). Dr. Mwenesi continues to be a thought leader in the malaria space through participation in the global RBM partnership to end malaria and being strong member of a select group of global experts and public health professional that guide technical and policy direction on international efforts to control and eliminate malaria across the globe. She now, at FHI 360, leads a portfolio that includes malaria, tuberculosis (TB) and Neglected tropical diseases which has programs globally.



## Prof Jean-Paul Moatti

Chief Executive Officer of the French National Research Institute for Sustainable Development

Jean-Paul Moatti is the Chief Executive Officer of the French Research Institute for Development (IRD-France) since March 2015. Prior to his appointment, Jean-Paul Moatti was Professor of Economics at Aix-Marseille University (AMU) and Director of the IRD/INSERM/AMU joint research unit "Economic and social sciences for health and the process of medical information" (SESSTIM).

From the 1990s, Jean-Paul Moatti focused his research on developing countries, contributing in particular to the fight against pandemics such as HIV/Aids and malaria. His research aimed more specifically at ensuring access to essential medicines, strengthening health systems and reducing health inequalities. He always carried out his research in partnership with scientists from the relevant countries and worked on the field in South Africa, Cameroon, Ivory Coast, Mali, Palestine, North Africa and Middle East. His research led him to be a member of the Advisory Committee for Health Research (AHCR) to the Executive director of the World Health Organization (WHO) and the Executive Director of the Global Fund for Combating Aids, tuberculosis and malaria (GFATM).

Jean-Paul Moatti is the author of more than 350 articles in scientific journals, ranging from economics and social sciences to biomedicine and public health. He coordinated for example a special issue of the Lancet in 2016 on "France, Nation and World", dedicated to the influence of the French model on global health policy.



## Dr Timothy Wells

Chief Scientific Officer of Medicines for Malaria Venture (MMV)

Dr Timothy Wells has been the Chief Scientific Officer of Medicines for Malaria Venture (MMV) since 2007, coordinating the development pipeline of new medicines from discovery through to post-approval studies. During his time at MMV he has led the implementation of collaborative projects based on high content screening, developments in translational medicine, and open access drug discovery.

For the latter activity, MMV was given the Open Data Institute award from internet pioneer Tim Berners-Lee in 2015. Prior to joining MMV, he had over 20 years' experience in drug discovery and development. From 1997 to 2006, he was the Head of Research for the Swiss biotech company Serono. He is a non-executive director at Kymab, developing next-generation monoclonal antibody technologies, and an interest to their applications in neglected disease. He was an expert adviser in 2016 on redrafting EU legislation to prevent medicines being exported for torture.

He has 220 peer reviewed publications, and received his PhD in Chemistry in 1987, on the engineering of enzyme catalysis from Imperial College, London; his ScD in Biology in 2009, from Cambridge University for his work on cytokine biology. He is a fellow of the UK's Royal Society of Chemistry and of the UK Academy of Medical Sciences.



## **Prof Hilary Ranson**

Chief Scientific Officer of Medicines for Malaria Venture (MMV)

Professor Hilary Ranson is a vector biologist whose research focuses on the control of mosquito borne disease. She is an expert in insecticide resistance its impact on vector control.

Her research group at the Liverpool School of Tropical Medicine is developing and validating molecular and bioassay tools to monitor insecticide resistance in African malaria vectors. In addition, with partners in multiple countries, she is investigating the impact of insecticide resistance on malaria control and evaluating alternative products and strategies to overcome resistance.

Professor Ranson has initiated and led several multidisciplinary international vector control consortia including the FP7 funded AvecNet and MIRA, a Wellcome Trust Collaborative Award to understand the performance of insecticide treated nets under contemporary malaria transmission settings.

She is deeply committed to increasing capacity in vector control and is the lead scientist of a major research capacity strengthening programme, the 'Partnership for Increasing the Impact for Vector Control', funded by the UK government.

Professor Ranson is Head of the Department of Vector Biology at the Liverpool School of Tropical Medicine. She also acts a technical advisor to the Innovative Vector Control Consortium and is member of the WHO Vector Control Advisory Committee.



## Dr Stephen L. Hoffman

MD, DTMH, DSc (hon), FIDSA, FASTMH, FAAA, FAAM, CAPT MC USN (ret)

Dr. Hoffman is the founder, chief executive and scientific officer of Sanaria Inc., a company dedicated to developing a whole sporozoite (PfSPZ) malaria vaccine to halt transmission and eliminate malaria, and chairman Protein Potential LLC, a company focused on developing vaccines for shigellosis, enterotoxigenic *E. coli* diarrhea, and typhoid fever.

From 1980-1984 he was chief of clinical investigation at NAMRU-2 in Jakarta, Indonesia. From 1987-2001 he was malaria program director, Naval Medical Research Center, where his team were leaders in subunit malaria vaccine development and sequencing the *Plasmodium falciparum* genome and published the first studies in the world showing DNA vaccines elicited killer T cells in humans. In 2001 he joined Celera Genomics as Sr. VP biologics and created a program to 1) utilize genomics and proteomics to produce biopharmaceuticals, initiating the field of personalized (precision) medicine, and 2) sequence the genome of the mosquito, *Anopheles gambiae*.

He has held several professorships, chairs or serves on multiple advisory boards, is past president of the American Society of Tropical Medicine and Hygiene, authored > 425 scientific publications, and has numerous patents. He is the most highly cited author in the world for scientific papers on malaria published between 1995 and 2005, was listed as the third most influential person in the world vaccine industry in 2015 when he received the Vaccine Industry Excellence Award for Best Biotech CEO.

He received his BA from the University of Pennsylvania, MD from Cornell, and Diploma in Tropical Medicine and Hygiene from London School of Hygiene and Tropical Medicine, and did residency training at UC San Diego. He was elected to membership in the National Academy of Medicine in 2004, and received the Distinguished Alumni Award from Weill Cornell Medical College in 2016.





## Sir Brian Greenwood

Faculty of Infectious and Tropical Diseases, London School of Hygiene & Tropical Medicine

After qualifying in medicine at Cambridge University, Brian Greenwood spent 15 years working in Nigeria, first at University College Hospital, Ibadan and then at Ahmadu Bello University, Zaria where he helped to start a new medical school and where he developed his research interests in malaria and meningitis. In 1980, he moved to The Gambia where he spent the next 15 years as director of the UK's Medical Research Council Laboratories, focusing his research on the prevention of the major infectious diseases prevalent in West African children including malaria, pneumonia and meningitis.

In 1996, he moved to the London School of Hygiene & Tropical Medicine where he has maintained his research on the prevention of malaria, meningococcal and pneumococcal infections in Africa, including trials that led to the development of Seasonal Malaria Chemoprevention, and he is currently supporting a trial of the use RTS,S/AS01 as a seasonal malaria vaccine, continuing his 20 year involvement in the development and evaluation of this vaccine. He is also supporting an evaluation of an Ebola vaccine in Sierra Leone.

From 2000 – 2008, he coordinated the Gates Malaria Partnership, a programme of malaria research and capacity development in several countries in Africa and, from 2008 – 2017, he coordinated a successor malaria research capacity development initiative, the Malaria Capacity Development Consortium (MCDC). MCDC has been followed by a new research capacity development programme (MARCAD) led by the University of Dakar, Senegal which he supports.

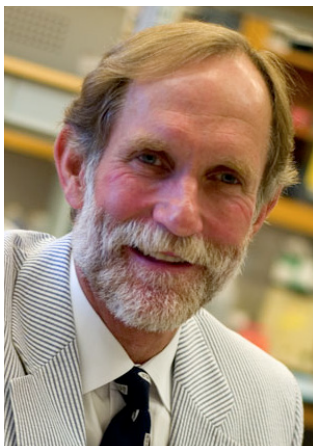


## Prof Adrian Hill

Director of the Jenner Institute at Oxford

He trained in medicine at Trinity College, Dublin and Oxford and was awarded a DPhil for population genetic studies of the thalassaemias in 1986 before further clinical training in infectious diseases. His research group at the Wellcome Trust Centre for Human Genetics in Oxford identified variants in genes that affect resistance to malaria, tuberculosis, sepsis and other infectious diseases. These findings have informed vaccine development helping his group to design and develop leading new vaccines for malaria. These are currently in clinical trials in the UK and at numerous outstanding units in Africa.

In 2005 he was appointed founding Director of the Jenner Institute at Oxford, an initiative aimed at accelerating public sector vaccine development for a range of infectious diseases, and partnered with the Pirbright Institute on veterinary vaccine development. The Jenner Institute is now the largest academic vaccine centre in Europe with clinical-stage new vaccine programmes against ten diseases. The largest of these is malaria in which over twenty new vaccines have entered clinical trials targeting all four stages of the parasite's life cycle and both *P. falciparum* and *P. vivax*. He has published over 550 research papers with over 55,000 citations. He is a Fellow of the UK Academy of Medical Sciences and the Royal College of Physicians, and both a Wellcome Trust and UK NIHR Senior Investigator.



## Prof Peter Agre

Nobel Prize in Chemistry for discovering aquaporins

JA native Minnesotan, Peter Agre studied chemistry at Augsburg College (B.A. 1970) and medicine at Johns Hopkins (M.D. 1974). He completed his residency at Case Western Reserve University in Cleveland and an Oncology Fellowship at the University of North Carolina at Chapel Hill. Agre joined the Johns Hopkins School of Medicine faculty in 1984 and rose to the rank of Professor of Biological Chemistry and Professor of Medicine.

In 2005, Agre moved to the Duke University School of Medicine where he served as Vice Chancellor for Science and Technology and James B. Duke Professor of Cell Biology. Agre returned to Johns Hopkins in January 2008, where he is a Bloomberg Distinguished Professor and Director of the Malaria Research Institute at the Bloomberg School of Public Health.

In 1992, Agre's lab became widely recognized for discovering the aquaporins, a family of water channel proteins found throughout nature and responsible for numerous physiological processes in humans—including kidney concentration, as well as secretion of spinal fluid, aqueous humor, tears, sweat, and release of glycerol from fat.

Aquaporins have been implicated in multiple clinical disorders—including fluid retention, bedwetting, brain edema, cataracts, heat prostration, and obesity. Water transport in lower organisms, microbes, including the malaria parasite, and plants involve aquaporins. In 2003, Agre shared the Nobel Prize in Chemistry for discovering aquaporins.

Agre is a member of the National Academy of Sciences and the Institute of Medicine for which he chaired the Committee on Human Rights. From 2009–2011, Agre served as President of the American Association for the Advancement of Science.



## Prof Christopher Plowe

MD, MPH, FASTMH Director, Duke Global Health Institute Duke University, Durham, NC USA

An acclaimed scientist and malariologist, Chris Plowe is recognized for his groundbreaking work on the molecular epidemiology of drug-resistant and «vaccine-resistant» malaria. He is the director of the Duke Global Health Institute, which works to reduce health disparities by bringing together interdisciplinary teams to solve complex health problems and train the next generation of global health leaders.

Before joining Duke University in 2018, Plowe was the Frank M. Calia MD Professor of Medicine and founding director of the Institute for Global Health at the University of Maryland. He has spent many years working to strengthen capacity for malaria research and training in Africa, in longtime partnership with the Malaria Research and Training Center in Mali and the Blantyre Malaria Project in Malawi.

He co-directs an NIH International Center of Excellence for Malaria Research in Myanmar, China and Bangladesh with his wife and colleague, Myaing Myaing Nyunt MD PhD MPH, who is also based at Duke. Born and raised in South Dakota, USA, Plowe received degrees in philosophy and in medicine from Cornell University and in public health from Columbia University. He trained in internal medicine at St.

Luke's Hospital in New York City, in malaria research at the U.S. National Institutes of Health and in infectious diseases at Johns Hopkins University. He is a fellow and past president of the American Society of Tropical Medicine and Hygiene...

## Plenary speakers Abstract

### Sunday 15<sup>th</sup> April

#### The Multilateral Initiative on Malaria and Global Health

**Harold Varmus MD**

**Weill Cornell Medicine and New York Genome Center**

I am not an expert on malaria---my fields of medical science are cancer biology, genetics, and virology---but meetings about malaria in the 1990's (including the critical meeting in Dakar in 1997 that led to the formation of MIM as a novel means to organize and support research on malaria) played a critical role in my approach to research designed to advance global health more broadly.\*

Fundamental to my views are the convictions that global health research needs to be conducted in places where diseases of the poor are common, not just in laboratories in the advanced economies; that talented people in all countries should be recruited to the challenges of combatting disease; that nations should work together to pursue common goals in medicine; and that strong centers for training, research, and health care are important organizations for sustaining such efforts.

In recent years, as Director of the US National Cancer Institute from 2010 to 2015, I used these principles, learned during my earlier experiences in helping to launch MIM, to promote international cancer research, in response to the growing incidence of cancers in low and middle income countries, new developments in cancer prevention and treatment, and the persistence of certain cancers that occur at higher frequencies in selected portions of the world. I will discuss the similarities and differences in approach to clinical and scientific problems posed by malaria (and other infectious diseases) and by various kinds of cancer (many of which are also caused by infectious agents).

\*Recent examples of how I think about global health and how governments can help to improve it can be seen in a report written for the National Research Council in 2009 (<https://www.nap.edu/download/12642>) and in lectures given on behalf of the Fulbright Commission in 2012 (<http://www.sciencediplomacy.org/article/2014/medical-research-centers-in-mali-and-uganda>).

### Monday 16<sup>th</sup> April

#### Challenges and perspectives in ending malaria; the role and contributions of the Health systems

**Professor Fred Newton Binka**

**Professor of Clinical Epidemiology, School of Public Health, University of Health and Allied Sciences, Ho, Ghana**

Significant progress towards malaria control and elimination has been made in the past 2 decades in Asia, Latin America and some African countries. However, malaria still remains a major public health problem in sub-Saharan Africa where health systems are quite weak. Investment in research has yielded numerous and highly efficacious tools.

Though these tools are efficacious, the current health system leads to low effectiveness of these tools due to the complex nature of the systems with huge gaps in access, availability, acceptability, compliance, targeting accuracy and cost effectiveness. The health systems in these endemic countries are operating in challenging environments including the private sector, in spite of its key role in the era of malaria control and elimination strategy. Main components to consider in the health system include (i) Universal access to prevention, diagnosis and treatment (ii) acceleration of efforts to achieve elimination through inter-sectorial approach (iii) integration of malaria surveillance as a core activity of the health systems and well trained and motivated workforce.

The current health systems needs to expand beyond the vertical approach of access to health promotion, treatment of asymptomatic cases through committed surveillance and vector control to include several ministries such as Environment, Education, Defence and Finance to form an Operational National Elimination task force with strong political leadership.

As elimination target is being achieved, more resources and political will is mandatory to sustain key strategies especially surveillance. Health systems must be revolutionized in-order to achieve our objectives of malaria control, elimination and malaria free status.

## Tuesday 1<sup>7th</sup> April

---

### Sustainable Development Goals and the economics of Malaria

Pr Jean Paul MOATTI

#### CEO of French National Research Institute for Sustainable Development (IRD)

Malaria still claims a heavy human and economic toll, specifically in sub-Saharan Africa. Even though the causality between malaria and poverty is presumably bi-directional, malaria negatively contributes to sustainable development of the continent.

The presentation will provide a synthesis of existing evidence of the economic consequences of malaria, notably on human capital accumulation and productivity. It will discuss the interactions between the fight against malaria and the other targets, notably universal health coverage, of the Sustainable Development Goal (SDG 3) on health and human well-being adopted by the United Nations for the 2015-2030 period.

It will also discuss synergies, but also potential conflicts, between this health SDG including its malaria component and the 16 other SDGs. In particular, it will discuss how policies aimed at reducing the incidence of malaria and its impact, like the distribution of insecticidal bed-nets and artemisinin combinations at highly subsidized prices, may fail in presence of a very high level of extreme poverty, as observed in the African region.

## Wednesday 18<sup>th</sup> April

---

### New Medicines for the Control and Elimination of Malaria

Timothy N.C Wells

#### Medicines for Malaria Venture, 20 rte de Pre-Bois, Geneva SWITZERLAND

Over the last decade, medicines have become vital to the fight to control and eliminate malaria. Medicines for Malaria Venture is a product development partnership which works with academia and industry, the private and public sector, science and medicine to catalyse the discovery, development and delivery of new, child-friendly medicines. Working with partners from around the world we have registered new fixed-dose artemisinin combination

therapies, which have become standard of care. For severe malaria we have helped make artesunate available at an affordable price, first as an injection, and now in suppositories. In addition, we have been a partner in the process of deploying medicines for protecting children from malaria via Seasonal Malaria Chemoprevention. Together, these medicines have treated or protected hundreds of millions of children over the last few years.

In the past decade, we have developed a new generation of molecules active against the parasite, some of which have progressed to phase II clinical trials (see [www.mmv.org](http://www.mmv.org) for details). These could play a critical role in the malaria elimination agenda. In addition, we have supported pioneering models for discovering compounds, and cutting-edge processes to ensure new medicines will be active against not only existing resistant strains of malaria, but strains which could emerge in the future. One of the pillars of our drug development strategy is being able to test promising antimalarial compounds in controlled human infection models, allowing us to get an early assessment of activity in human subjects with no immune support. This is critical if we are to make medicines to treat and protect infants.

Over the next decade it will be imperative to ensure the optimal use of current tools if we are to drive down both the incidence and transmission of malaria. MMV's strong pipeline will ensure that should multidrug resistant malaria start to spread, medicines to combat it are ready and available

### Insecticide resistance in African malaria vectors: how worried should we be?

Professor Hilary Ranson

#### Head of the Department of Vector Biology at the Liverpool School of Tropical Medicine

Resistance to pyrethroid insecticides is increasing in distribution and intensity in African malaria vectors. However the impact of this resistance on the performance of vector control tools such as insecticide treated nets (ITNs) is unclear.

Some studies have shown that ITNs still provide personal protection even if the local mosquito population is resistant to insecticides but the extent to which this protection is provided by the physical barrier of the net

rather than the insecticide itself is not fully understood. To address this studies that look at the community wide impact of insecticide resistance are needed. However this is not straightforward and challenges associated with such studies, and alternative approaches to address this issue will be discussed.

A second major limitation of our understanding of the impact of resistance relates to the way in which we measure resistance. Most studies focus solely on short-term effects with lethality or survival as the only outcome. However recent research has shown that even mosquitoes that are resistant to these immediate effects of insecticide exposure may be impacted in other ways that reduce their capacity to transmit the malaria parasite. Understanding how insecticide exposure influences the life long fitness and behavior of mosquitoes, and how these traits are affected by insecticide resistance is critical to predicting the expected impact of pyrethroid resistance on malaria control tools.

Recent data from laboratory and field studies, plus outputs from modeling studies, will be presented to outline the current status of our understanding of the impact of insecticide resistance, identify key knowledge gaps and stimulate debate about the future of insecticide based interventions for malaria control.

## Thursday 19<sup>th</sup> April

---

### **From parasite biology to T cells to African infants to genome editing and back: Toward licensure of the first and future generations of live parasite *Plasmodium falciparum* sporozoite (PfSPZ) vaccines**

**Stephen L. Hoffman**

**MD, DTMH, DSc (hon), FIDSA, FASTMH, FAAA, FAAM, CAPT MC USN (ret)**

Clinical trials in humans immunized by exposure to bites of *Plasmodium falciparum* (Pf) sporozoite (SPZ)-infected mosquitoes, attenuated by irradiation or antimalarial drugs, demonstrated high level, durable protection against controlled human malaria infection (CHMI). The parasites that induce this immunity are biologically complex. The subunit vaccine approach seeks to unravel that complexity and identify a few important targets from the >5,000 proteins in the parasite's proteome, and induce specific protective immunity against these targets. The whole

PfSPZ approach does not try to distinguish potential targets; rather all parasite proteins/epitopes during the pre-erythrocytic stages are targets. In this window of opportunity protection against disease and transmission can be established. A focused, intense approach to the biology of the parasite life cycle allowed Sanaria to develop a process for using aseptically reared *Anopheles stephensi* mosquitoes as the bioreactors to produce aseptic, purified, cryopreserved PfSPZ which comprise the immunogens in Sanaria's PfSPZ-based vaccines. These PfSPZ are uniquely distributed internationally in liquid nitrogen vapor phase and administered by direct venous inoculation, which, respectively, have important advantages over traditional cold chains and methods of administration. >1,800 subjects have received >5,000 injections of PfSPZ-based products in > 30 clinical trials at 6 U.S. sites, and in 4 European and 6 African countries; a trial in Indonesia will begin in 2018. In all double blind, normal saline placebo controlled trials there have been no differences in adverse events between vaccinees and controls. 80-100% vaccine efficacy has been demonstrated against homologous (same Pf strain as in the vaccine) and/or heterologous (different strain) CHMI in 6 clinical trials in the U.S., Germany, Tanzania, and Mali. Protection was sustained for at least 14 months against homologous CHMI in the U.S. and 6 months against heterogenous, intense natural transmission in two clinical trials in Mali. Phase 2 trials are underway or planned on 4 continents that are designed to provide an optimized dosage regimen for phase 3 clinical trials, a first generation licensed PfSPZ vaccine and a demonstration program for use of PfSPZ Vaccine in combination with standard control measures for Pf elimination in Equatorial Guinea. These include trials in 317 infants in Kenya, several hundred 1-12 year olds in Gabon, and 420 soldiers in Indonesia. Phase 3 trials are planned to begin in the U.S., Germany, and Equatorial Guinea by early 2019. In parallel, with the recognition that improved next generation PfSPZ-based vaccines could be more efficient than the current versions, the first injectable genetically attenuated (GA) PfSPZ vaccine has begun clinical evaluation in the Netherlands, and additional GA PfSPZ vaccines are under development; a multi-strain PfSPZ vaccine has been manufactured; semi-automated dissection of mosquitoes will soon be integrated into the manufacturing schema; genetically altered mosquitoes with compromised immune responses are under development to more efficiently produce PfSPZ; detailed studies of human immune responses are being conducted; human monoclonal

antibodies have been produced; in vitro-production of PfSPZ is being refined, which could eliminate the mosquito from manufacturing; and aseptic, purified, cryopreserved *P. vivax* SPZ are being developed. The entire R&D process is conducted with the collaboration of the International PfSPZ Consortium (I-PfSPZ-C), a group of nearly 200 investigators from ~40 organizations in ~20 countries who are dedicated to development of whole SPZ malaria vaccines that can be used to prevent malaria in individuals and systematically eliminate malaria from geographically defined areas of the world.

---

## **Chemoprevention of malaria in endemic areas - Progress since 1997**

**Brian Greenwood**

**Faculty of Infectious and Tropical Diseases, London School of Hygiene & Tropical Medicine, London, UK**

At the time of the first MIM meeting in Dakar in 1997, antimalarials were little used for the prevention of malaria in the resident population of malaria endemic areas because of concerns about impairment of immunity, drug resistance and costs.

Since 1997, much has been learnt about how to use antimalarials for prevention of malaria in endemic populations in an intelligent way guided by knowledge of the epidemiology of the infection. In 1998 intermittent preventive treatment of malaria in pregnancy (IPTp) with sulphadoxine pyrimethamine (SP) was the first chemopreventive strategy to be recommended by WHO and this intervention has subsequently been deployed widely with reductions in maternal anaemia, low birth weight and neonatal deaths. IPTp was followed by development of a chemopreventive strategy for infants, intermittent preventive treatment in infants (IPTi). This intervention has been not been deployed widely, in part because of a shift in the peak burden of malaria to older children, an epidemiological change that supported the development of intermittent preventive treatment for malaria in children (IPTc) now called seasonal malaria chemoprevention (SMC) because this intervention is most suitable for areas where the transmission of malaria is limited to a few months of the year. A further shift in the burden of malaria to school-age children has led to some innovative studies of how chemopreventive measures can be used effectively in children in this age group. Mass drug

administration (MDA) fell into disrepute because of the inappropriate way in which it was used in past decades but this form of chemoprevention has also had a renaissance, with recognition that this intervention can be useful in certain, well defined situations.

Lessons learnt on how best to use antimalarial drugs in malaria endemic situations and future challenges to this approach to malaria control are discussed in this presentation.

---

## **Friday 20<sup>th</sup> april**

---

### **When Will We Have a Licensed Malaria Vaccine?**

**Adrian V. S. Hill**

**Director of the Jenner Institute at Oxford**

Efforts to develop a malaria vaccine were first reported at the start of the 20<sup>th</sup> Century but 110 years later no vaccine is very close to licensure and none will be licensed for general use in Africa this decade. I will consider some of the challenges of malaria vaccine development that have slowed down progress for all candidate vaccines.

In particular, planned licensure of RTS,S/AS01 – often called the “leading vaccine candidate” – has now been delayed considerably so that other vaccines may be licensed for widespread use before it. These include an improved virus-like particle based on the circumsporozoite protein, called R21, which shows high level efficacy in controlled human malaria infection trials. Also, efforts continue to develop a range of whole parasite vaccines but these face additional challenges.

An increasingly attractive and feasible approach is to combine subunit vaccines targeting diverse stages of the parasite's life-cycle, and also subunits targeting specifically *P. falciparum* and *P. vivax*, into a multi-component vaccine with higher or broader efficacy. I will review progress on one such approach from Oxford University where five such potential vaccine components are in clinical development. It seems most likely that a single-stage single-component vaccine will reach licensure in the early- to mid- 2020s and then other subunit components be licensed, singly or in combinations, to help reduce both the malaria disease burden and malaria transmission.

## Challenges and Perspective in Ending Malaria: Drug Resistance

**Christopher Plowe, MD, MPH, FASTMH**

**Director, Duke Global Health Institute Duke University,  
Durham, NC USA**

The emergence and spread of drug resistant malaria has been a durable and vexing impediment to malaria control and elimination. The global dissemination of chloroquine-resistant falciparum malaria caused countless deaths and braked the momentum of the first eradication campaign. The ensuing rapid rise of antifolate resistance contributed to a sense of fatalism about malaria in the late 20th century. Combination with partner drugs initially protected the artemisinins from resistance, but multi-drug resistance now compromises the efficacy of artemisinin-based combinations (ACTs).

Drug resistance research highlights in the last 20 years include identifying the genetic determinants of resistance to chloroquine, antifolates, artemisinins, and several ACT partner drugs. The time from initial appearance of resistance to identifying resistance markers has shortened from decades for chloroquine, to a few years for artemisinins, to having candidate markers in hand for new drugs before they are even deployed. This progress is attributable in part to technological advances in genome sequencing and genetic and in vitro manipulation of malaria parasites. Better and earlier integration of these basic sciences with field epidemiology has also

accelerated the identification and validation of resistance markers. Genomic epidemiology studies showing that artemisinin resistance was both spreading transnationally and emerging independently in multiple locations contributed to the decision to launch an aggressive malaria elimination campaign in the Greater Mekong Sub-Region. Mathematical modeling of resistance and of interventions aiming to mitigate resistance has also influenced malaria drug treatment and prevention policies.

For maximum impact, drug resistance research must continue to cross barriers between basic and applied sciences and between the cultures of research and of program implementation and policymaking. Timely translation of research results into effective and scalable tools for surveillance, new drugs with durable efficacy, and actionable evidence to inform policies, calls for interdisciplinary research that integrates not just genomics and epidemiology but vector biology, health economics, social, environmental, and political sciences, and health care inequalities and health systems research. Potential outputs include optimized strategies for: surveillance and response systems for emerging and spreading resistance; targeted mass drug administration and screen-and-treatment interventions to eliminate foci of resistance; rational formulation of new resistance-resistant drug combinations; deployment of multiple first line therapies with countervailing resistance profiles; and drug rotation.



# Moderators



### **Dr. Dyann Wirth, PhD**

Richard Pearson Strong Professor of Infectious Diseases, Chair, Department of Immunology and Infectious Diseases, Senior Associate Member, Broad Institute, Director, Defeating Malaria: From the Genes to the Globe, Harvard University, Faculty Director, Harvard Integrated Life Sciences Ph.D. Programs

Professor Dyann Wirth is a major leader in the area of malaria research. Her work provided new insight into how the malaria parasite has evolved, specifically in the areas of population biology, drug resistance and antigenicity. The Wirth laboratory blends the scientific communities of the Harvard School of Public Health, the Broad Institute, and collaborators from around the globe to create a unique malaria research and training network that brings together scientists with expertise in molecular biology, genetics, genomics, population genetics, chemistry, cell biology, epidemiology, computational biology, and biostatistics with leading clinicians in infectious diseases and pathology. Leveraging the genomic tools of the human genomic project, the group has applied state of the art technologies and novel approaches to better understand the fundamental biology of the malaria parasite and mechanisms of drug resistance. Professor Wirth's research activities are made possible through collaborative research partnerships with investigators, universities, and clinical centers in Africa, in particular Senegal, Asia, and South America.

Professor Wirth is a current fellow and past president of the American Society of Tropical Medicine & Hygiene and a Joseph Augustine LePrince Medal recipient; a past board member of the Burroughs-Wellcome Fund and Marine Biological Laboratory; a member of the National Academy of Medicine of the National Academy of Sciences; and a Fellow of the American Academy of Microbiology.

She currently serves on the WHO Malaria Policy Advisory Committee.

Professor Wirth plays a major role in malaria education and leadership training. With colleagues from IS Global and Swiss TPH, she developed the Science of Eradication Leadership course and recently led the development of a HarvardX online course, MalariaX. Both of these efforts bring the range of expertises from the Genes to the Globe together in one course.



## Prof Awa Marie Coll Seck

Ministry of State to the President of Senegal Former Minister of Health and social Welfare of the Republic of Senegal

Before being nominated Minister of State to the President of Senegal, Awa Marie Coll-Seck has served as Minister of Health and Welfare from 2012 to 2017 and Minister of Health and Prevention from 2001 to 2003.

At International level, she was Executive Director of the Roll Back Malaria Partnership (RMB) from 2004-2011 and served as Director of the UNAIDS Department of policy, strategy and research and finally Country and Regional Support from 1996-2001.

Specialist of infectious diseases and bacteriology-virology, MD, PhD, she was leading the Department of infectious diseases at University Cheikh Anta Diop of Dakar-Senegal, before starting her international career.

Dr Coll-Seck is on the Board of Directors of the Global Fund, Roll Back Malaria, on the Scientific Council of University Cheick Zaid (Morocco) and the High-Level Steering Group for Every woman, every Child, Clinton Health Initiative, Coalition for Epidemic Preparedness Innovation (CEPI).

She has been serving on the Lancet Commission on the Future of Health in Africa and the Guttmacher-Lancet Commission on Sexual and Reproductive Health and Rights (SRHR).

She has been awarded numerous honours, including the Knight of the Order of Merit of Senegal, Burkina Faso, France and of The Gambia; and Palmes académiques, Order of Merit and Légion d'honneur of France. She has been awarded « Best Minister of the world » in Dubai in 2017. She is an honorary member of the Academy of Sciences and Technologies of Senegal and the French Academy of pharmacy. She is the author of more than 150 scientific publication including malaria.

She is married and mother of 4 and grandmother.



## Dr Lucien Manga

WHO Representative in Mali

Dr Manga joined the World Health Organization in 1997 as the Head of the Vector Biology and Control Unit at the Regional Office for Africa. He spearheaded the development of Integrated Vector Management and its endorsement at the global level as the main strategic approach to vector control. He initiated and led the establishment of the African Network on Vector Resistance to Insecticide (ANVR), which continues to support capacity building for vector control and in monitoring trends in insecticide resistance throughout Africa.

Between 2005 and 2013, Dr Manga served as the Programme Coordinator for the Protection of the Human Environment at the WHO Regional Office for Africa. In that capacity, he coordinated the Inter-Ministerial Conferences on Health and Environment which resulted in WHO member states adopting and implementing the Libreville Declaration on Health and Environment in Africa. Dr Manga further championed the development of The Framework for Public Health Adaptation to Climate Change, including the establishment of the Climate and Health Consortium for Africa (Clim-HEALTH Africa). This consortium supports capacity building and development of early warning and early response systems for the sound management of health impacts of Climate Change.

Between 2013 and 2015, Dr Manga was the Coordinator for Outbreaks and Disasters Management at the WHO Regional Office for Africa. He coordinated the regional response to humanitarian crises in Central African Republic and South Sudan and was deployed at the United Nations Mission for Ebola Emergency Response.

Originally from Cameroon, Dr Manga gained his Doctorate in medical entomology from the University of Yaoundé, Cameroon (1992) and a PhD in Medical Parasitology from the University of Montpellier I, France (1999). Before joining WHO, Dr Manga was a lecturer at the University of Yaoundé and a researcher in the area of malaria at the OCEAC. He authored several publications in scientific journals as well as a book on Climate change, health and development in Africa.



## Prof Kevin Marsh

Senior Advisor at the African Academy of Sciences in Nairobi, Kenya. Professor of tropical medicine at the University of Oxford

Kevin Marsh qualified in medicine at the University of Liverpool in 1978 and after undertaking specialist training as a physician began his research career at the Medical Research Council Unit in the Gambia working on the immunology of malaria. From 1985-89 he was at the Institute of Molecular Medicine in Oxford and in 1989 established with colleagues a series of research projects on the clinical epidemiology and immunology of malaria at Kilifi on the Kenyan coast. These have developed into a major international programme, which he directed for 25 years, involving around 800 staff working across a number of countries in east Africa.

Kevin Marsh has a broad interest in clinical, epidemiological and immunological aspects of malaria and has authored or coauthored over 450 publications on different aspects of malaria. He has a particular interest in developing and strengthening research capacity and scientific leadership in Africa.

Kevin Marsh is Senior Advisor at the African Academy of Sciences in Nairobi, Kenya, and also professor of tropical medicine at the University of Oxford. He is chair of the WHO Malaria Policy Advisory Committee (MPAC) and a member of a number of international advisory committees relating to malaria and to global health research. A fellow of the Academy of Medical Sciences and the African academy of Sciences, he was awarded the Prince Mahidol prize for medicine in 2010 and the Al Sumait prize for health in 2016.

# Panelist



## Dr Kesete Admasu

CEO, RBM Partnership To End Malaria

Dr Kesete served as Minister of Health of the Federal Democratic Republic of Ethiopia from 2012 to 2016. Dr Kesete has dedicated his career to public service and scientific research focused on major public health problems in Ethiopia and has received numerous national and international awards.

A medical doctor by training with a Masters degree in public health, Dr Kesete has served in a number of clinical and public health positions. He has worked as a public private partnership team leader, the CEO of a tertiary hospital and the Director General of health promotion and disease prevention before assuming his current position as CEO of the RBM Partnership To End Malaria.



## Prof Marcel Tanner

PhD in medical biology from the University of Basel and a MPH from the University of London

Marcel Tanner obtained a PhD in medical biology from the University of Basel and a MPH from the University of London. He was Director of the Swiss Tropical and Public Health Institute from 1997 to 2015 and chair of Epidemiology and Medical Parasitology at the University of Basel and at the Federal Institute of Technology. He is President of the Swiss Academy of Sciences. Since 1977, his research ranges from basic research on the cell biology and immunology on malaria, schistosomiasis, trypanosomiasis and filariasis to epidemiological and public health research on risk assessment, vulnerability, health impact and district health planning.

His research, teaching and health planning expertise are based on substantial long term experience from working in rural and urban areas in Africa (mainly Tanzania, Chad, Burkina Faso and Côte d'Ivoire) and Asia (China, Thailand, Laos). Besides research the capacity building and North-South partnership was a main interest as reflected in the development of the Ifakara Health Institute in Tanzania. He has published extensively in the many fields (>600 original papers). He also acted and acts as advisor on communicable diseases research and control, health systems strengthening and capacity building in various national and international agencies/bodies and in boards/committees.



## **Mrs Joy Phumaphi**

Executive Secretary of the African Leaders Malaria Alliance

Joy Phumaphi is the Executive Secretary of the African Leaders Malaria Alliance. She served as a member of the UNSG's High-Level Panel on the Global Response to Health Crises and the Chair of the Global Leaders Council for Reproductive Health, as well as serving as co-Chair of the Independent Expert Review Group for Every Woman Every Child, reporting annually to the UNSG on developing country-level progress on Women's and Children's health.

She served as Member of Parliament in Botswana, holding portfolio responsibility in the cabinet, first for Lands and Housing (1995-1999), and then for Health (1999-2003). She later joined the WHO as Assistant Director General for Family and Community Health (2003-2007). She has served as Vice President for Human Development at the World Bank (2007-2009).

Joy has served on a number of commissions and expert groups and sits on the Board of several international non-profit organizations working on global health.



## **Prof Tore Godal**

International public health specialist

Dr. Tore Godal is an international public health specialist, currently working as a special advisor on global health at the Ministry of Foreign affairs, Norway. He has facilitated the establishment of a research program for global health in Norway (Globvac, 2006) and global partnerships relating to maternal and child health such as the UN Every Woman Every Child initiative (2010) and the Global Financing Facility at the World Bank (2014).

As the founding executive secretary of GAVI (1999-2004), Dr. Godal was instrumental in the design and development of this alliance on which also The Global Fund was modelled. Previously, Dr. Godal was instrumental in the initiation (1973-74) of the UNDP/World Bank/WHO Special Program for Research and Training in Tropical Diseases, leading the program's pilot project and flagship effort, Immunology of Leprosy.

As a director of TDR (1986-1998), Dr Godal organized a number of large scale trials, including on insecticide treated mosquito nets which showed that African children was saved from dying from malaria if sleeping under a net. Before retiring from WHO, Dr. Godal launched the Roll Back Malaria project (1998). A medical doctor and trained immunologist, Dr. Godal has contributed a great deal to the understanding of mechanisms of immunity to mycobacteria, the pathogenesis of autoimmune disease, and the clinical and sub-clinical manifestations of leprosy.

His research in cancer at the Norwegian Cancer Hospital (1974-1986) led to the development of immunological tools against cancer, including monoclonal antibodies, which laid the foundation for modern immunotherapy in Norway. Most recently, Dr. Godal contributed to the initiation and financing of the promising Ebola vaccine trial in Guinea and subsequently to the establishment of CEPI.

Dr Godal has over 300 publications in peer reviewed journals.





## Dr Matshido Moeti

WHO Regional Director for Africa

Dr Matshidiso Moeti from Botswana is the first woman WHO Regional Director for Africa. She is leading health transformation in the African Region through a Transformation Agenda which is building a responsive, effective and results-driven regional secretariat that is advancing efforts towards universal health coverage and accelerating progress toward global development goals, while tackling emerging threats. Strong partnerships will underpin every aspect of the Regional Office's work during her tenure.

Dr Moeti is a public health veteran, with more than 35 years of national and international experience. She joined the WHO Regional Office for Africa in 1999 and has held several senior positions in the Organization, including Deputy Regional Director, Assistant Regional Director, Director of Noncommunicable Diseases, WHO Representative to Malawi, and Coordinator of the Inter-Country Support Team for Eastern and Southern Africa.

At the height of the HIV/AIDS epidemic, Dr. Moeti led WHO's "3 by 5" Initiative in the African Region, an Initiative that helped establish systems for the provision of antiretroviral therapy in countries and resulted in a significant increase in the number of HIV-positive individuals accessing antiretroviral drugs.

Under her leadership as Regional Director, in 2016 the Regional Committee for Africa adopted the Framework for Implementing the Global Technical Strategy for Malaria 2016-2030 in the African Region.

Prior to joining WHO, Dr. Moeti worked with UNAIDS as the Team Leader of the Africa and Middle East Desk in Geneva, with UNICEF as a Regional Advisor, and with Botswana's Ministry of Health in various capacities.

Dr Moeti qualified in medicine (M.B., B.S) and public health (MSc in Community Health for Developing Countries) at the Royal Free Hospital School of Medicine, University of London in 1978 and the London School of Hygiene and Tropical Medicine in 1987, respectively.



## **Dr Charles Wondji**

Head of the LSTM research Unit at the Centre for Research in Infectious Diseases (CRID)

Charles Wondji is a Wellcome Trust Senior Research Fellow and Reader in Vector Biology at the Liverpool School of Tropical medicine. He is currently the head of the LSTM research Unit at the Centre for Research in Infectious Diseases (CRID) in Cameroon.

He uses genetic and genomic tools to help control mosquito vectors of diseases such as malaria, dengue, Zika and lymphatic filariasis. To help manage resistance to insecticides in mosquitoes, Charles research aims at understanding the molecular and genetic basis of insecticide resistance by detecting molecular resistance markers using genomic tools and designing suitable molecular assays to track resistance in field populations.

He is also defining patterns of gene flow and selective sweeps in vector populations to predict the evolution and spread of resistance. Using a field experimental hut station in Africa (Cameroon), he is assessing the impact of insecticide resistance on the effectiveness of vector control tools such as bed nets and indoor residual spraying. He is also establishing the entomological risk of arbovirus outbreaks in Africa to help elaborate robust responses to future outbreaks. He is sponsor of several fellows (Wellcome Trust, DELTA, PIIVC) across Africa as part of his goal of contributing to capacity building. He is member of the WHO pre-qualification team of vector control products.



## **Prof Jude Bigoga**

PhD in Biochemistry

Prof Jude Bigoga holds a PhD in Biochemistry (with thesis in medical entomology and parasitology) in 2004 from the University of Buea. He underwent additional training in biology of disease vectors at Colorado state University, USA, and Malaria Entomology (including functional genomics) at the South African Institute of Medical Research as WHO/TDR fellow. He later joined the teaching core of the Department of Biochemistry, University of Yaounde I 2005, where is currently Associate Professor of Molecular parasitology/medical entomology. In 2010 he was TDR Career Development Fellow in support of TDR's Disease and Thematic Reference Groups.

Prof Bigoga is founder and head of the Molecular Parasitology and Disease Vector Research Laboratory, Biotechnology Center, University of Yaounde I, and head of the National Reference Unit for Vector control that provides technical support to the National Malaria control program.

Prof Bigoga's research focuses on the development of knowledge and tools for the control of vector borne diseases with particular emphasis on malaria where he looks at transmission dynamics, insecticide resistance and clinical trials.

Prof Bigoga is a member of the African Network on Vector Resistance (ANVR), Climate and health in Africa (ClimHealth Africa), vice president of Pan African Mosquito Control Association (PAMCA)- Cameroon and regular consultant with WHO and NMCP.



## Prof Rajendra Maharaj

Prof Rajendra Maharaj holds a PhD in Entomology from the University of KwaZulu-Natal as well as a Masters in Infectious Diseases from the London School of Hygiene and Tropical Medicine. He is an extraordinary professor in the School of Health Systems and Public Health, Faculty of Health Sciences, University of Pretoria as well as a member of the University of Pretoria Institute for Sustainable Malaria Control.

He also serves as an Associate Professor at the School of Biological and Conservation Sciences at the University of KwaZulu-Natal. Prof Maharaj has extensive experience working in all areas of malaria research and control. His expertise and knowledge encompasses research and control of both the malaria parasite and mosquito vector, vector biology and integrated vector management.

Prof Maharaj's research interests focus on public health, malaria control and infectious disease control. With over 25 years' experience in malaria research and control his main area of research is innovative technologies for the control of malaria vectors. He is currently the Director of the Office of Malaria Research at the South African Medical Research Council and his priorities are to identify gaps in the malaria landscape and to fund appropriate projects that would help to cover these gaps.

Prof Maharaj serves on various national and international committees and is a member of the Boards of the Elimination 8 and of the Lubombo Spatial Development Initiative 2 (LSDI2). Prof Maharaj has attended and participated in national, regional and international conferences. His work has been disseminated through scholarly articles and publications in peer-reviewed manuscripts. Prof Maharaj supervises doctoral, masters and honours students at the University of KwaZulu-Natal and the University of Pretoria.



## **Dr Stephen Hoffman**

MD, DTMH, DSc (hon), FIDSA, FASTMH, FAAA, FAAM, CAPT MC USN (ret)

Dr. Hoffman is the founder, chief executive and scientific officer of Sanaria Inc., a company dedicated to developing a whole sporozoite (PfSPZ) malaria vaccine to halt transmission and eliminate malaria, and chairman Protein Potential LLC, a company focused on developing vaccines for shigellosis, enterotoxigenic E. coli diarrhea, and typhoid fever. From 1980-1984 he was chief of clinical investigation at NAMRU-2 in Jakarta, Indonesia. From 1987-2001 he was malaria program director, Naval Medical Research Center, where his team were leaders in subunit malaria vaccine development and sequencing the Plasmodium falciparum genome and published the first studies in the world showing DNA vaccines elicited killer T cells in humans.

In 2001 he joined Celera Genomics as Sr. VP biologics and created a program to 1) utilize genomics and proteomics to produce biopharmaceuticals, initiating the field of personalized (precision) medicine, and 2) sequence the genome of the mosquito, Anopheles gambiae. He has held several professorships, chairs or serves on multiple advisory boards, is past president of the American Society of Tropical Medicine and Hygiene, authored > 425 scientific publications, and has numerous patents. He is the most highly cited author in the world for scientific papers on malaria published between 1995 and 2005, was listed as the third most influential person in the world vaccine industry in 2015 when he received the Vaccine Industry Excellence Award for Best Biotech CEO.

He received his BA from the University of Pennsylvania, MD from Cornell, and Diploma in Tropical Medicine and Hygiene from London School of Hygiene and Tropical Medicine, and did residency training at UC San Diego. He was elected to membership in the National Academy of Medicine in 2004, and received the Distinguished Alumni Award from Weill Cornell Medical College in 2016.



## Prof Adrian Hill

Director of the Jenner Institute at Oxford

Adrian V.S. Hill is Director of the Jenner Institute at Oxford. He trained in medicine at Trinity College, Dublin and Oxford and was awarded a DPhil for population genetic studies of the thalassaemias in 1986 before further clinical training in infectious diseases. His research group at the Wellcome Trust Centre for Human Genetics in Oxford identified variants in genes that affect resistance to malaria, tuberculosis, sepsis and other infectious diseases. These findings have informed vaccine development helping his group to design and develop leading new vaccines for malaria. These are currently in clinical trials in the UK and at numerous outstanding units in Africa.

In 2005 he was appointed founding Director of the Jenner Institute at Oxford, an initiative aimed at accelerating public sector vaccine development for a range of infectious diseases, and partnered with the Pirbright Institute on veterinary vaccine development. The Jenner Institute is now the largest academic vaccine centre in Europe with clinical-stage new vaccine programmes against ten diseases. The largest of these is malaria in which over twenty new vaccines have entered clinical trials targeting all four stages of the parasite's life cycle and both *P. falciparum* and *P. vivax*. He has published over 550 research papers with over 55,000 citations. He is a Fellow of the UK Academy of Medical Sciences and the Royal College of Physicians, and both a Wellcome Trust and UK NIHR Senior Investigator.



## Dr Ashley Birket

Director of PATH's Malaria Vaccine Initiative (MVI)

Ashley Birkett is the Director of PATH's Malaria Vaccine Initiative (MVI) and the Global Head of the malaria disease area within PATH's Center for Vaccine Innovation and Access (CVIA). He joined PATH in 2008 as MVI's director of research and development.

PATH's CVIA brings together expertise across every stage of vaccine research, development, and introduction to make lifesaving vaccines globally available to women, children, and communities, particularly in low resource settings. CVIA's portfolio currently includes more than two dozen vaccine projects to protect against 17 diseases. Ashley oversees the development and implementation of CVIA's malaria vaccine development strategy, including programmatic, administrative, and financial management aspects, to develop new models and explore new pathways that will accelerate the development of malaria vaccines. Ashley plays an integral leadership role in guiding the work of more than 40 professionals involved in projects in PATH's malaria vaccine portfolio, including the provision of technical assistance to the World Health Organization for the Malaria Vaccine Implementation Programme.

Ashley has more than 20 years of vaccine development experience, initially with biotechnology companies, where he successfully advanced novel influenza and malaria vaccine candidates from research through first-in-human clinical studies. Ashley earned a PhD in biochemistry and molecular biophysics from Virginia Commonwealth University; he has a BSc (Honors) in applied biological sciences from the University of the West of England in the United Kingdom.



## Dr Tom Kariuki

PhD, Director, Alliance for Accelerating Excellence in Science in Africa (AESA)

Dr Thomas Kariuki is Director of the Alliance for Accelerating Excellence in Science in Africa, an initiative launched in 2015 by the African Academy of Sciences and the New Partnership for Africa's Development (NEPAD) agency. An internationally recognised leader in immunology, Dr Kariuki leads AESA's efforts to accelerate world-class research, foster innovation, and promote scientific leadership on the continent. He oversees a number of diverse programmes focused on funding the research, development and commercialisation of novel, high-impact solutions and is cultivating strategic partnerships with academic institutions, governments and industry globally to build the momentum needed to transform Africa's future through science-led, knowledge-based economies.

Prior to his appointment at AESA, Dr Kariuki served as Director of the Institute of Primate Research / National Museums of Kenya, a biomedical and conservation biology organisation. He has published widely on aspects of vaccines and diagnostics development for schistosomiasis (Bilharzia), malaria and co-infections and on policy issues related to biomedical research and funding and is a recipient of several international grants and awards.



## Dr Isabella Ochola Oyier

Following the completion of her PhD at the Liverpool School of Tropical Medicine in Prof Steve Ward's lab, Lynette Isabella Oyier joined the KEMRI-Wellcome Trust Research Programme (KWTRP) in 2006 as a post-doctoral researcher. She worked under Profs. David Conway (LSHTM) and Kevin Marsh, to study natural selection in *Plasmodium falciparum* merozoite antigens at the MRC, The Gambia and KWTRP. She later received a re-entry grant from the Malaria Capacity Development Consortium (MCDC), to work on the temporal genetic variation in merozoite antigens. In addition, she supervised a Wellcome Trust funded MSc fellow in collaboration with Dr Colin Sutherland (LSHTM) to examine the temporal genetic variation in known drug resistance markers. She was appointed Visiting Lecturer to the Centre for Biotechnology and Bioinformatics (CEBIB), University of Nairobi, in 2011.

Here, she developed a molecular biology lab, taught on the molecular biology and advanced molecular genetics MSc courses and supervised MSc students. She received a MCDC initiative award to examine the genetic diversity of *P. falciparum* erythrocyte receptors and conducted part of the project at CEBIB. While at CEBIB, using funding from the MCDC, she established a career development group to improve the learning environment through mentoring, postgraduate supervision and personal development planning activities and developing a modern lecture room, an online CEBIB Postgraduate handbook and an online documentation system. She is currently a Wellcome Trust Intermediate fellow, conducting her research in collaboration with Dr Julian Rayner (Wellcome Trust Sanger Institute) to develop a novel strategy for understanding the functional impact of variation in *P. falciparum* merozoite vaccine candidates. She supervises MSc and PhD students and has a continued interest in antimalarial resistance and in asymptomatic malaria infections.



## Prof John Reeder

Director of TDR

Professor John Reeder is Director of TDR, the Special Programme for Research and Training in Tropical Diseases, at the World Health Organization in Geneva. He was previously Director of the Centre for Population Health and Head of the Office of International Health Research at the Burnet Institute, Melbourne and an NH&MRC Principal Research Fellow. Prior to this he was Director of the Papua New Guinea Institute of Medical Research for several years, where he worked on translating scientific findings into policy for improved health across research programmes in mosquito-borne diseases, respiratory disease, sexual health, disease surveillance, infectious diseases and therapies, and operational/implementation research.

John began his career in medical microbiology laboratories in the United Kingdom and then moved to health training as a development volunteer in the Highlands of PNG, later working with the renowned malaria research team at the Walter and Eliza Hall Institute in Melbourne. He maintains research interests in malaria and other agents of global health significance, such as tuberculosis, NTDs and HIV. He has published over 160 scientific papers that span basic laboratory research to large community-based field studies.



## Prof Brian Greenwood

Faculty of Infectious and Tropical Diseases, London School of Hygiene & Tropical Medicine, London, UK

After qualifying in medicine at Cambridge University, Brian Greenwood spent 15 years working in Nigeria, first at University College Hospital, Ibadan and then at Ahmadu Bello University, Zaria where he helped to start a new medical school and where he developed his research interests in malaria and meningitis. In 1980, he moved to The Gambia where he spent the next 15 years as director of the UK's Medical Research Council Laboratories, focusing his research on the prevention of the major infectious diseases prevalent in West African children including malaria, pneumonia and meningitis.

In 1996, he moved to the London School of Hygiene & Tropical Medicine where he has maintained his research on the prevention of malaria, meningococcal and pneumococcal infections in Africa, including trials that led to the development of Seasonal Malaria Chemoprevention, and he is currently supporting a trial of the use RTS,S/AS01 as a seasonal malaria vaccine, continuing his 20 year involvement in the development and evaluation of this vaccine. He is also supporting an evaluation of an Ebola vaccine in Sierra Leone.

From 2000 – 2008, he coordinated the Gates Malaria Partnership, a programme of malaria research and capacity development in several countries in Africa and, from 2008 – 2017, he coordinated a successor malaria research capacity development initiative, the Malaria Capacity Development Consortium (MCDC). MCDC has been followed by a new research capacity development programme (MARCAD) led by the University of Dakar, Senegal which he supports.



## Prof Wilfred Mbacham

Titular Prof of Public Health Biotechnology

Wilfred Mbacham is a Titular Prof of Public Health Biotechnology. His scientific career started off in Zoology in the undergraduate level in 1980 and he went on to obtain a Doctorat de Spécialité in Molecular Parasitology from the University of Yaoundé I (1989) and a Doctor of Science Degree in Tropical Public Health from Harvard (1997). He researches at the Biotechnology Center (BTC), of the University of Yaoundé I, on the pharmacogenomics in response to drugs, the molecular diversity and epidemiology of drug resistance in Malaria, HIV & Tuberculosis. He also researches on the development of bio-reagents with the discovery of a thermostable peroxidase. His latest focus is on the Inflammation interaction between Communicable and Non Communicable diseases.

He has served in leadership positions in many national and international programs. He is the Executive Director of the Multilateral Initiative on Malaria that promotes fundamental research on Malaria but also organises a the Pan-African conference every 4 years. For 10 years, he also coordinated the APALP (Assises Pan Africaines de Lutte contre le Paludisme) that brought together 35 National Malaria Control Program Managers from Anglophone, Lusophone and Francophone Africa, to discuss and exchange strategies for success in rolling out various anti-malarial interventions.

He is the current coordinator of the graduate program unit in Life Sciences and the Biology of organisms at the University of Yaoundé I. He was elected chair of the Program Management Committee of the International Atomic Energy Agency-AFRA program of 41 African member states since Nov 2015. He has supervised more than 65 Masters and 15 MD level students, 15 PhD, He has some 125 publications including book chapters, books, manuals and scientific articles in peer reviewed journals. He is a fellow of the Cameroon Academy of Sciences and of the African Academy of Sciences. He has won numerous awards, the latest being the, World Academy of Science Regional Prize for promoting excellence in science and Technology and popularizing the public understanding of Science and Technology for 2017. He is married and father of 4 children.



# Detailed Program

## Abstract Panels

### 1. Panel: Malaria elimination challenges

Monday 15th, April , 09:45 - 10:45

**Moderator:** Prof Dyann Wirth, Chair

**Discussants:**

- Dr. Kesetebirhan Admasu
- Dr. Bruno Moonen
- Prof Marcel Tanner
- Prof Ogobara Doumbo

This panel will address the challenges facing malaria elimination with a focus on the situation in Africa. The discussion will include an analysis of current elimination efforts citing two or three specific examples – this will include a look at successes and challenges. Specific issues include the impact of insecticide resistance in vector populations and the adequacy of current surveillance data. We will also address the use of new tools that are becoming available in the near future including highly sensitive diagnostics, molecular diagnostics and the RTS,S vaccine. A final and critical topic will be the gaps in training and education for eradication and novel approaches to addressing these issues in particular through online learning and mentored training modalities.

## Symposium Session

### S01

#### Durability of Long-Lasting Insecticidal Nets in Tanzania: Methodology Innovation and Operational Research

**Tente A: 11:15 - 13:00**

**Chairs:** Aissatou Toure and Alioune Dieye

**Speaker 1:** Sarah J Moore, Use of the semi-field Ifakara Ambient Chamber Test (I-ACT) in LLIN durability studies. , Department of Epidemiology and Public Health, Swiss Tropical and Public Health Institute, Basel, Switzerland

**Speaker 2:** Dennis J Massue, Impact of hole size, location, insecticide and mosquito resistance on the protective

efficacy of LLINs., Department of Epidemiology and Public Health, Swiss Tropical and Public Health Institute, Basel, Switzerland

**Speaker 3:** Zawadi D. Mageni, The consequences of changing population access on net use patterns and physical degradation of nets after 22 months of ownership., Ifakara Health Institute, Mikocheni, Dar-es-Salaam, Tanzania

**Speaker 4:** Lena M. Lorenz, LLIN durability in Tanzania: Functional survival and bio-efficacy of three LLIN brands over three years., Department of Disease Control, London School of Hygiene & Tropical Medicine (LSHTM), Keppel Street, London, UK

**Speaker 5:** Jo Lines, Improving LLIN performance: What is needed for technological development of LLIN durability and effective management of insecticide resistance?, Department of Disease Control, London School of Hygiene and Tropical Medicine (LSHTM), Keppel Street, London, UK.

**Purpose and Objective:** The purpose of this symposium is to provide a holistic view of the different aspects that can affect the protective efficacy of LLINs against malaria. Data on durability, access and use of LLINs in Sub-Saharan Africa, with Tanzania as a case study, will be presented. Speakers will describe final results from the ABCDR project (2013-2016), a three-year large-scale durability field study in Tanzania. The symposium will also present new methodologies for measuring LLIN bio-efficacy against mosquitoes in semi-field conditions.

### S02

#### The potential of dihydroartemisinin-piperaquine (DP) for intermittent preventive therapy (IPTp) to prevent malaria in pregnancy: results from recent trials in Africa

**Tente B: 11:15 - 13:00**

**Chairs:** Prof Feiko Ter Kuile and Dr Mwayi Madanitsa

**Speaker 1:** Feiko ter Kuile , Prof, Liverpool School of Tropical Medicines , Pembroke Place Liverpool L3 5QA UK

**Speaker 2:** Abel Kakuru , Dr, London school of hygiene and tropical medicine

**Speaker 3:** Dr Matthew Chico , Dr, LSHTM, London

**Speaker 4:** Dr Julie Gutman , Dr, Centres for Disease Control and Prevention (CDC)

**Speaker 5:** Ms. Silke Fernandes , LSHTM

**Purpose and Objective:** Malaria in pregnancy can have devastating consequences for mothers and their unborn/newborn children. The World Health Organization recommends a three-pronged approach to reduce the burden of malaria infection during pregnancy in areas of stable malaria transmission, including the provision of intermittent preventive treatment during pregnancy with sulfadoxine-pyrimethamine (IPTp-SP). However, there is evidence of high SP resistance in malaria endemic areas, particularly in East Africa, with evidence of quintuple mutations threatening the efficacy of the intervention. DP is a potential replacement for use in IPTp. This symposium will review the efficacy, safety, tolerability, and cost-effectiveness of DP in pregnancy.

## S04

### New findings on submicroscopic Plasmodium falciparum and Plasmodium vivax infections.

**Oval Room: 14:30 - 16:15**

**Chairs:** Lucy Okell, Hannah Slater and Andre Lin Ouedraogo

**Speaker 1:** Prof Chris Drakeley, New findings from the Assessment of the Infectious Reservoir of Malaria (AFIRM) study, London School of Hygiene & Tropical Medicine, London, UK

**Speaker 2:** Dr Fitsum Tadesse, Human-to-mosquito transmission by submicroscopic *P. vivax* and *P. falciparum* infections in Ethiopia, Institute of Biotechnology, Addis Ababa University, Ethiopia

**Speaker 3:** Dr Leanne Robinson, The density, temporal dynamics and infectiousness of submicroscopic *P. vivax* infections, Walter & Eliza Hall Institute of Medical Research, Melbourne, Australia

**Speaker 4:** Dr Hannah Slater, The density, temporal dynamics and infectiousness of submicroscopic *P. falciparum* infections, Imperial College London, United Kingdom

**Speaker 5:** Charles Whittaker, The effect of transmission intensity on the proportion of submicroscopic infections: a reassessment across low transmission areas, Imperial College London, UK

**Purpose and Objective:** Increasing quantities of molecular data confirm the widespread presence of low density parasitaemia in endemic settings below the threshold of standard microscopy or RDT detection. However, further quantification is needed to show whether such submicroscopic infections make an important contribution to transmission and if so, what sensitivity of diagnostic is needed to detect them. This symposium will present new data on this topic: (a) new estimates of the infectiousness of submicroscopic cases (b) parasite densities in the submicroscopic range in different locations with implications for diagnostics (c) dynamics of submicroscopic infection over time and (d) gametocytaemia in submicroscopic infections.

## S03

### Understanding, detecting and interrupting malaria transmission to achieve elimination: conceptual approaches and strategic initiatives from the Institute Pasteur International Network

**Auditorium: 09:30 - 10:45**

**Chairs:** Aissatou Toure and Alioune Dieye

**Speaker 1:** Ivo Mueller, Prof, Malaria : Parasites and Host Unit Institut Pasteur in Paris , 25-28 Rue du Dr Roux 75724 Paris Cedex 15

**Speaker 2:** Didier Menard, Dr, Biology of Host-Parasite interactions Unit Malaria Translational Research Group Department of Parasites and Insect Vectors Institut Pasteur in Paris , 25-28 Rue du Dr Roux 75724 Paris Cedex 15

**Speaker 3:** Sebastien Boyer, Dr, Medical Entomology Platform, Institut Pasteur du Cambodge, 5 Preah Monivong Blvd (93), Phnom Penh, Cambodia

**Speaker 4:** Ines Wigan-womas, Dr, Unité d'Immunologie des Maladies Infectieuses Institut Pasteur de Madagascar, BP 1274, Ambatofotsikely 101 Antananarivo, Madagascar

**Speaker 5:** Makhtar Niang, Dr, Immunology Unit, Institut Pasteur de Daka, 36 Avenue Pasteur, BP 220 Dakar, Sénégal

**Purpose and Objective:** The symposium aims to highlight the Institute Pasteur International Network (IPIN) Malaria Initiatives that leverages the unique strengths and capacities of the IPIN to address key research challenges and to develop a global research strategy for malaria elimination. The general objective entails three specific

axes: a focus on antimalarial and insecticide resistance, a focus on the development of tools/strategies to measure and control transmission, and a focus on *Plasmodium vivax* because this species has specific issues that require dedicated efforts. Speakers will provide their different perspectives, from the big-picture view of strategic planning for elimination, to an up-close look at the different challenges and opportunities in approaching elimination.

## S05

### Benefiting from the diversity of field parasites in Africa to better guide the discovery and development of next generation antimalarials.

**PC Room: 14:30 - 16:15**

**Chairs:** Dr Didier Leroy, PhD and Dr Salim Mohammed Khamis ABDULLA, MD, PhD, MSc

**Speaker 1:** Dr Nebie Issa OUEDRAOGO, Msc, PhD , Challenge of getting *P. falciparum* isolates for drug discovery in malaria endemic setting of Burkina Faso, Centre National de Recherche et de Formation sur le Paludisme, 01 BP 2208 Ouagadougou 01, Burkina Faso

**Speaker 2:** Dr Maximilian Mpina , Impact of field isolates in evaluating antimalarial drug efficacy to support malaria elimination campaign, Ifakara Health Institute, P.O.Box 74, Bagamoyo, Tanzania

**Speaker 3:** Dr Silue KIGBAFORI , Ex-vivo susceptibility testing of clinical *Plasmodium falciparum* isolates from Côte d'Ivoire: a CSRS-MMV collaboration, Centre Suisse de Recherches Scientifiques en Côte d'Ivoire (CSRS), 01 BP 1303 Abidjan 03, Côte d'Ivoire

**Speaker 4:** Dr Colin Sutherland , What does African artemisinin resistance look like? An exploration of in vitro and in vivo studies, London School of Hygiene and Tropical Medicine, Department of Immunology and Infection, London, WC1E 7HT, United Kingdom

**Speaker 5:** Dr Patrick Tumwebaze , Ex vivo sensitivity of Ugandan *P. falciparum* isolates to the MMV drugs in development pipeline, Infectious Diseases Research Collaboration , Tororo, Uganda

**Purpose and Objective:** This symposium will give the most up to date view on the use of field parasites isolated from African patients to assess sensitivity to new preclinical

antimalarial candidates in development. MMV represents over half of the global R&D antimalarial compound portfolio. The current challenge in discovery is to predict the efficacy of new compounds on the wide diversity of parasites in the field. The current activity review of in various African and European clinics will be shared with the audience with a view to generating stimulating discussions on how to further improve an early selection of the most promising candidates.

## S06

### Testing Malaria Vaccines in Pregnant Women

**Room 205: 14:30 - 16:15**

**Chairs:** Professor Ogobara Doumbo and Dr. Sara Healy

**Speaker 1:** Prof Ogobara Doumbo, MD, PhD , Introduction to symposium: why pregnant women must be included in all malaria vaccine studies , MRTC/USTTB , USTTB Bamako; BP 1805, Point G; Bamako, Mali

**Speaker 2:** Dr. Flor M. Munoz, Lessons learned from current maternal vaccinations and promising experimental maternal vaccines, Baylor College of Medicine, Texas Children s Hospital, Feigin Tower, 1102 Bates St, Suite 1150. Houston, Texas 77030, USA

**Speaker 3:** Dr. Michal Fried , Placental malaria overview and evolution of standard of care and current limitations, LMIV/ NIAID/NIH, 12735 Twinbrook Pkwy, MSC 8130, Rockville, MD 20892-8130, United States

**Speaker 4:** Dr. Nicola Viebig , Update on progress from the two phase 1 placental malaria vaccine studies and future plans , European Vaccine Initiative, UniversitätsKlinikum Heidelberg; Vossstrasse 2, Geb. 4040; 69115 Heidelberg; Germany

**Speaker 5:** Dr. Jeffrey Roberts, Regulatory considerations in the clinical development of malaria vaccines indicated for use during pregnancy, Division of Vaccines and Related Product Applications, Center for Biologics Evaluation and Research, Food and Drug Administration, 10903 New Hampshire Ave, Silver Spring, MD 20993

**Purpose and Objective:** Pregnant women and children bear the greatest burden of malaria morbidity and mortality, and are the greatest beneficiaries of improved control. Despite progress, malaria remains an enormous public health problem, with an estimated 730,000 malaria-related

deaths in 2015. The primary tools for malaria control existing antimalarial drugs and anti-vector agents address the burden in part, but applying these is cumbersome, and resistance is increasing. Even in areas where the tools retain their efficacy and are applied reasonably well, the malaria burden in pregnant women remains stubbornly high. No malaria vaccine has ever been tested in pregnant women. However, several vaccine candidates currently in the clinic are likely or may be considered for testing in pregnant women in the near future. The rationale for testing these products during pregnancy will be to demonstrate safety for those that will be used for mass administration malaria elimination campaigns, to demonstrate safety and efficacy of those that prevent placental malaria, or both. This symposium will describe the development of maternal vaccines against other pathogens, review the impact of current malaria interventions for pregnant women, report the results from early testing of placental malaria vaccines, and explore the regulatory pathway for approval of a malaria vaccine for pregnant women.

## S07

### Why eliminating malaria will require an integrated approach.

**Room 202: 14:30 - 16:15**

**Chairs:** Stefan Swartling Peterson, Kesete Admasu and Patrick Kachur

**Speaker 1:** Stefan Swartling Peterson, Associate Director, Chief of Health, UNICEF, UNICEF, 3 UN Plaza, New York, NY 10017, USA

**Speaker 2:** Kesete Admasu, CEO, RBM Partnership to End Malaria, 8 Chemin de Blandonnet, Geneva, Switzerland

**Speaker 3:** Patrick Kachur, Chief, Malaria Branch, Centers for Disease Control (CDC), Centers for Disease Control, Atlanta, Georgia, USA

**Speaker 4:** Emily White Johansson, Affiliated Researcher, Uppsala University in the Department of Women's and Children's Health, International Maternal and Child Health Unit

**Speaker 5:** Phyllis Awor, Affiliated Researcher, Makerere University

**Purpose and Objective:** To present the benefits,

challenges & necessity of an integrated approach to fever management on the road to malaria elimination. With malaria incidence declining & less fevers due to malaria infection, a new paradigm is needed to ensure febrile children are appropriately managed as frontline providers are under increasing pressure to dispense unnecessary antimalarial or antibiotic treatment to RDT-negative cases. New thinking is needed around approaches to improve accuracy in diagnosis & treatment of febrile illness, including addressing current challenges such as poor quality care, irrational use of antibiotics, rising anti-microbial resistance and vertical supply & delivery systems. Recent analyses confirm that reducing child mortality is more cost effective through interventions focusing on the poorest/most vulnerable communities who are also those most affected by malaria & other illnesses. With increasing focus on universal health care, an integrated agenda that strengthens rational antimicrobial prescribing practices by training those providing care at community, health facility & in the private sector stands to improve the quality of care for the febrile child, particularly in malaria elimination contexts. The objective of this symposium is to engender a dialogue around the need for multisectoral investments into an integrated approach for management of febrile child to continue progress towards malaria elimination.

## S08

### Digital health system strengthening approaches for improved malaria case management, surveillance, and response.

**Tente A: 14:30 - 16:15**

**Chairs:** Arantxa Roca-Feltrer and Abdisalan Noor

**Speaker 1:** Arantxa Roca-Feltrer, Head of Monitoring and Evaluation, Malaria Consortium, Rua Joseph Ki-Zerbo 191, PO Box 3655, Coop, Maputo, Mozambique

**Speaker 2:** Karin Kallander, Senior Research Advisor, Malaria Consortium, UK, and Associate Professor at Karolinska Institutet, Sweden, Malaria Consortium, Malaria Consortium, Development House, 56-64 Leonard Street, London, United Kingdom, EC2A 4LT.

**Speaker 3:** Francisco Saute, Deputy Director for Science and Director of the Malaria Elimination Initiative, Centro de Investigacao em Saude de Manhica (CISM), Rua 12,

Cambeve, Vila de Manhica, CP 1929, Maputo, Mozambique..

**Speaker 4:** Arnaud Le Menach, Director, Analytics and Surveillance, Global Malaria, Clinton Health Access Initiative (CHAI), 383 Dorchester Avenue, Boston, MA, USA

**Speaker 5:**

**Purpose and Objective:** The goal of this symposium is to explore and discuss the successes and constraints of implementing digital health system strengthening approaches for malaria case management, surveillance, and response. The symposium will highlight the experiences of implementers in Mozambique as a case study to generate wider discussion regarding best practices for using digital health system strengthening approaches for improved malaria case management, surveillance, and elimination globally.

## S09

**Next generation IRS: expanding the use of 3rd generation IRS products as part of the intervention toolbox for malaria control and elimination.**

**Tente B: 14:30 - 16:15**

**Chairs:** Jason Richardson

**Speaker 1:** David McGuire , NI, IVCC , Pembroke Place Liverpool United Kingdom

**Speaker 2:** Francisco Saute, PhD, CISM, Rua 12, Cambeve, Vila de Manhica, Maputo, Mozambique

**Speaker 3:** Hilary Ranson, PhD, Liverpool School of Tropical Medicine, Vector Biology, Pembroke Place Liverpool, United Kingdom

**Speaker 4:** Elizabeth Chizema, PhD, National Malaria Elimination Centre, Chainama Hospital College Grounds, Lusaka, Zambia

**Speaker 5:**

**Purpose and Objective:** The speakers in this symposium will: outline the Next Generation IRS market shaping intervention to accelerate access to new IRS tools; discuss the role of the various project partners (Unitaid, IVCC, USAID, Abt, Global Fund and insecticide manufacturers); summarize the project's impact to date on IRS coverage and the improved affordability of Actellic 300 CS; present interim evidence of cost-effectiveness of IRS; and discuss strategies to best manage the new IRS products to

simultaneously maximize the reliability of future product demand across Africa while also minimizing the risk of resistance development through pre-emptive, sub-national rotation of multiple IRS products.

## S10

**Primaquine for P. falciparum elimination: progresses and challenges.**

**Auditorium: 16:45 - 18:30**

**Chairs:** Prof Jean Louis Ndiaye

**Speaker 1:** Alassane Dicko, Dr, University of Bamako, University of Bamako, Mali

**Speaker 2:** Alfred B Tiono, Centre National de Recherche et de Formation sur le Paludisme, Ouagadougou, Burkina-Faso

**Speaker 3:** Milijaona Randrianarivelosia, Institute Pasteur, Madagascar

**Speaker 4:** Jean-Pierre Collaveri, pharmaceutical development expert, France.

**Speaker 5:**

**Purpose and Objective:** To present the latest results available from studies designed to investigate the optimal use of low-dose primaquine for P. falciparum elimination in a variety of settings.

## S11

**Using digital tools to strengthen the malaria supply chain.**

**Room 205: 16:45 - 18:30**

**Chairs:** Solomon Assefa and Dejan Zurovac

**Speaker 1:** Solomon Assefa , Doctorate , IBM Research , Catholic University Campus Nairobi Kenya

**Speaker 2:**

**Speaker 3:**

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** Availability of medicines depends on several factors. One of these factors is a fully functional

and working supply chain to assure that the necessary, usable, quality malaria products are available at all levels. Digital tools are increasingly in focus to support supply chain processes. From tablets registering patient/disease numbers, mobile phones to submit stock data, to drones delivering medicines to remote health centers. The purpose of the panel is to share experiences and to determine whether digital tools are just expensive gadgets or whether they are a worthwhile investment with the potential to enhance health outcomes in resource-constrained environments.

## S12

### Detection of sub-microscopic malaria infections using new point-of-care diagnostic tests.

**Tente B: 14:30 - 16:15**

**Chairs:** Xavier Ding

**Speaker 1:** Babacar Faye, Prof, Cheik Anta Diop University, Dakar Senegal

**Speaker 2:** Quique Bassat, Barcelona Institute for Global Health, Spain

**Speaker 3:** Kigbafori D. Silué, Félix-Houphouët-Boigny University and Centre Suisse de Recherches Scientifiques en Côte d'Ivoire, Abidjan, Cote d'Ivoire

**Speaker 4:** Michelle Hsiang, University of California San Francisco, School of Medicine and University of Texas, Southwestern, Dallas, United States

**Speaker 5:**

**Purpose and Objective:** The purpose of this Symposium is to provide an opportunity to present and discuss new point-of-care diagnostic tools for the detection of sub-microscopic malaria infections in various epidemiological settings in sub-Saharan Africa. We will present a number of case studies to illustrate and discuss the technical and practical challenges associated with the use of innovative diagnostic tests for screen-and-treat interventions.

## Oral Session

### Control and Elimination 1 (Presentation 1-8)

**Auditorium: 11:15 -13:00**

**Chair:** Prof Marcel Tanner

**Co chair:** Shehu Awandu

**Malaria pre-elimination reached in Zanzibar but residual transmission and new identified challenges call for additional tools and strategies to achieve elimination**

**By:** Anders Bjorkman

**Co-Author(s):** Chris Drakeley, Deler Shakely, Abdullah Ali, Jackie Cook, Andreas Martensson, Rahila Omar, Kristina Elfving, Berit Aydin-Schmidt, Khamis Haji, Abdul Al-Mafazy, Juma Mcha, Ulrika Morris, Humphrey Mkali, Mwinyi Msellem

**High levels of submicroscopic and asymptomatic Plasmodium infections in a low transmission southern African setting; implications for elimination**

**By:** Shehu Awandu

**Co-Author(s):** Kim Hafmans, Philip Kruger, Lyn-Marie Birkholtz, Himanshu Gupta, Jaishree Raman

**A regional P. falciparum elimination program in Eastern Kayin State, Myanmar: impact of generalized access to early diagnosis and treatment and targeted mass drug administration.**

**By:** Jordi Landier

**Co-Author(s):** Gilles Delmas, Aung Myint Thu, Francois Nosten, Daniel M Parker, Khin Maung Lwin

**Accelerating malaria transmission reduction in Senegal: a cluster randomized trial of the effectiveness of targeted control in hotspots using IRS combined with either MSAT or MDA**

**By:** Abdoulaye Diallo

**Co-Author(s):**

### ADHERENCE TO FOCUSED TREATMENT FOR MALARIA ELIMINATION IN THE GAMBIA

**By:** Fatou Jaiteh

**Co-Author(s):** Umberto Dalessandro, Joseph Okebe, Julie Balen, Jane Achan, Yoriko Masunaga, Koen Peeters Grietens, Joan Muela Ribera

### Bridging the gap between end users and researchers/innovations for malaria control lessons from Target Malaria, Uganda project

**By:** Elinor Wanyama Chemonges

**Co-Author(s):** Jonathan Kayondo

### Current malaria clinical trials activity on the African Continent with special reference to the Pan African Clinical Trials Register

**By:** Elizabeth Pienaar

**Co-Author(s):** Dudzile Ndwandwe, Lindi Mathebula, Vittoria Lutje, Tamara Kredo

### Evaluating the effectiveness and feasibility of reactive focal mass drug administration vs. reactive case detection, with and without reactive vector control, as a community level intervention in response to confirmed, passively identified malaria cases in Zambezi region, Namibia

**By:** Henry Ntuku

**Co-Author(s):** Adam Bennett, Kathryn Roberts, Davis Mumbengegwi, Cara Smith Gueye, Immo Kleinschmidt, Stark Katokele, Ronnie Bock, Oliver Medzhradsky, Hugh Sturrock, Mi-Suk Kang Dufour, Lisa Prach, Jenny Smith, Brooke Whittemore, Bryan Greenhouse, Patrick McCreech, Michelle Hsiang, Petrina Uusiku, Roly Gosling

### Health Systems 1 (Presentation 9-16)

**Oval room: 11:15-13:00**

**Chair:** Prof Robert Guiguemde

**Co chair:** Aminatou Kone

**Evaluating Malaria commodity reporting in Guinea's routine Malaria Information System, 2014-2016**

**By:** Mateusz Plucinski

**Co-Author(s):** Jessica Butts, Abdoulaye Sarr, Claude Bahati, Patrick Condo, Yu Sun, Mohamed Dioubate, Alioune CAMARA, Marie Paule Fargier, Timothee Guilavogui

### THE MANAGEMENT OF MALARIA IN RURAL HEALTH FACILITIES IN BURKINA FASO: HEALTH WORKERS PERCEPTIONS AND PRACTICES

**By:** Traore Adama

**Co-Author(s):** Hilary Ranson, Lea Pare Toe, Caroline Jones, Toe Patrice

### Post-market surveillance of diagnostics: Detection and response to defective malaria RDTs in the field

**By:** Nora Zwingerman

**Co-Author(s):** Santiago Ferro, Orode Doherty, Patrick Orode, Kayla Seadon

### Low test positivity of Malaria Rapid Diagnostic Tests in a low transmission setting in Southern Zambia: Implications for efficient use

**By:** Japhet Matoba

**Co-Author(s):** Philip E. Thuma, Mukuma Lubinda, Kelly Searle, Caison Sing'anga, Jennifer Stevenson, Tamaki Kobayashi, Harry Hamapumbu

### Evaluating the impact of malaria rapid diagnostic tests on health outcomes: Study design and fidelity considerations

**By:** Eleanor Ochodo

**Co-Author(s):** Sue Mallett, Mark Nicol, Patrick Bossuyt, Jon Deeks, Samuel Schumacher, Frank Cobelens, Taryn Young, Christian Nsanzabana, Selvan Naidoo

### Defeating Malaria through Pharmaceutical Systems Strengthening

**By:** Melissa Thumm

**Co-Author(s):** Seydou Doumbia

**Antenatal clinic surveillance for malaria accurately reflects community malaria infection prevalence in**



### a high transmission setting in western Kenya

By: Aaron Samuels

**Co-Author(s):** Oliver Towett, Phelix Jangu, Simon Kariuki, Brian Seda, Duncan Earle, Rick Steketee, Isabella Nyang'au, Meghna Desai, Oscar Odunga, Abdi Mohamed, Titus Kwambai, Laurence Slutsker, Allen Hightower, Feiko ter Kuile, Samwel Onditi

### It's not just about the count! Factors contributing to variances in Malaria Cases and Drug consumption in Zimbabwe (Preliminary Findings): Health worker perceptions and practices

By: Ekpenyong Ekanem

**Co-Author(s):** Joseph Mberikunashe, Patrick Chinyamuchiko, Arthur P. Sanyanga, Busisani Dube, Anthony Chisada

### Epidemiology 1 (Presentation 49-56)

**Oval room: 16:45-18:30**

**Chair:** Prof. Kwadwo koram

**Co chair:** Dr Adama Tall

### Malaria prevalence metrics in low- and middle-income countries: an assessment of precision in nationally-representative surveys

By: Victor Alegana

**Co-Author(s):**

### Model-based interpretation of local changes in transmission patterns in Thies, Senegal through genetic surveillance: 2006 - 2016

By: Edward A. Wenger

**Co-Author(s):** Dyann Wirth, Rachel Daniels, Sarah Volkman, Daouda Ndiaye

### Modeling the impact of Plasmodium falciparum sexual stage immunity on the composition and dynamics of the human infectious reservoir for malaria in natural settings

By: Andre Lin Ouedraogo

**Co-Author(s):** Robert Sauerwein, Will Roeffen, Philip A.

Eckhoff, Edward A. Wenger, Adrian Luty

### Modelling Plasmodium vivax transmission in genetically structured populations: case studies of G6PD deficiency in Papua New Guinea and Duffy negativity in Senegal

By: Michael T White

**Co-Author(s):** Ivo Mueller

### Modelling target product profiles for a childhood Malaria vaccine

By: Alexandra Hogan

**Co-Author(s):**

### Defining minimal profiles of new Malaria interventions for elimination: a modelling study

By: Melissa Penny

**Co-Author(s):** Katya Galactionova, Guojing Yang, Flavia Camponovo

### Stratification of Malaria transmission dynamics and optimal intervention packages in Southern Province, Zambia

By: Joshua Suresh

**Co-Author(s):** Caitlin Bever, Jaline Gerardin, John M Miller, Busiku Hamainza, Edward Wenger

### Understanding the effectiveness of reactive case detection through mathematical modeling of three settings in southern Zambia

By: Jaline Gerardin

**Co-Author(s):**

### Diagnosis and reagents 1 (Presentation 17-24)

**PC Meeting: 11:15-13:00**

**Chair:** Pr Daouda Ndiaye

**Co chair:** Innocent ali

### Evaluation of the performance of SD-Bioline® (HRP2-Based) Malaria Rapid Diagnostic Test against

### Microscopy and Polymerase Chain Reaction among under-five febrile children in Southwest Nigeria

By: Catherine O Falade

**Co-Author(s):** Prudence Hamade, James Ssekitooleko, Adebola Orimadegun, Ayodele S. Jegede, Olusola Ojorongbe, Hannah Dada-Adegbola, Olusegun Ademowo, Daniel Chandramohan, Ebenezer Baba, Ikeoluwapo Ajayi, Obaro Michael, Joseph Badejo, Jayne Webster

### The deployment of a mobile suitcase laboratory based on recombinase polymerase amplification technique for rapid diagnosis of Malaria

By: Olusegun Ademowo

**Co-Author(s):** Elijah Oyinloye, Ahmed Abd El Wahed, Claus-Peter Czerny, Soren Hansen, Susanne Boehlken-Flascher, Solomon Bakarey

### Pitting-based prediction of post-artesunate delayed hemolysis by measuring the Plasmodium falciparum Histidin-Rich Protein-2 in whole blood of artesunate-treated malaria patients

By: Papa Alioune Ndour

**Co-Author(s):**

### Performance of an ultra-sensitive rapid diagnostic test for Plasmodium falciparum Malaria in the low transmission setting of Zambezi Region, Namibia

By: Lisa Prach

**Co-Author(s):** Bryan Greenhouse, Munyaradzi Tambo, Davis Mumbengegwi, Petrina Uusiku, Smita Das, Leah Schrubbe, Michelle Hsiang, Sofonias Tessema, Sophie Allauzen, Roly Gosling, Gonzalo Domingo, Lindsey Wu

### Experiences of using LAMP for Malaria diagnosis in Zanzibar, a preelimination area

By: Berit Aydin-Schmidt

**Co-Author(s):**

### Delivering an offline virtual microscope-based malaria microscopy in-service training course to improve performance in malaria diagnosis

By: Jane Carter

**Co-Author(s):** Earl Long, Vikas Agrawal, Matthew Horning, Travis Ostbye, Christine Bachman, Josephine Namboze, Stephen Johnston, David Ocheng, Christine Bachman, David Isaboke, Anderson Chinorumba, Adam Askew, Dionicia Gamba, Rachel Achilla, Bernard Kikechi, Peter Mwatha, Ken Lilley

### Clinical usefulness of highly sensitive methods (HS-mRDT and HS-qPCR) for the diagnosis of malaria in febrile children in endemic areas

By: Blaise Genton

**Co-Author(s):** Frank Kagoro, Josephine Samaka, Valerie D'Acromont, Iveth Gonzalez, Natalie Hofman, Kristina Keitel, Ingrid Felger

### Improving capacities of Medical Laboratory Scientists towards reliable Malaria diagnosis in Ghana, 2017

By: Alexander Asamoah

**Co-Author(s):** Akosua Gyasi-Darkwa, KEZIAH MALM, Ashia Abukari, Nana Yaw Peprah, Constance Bart-Plange, Patricia Bentil, Hamatu Harruna

## Immunology 1 (Presentation 57-64)

**PC Meeting: 16:45-18:30**

**Chair: Prof Ayola ADEGNIKA**

**Co chair: Dr Faith Osier**

### A novel serological marker of exposure to Plasmodium falciparum gametocytes identified by molecular screening of high risk populations in Cameroon

By: Sylvie Kemleu

**Co-Author(s):** Lawrence Ayong, Emmanuel Elanga, Carole Eboumbou, Estelle Geraldine Essangui Same

### THE RELATIONSHIP BETWEEN THE RATIO OF INTERLEUKIN-10(INT-L10) AND TUMOR NECROSIS FACTOR (TNF) WITH with Plasmodium falciparum density in children

**By:** Okoro chinyere I.

**Co-Author(s):** Chimere O. Agomo, Okoro oluchi, Francis Ihenetu

**Self-reactive immunoglobulin G contribute to asymptomatic Plasmodium falciparum malaria in Ivory Coast**

**By:** David Koffi

**Co-Author(s):** Joseph Djaman, landry tiacoh, fabien herbert, Nicolas Tchitcheke, Offianan Andre Toure, Sylviane Pied

**Marked variations in Pro-inflammatory and Regulatory cytokines and chemokines among children with cerebral malaria and bacterial meningitis in Zambia**

**By:** James Chipeta

**Co-Author(s):** Mable Mwale-Mutengo, Agnes Mtaja, Daniel Mwimbe, Monique Stins

**Cytokine Profiles of Individuals Single and Co-infected with Plasmodium falciparum, Blood Filariae, Soil-Transmitted Helminths and Intestinal Protozoa in Gabon**

**By:** Reine Moutongo

**Co-Author(s):**

**Cytokine and regulatory responses after immunization with GMZ2 in semi immune adults and their association with plasmablasts frequency**

**By:** Ayola Adegnika

**Co-Author(s):** Odilon Paterne Nouatin, Benjamin Mordmueller

**B cell population dynamics during a 1-year follow-up of patients experiencing Malaria for the first time or following repeated exposure**

**By:** Christopher Sundling

**Co-Author(s):**

**ACQUIRED Plasmodium falciparum-SPECIFIC ANTIBODY RESPONSES AS A CORRELATE OF**

**EFFICACY AND RESISTANCE TO ARTEMISININ-BASED COMBINATION THERAPY (ACT) IN TREATMENT OF UNCOMPLICATED MALARIA IN KOMBEWA, WESTERN KENYA**

**By:** Geoffrey Oyugi

**Co-Author(s):** Daniel Ochiel, John Waitumbi, Walter Jura

**Integrated vector management 1 (Presentation 33-40)**

**ROOM 201: 11:15-13:00**

**Chair:** Prof Maharaj Rajendra

**Co chair:** Dr Djogbenou Luc

**Screening and field performance of powder-formulated insecticides on eave tube inserts against pyrethroid resistant Anopheles gambiae**

**By:** Welbeck Achille Oumbouke

**Co-Author(s):** Eleanore D. Sternberg, Matthew B. Thomas, Raphael N'Guessan, Innocent Z Tia, Alphonsine Koffi, Remco A. Suer, Antoine M.G. Barreaux

**Malaria vector species composition and entomological indices following several years of indoor residual spraying in regions bordering Lake Victoria, Tanzania**

**By:** Alphaxard Manjurano

**Co-Author(s):**

**Baseline entomological data related to Malaria vector dynamics and insecticide susceptibility of Anopheles gambiae s.l. in preparation for Indoor Residual Spraying (IRS) in Burkina Faso**

**By:** Aristide HEIN

**Co-Author(s):**

**Estimating the Impact of Next Generation IRS in Ghana: An observational analysis of Malaria indicator trends from 2014-2017**

**By:** Christelle Gogue

**Co-Author(s):** Yemane Yihdego, Richard Stekette, Kenzie Tynuv, Jason Richardson, Anthony Ofosu, Andrew Saibu, Molly Robertson, Wahjib Mohamed, Joe Wagman

**WHOPE Phase I evaluation of Interceptor G2LN (a pyrethroid and chlorfenapyr mixture net) against susceptible and resistant strains of Anopheles gambiae s.l.**

**By:** Corine Ngufor

**Co-Author(s):**

**Indoor Residual Spraying: past, present and &.does it have a future?**

**By:** John Lucas

**Co-Author(s):** John Invest

**Transgenic *Metarhizium pingshaense* synergistically ameliorates pyrethroid-resistance in wild-caught, Malaria-vector mosquitoes**

**By:** Etienne Bilgo

**Co-Author(s):**

**Evaluating the potential effects of Eave Tubes on mosquito entry, blood feeding and mortality**

**By:** Antoine M.G. Barreaux

**Co-Author(s):** Innocent Z Tia, Welbeck Achille Oumbouke, Alphonsine Koffi, Raphael N'Guessan, Matthew B. Thomas

**Phytomedicines 1 (Presentation 73-80)**

**ROOM 201: 14:30-16:15**

**Chair:** Dr Merlin Willcox

**Co chair:** Pr Makhtar Seck

**Acacia ataxacantha and its Compounds as Possible Antimalarial agents in New Drug Discovery: Future Perspectives.**

**By:** Abdou Madjid Olatounde AMOUSSA

**Co-Author(s):**

**Antimalarial herbal remedy inactive against**

**Plasmodium sp: real threat from a public health perspective in Madagascar**

**By:** Elisabeth Ravaoarisoa

**Co-Author(s):** Eleanore D. Sternberg, Matthew B. Thomas, Raphael N'Guess

**Antiplasmodial activity and cytotoxicity of methanol leaf extracts of *Dacryodes edulis*, *Ficus capensis* and *Funtumia elastica***

**By:** Ehimwenma Omoregie

**Co-Author(s):** Osarhieme Okugbo, Francis Irabor, Osamudiamen Ebohon

**Effect of standardized Anti-malarial Herbal tea (Malatreat) on Plasmodium berghei infection in mice**

**By:** Salome Eyaete

**Co-Author(s):**

**EFFICACY AND TOLERANCE OF SAYE, AN HERBAL REMEDY IN THE TREATMENT OF MALARIA**

**By:** Maminata TRAORE

**Co-Author(s):**

**Guinean medicinal plants: in vitro and in vivo validation of antimalarial effect and impact on immune modulation**

**By:** Aissata CAMARA

**Co-Author(s):** Aliou Mamadou BALDE, Agnes Aubouy, Mohamed Sahar Traore, Bernard PIPY, Agnes COSTE, Alpha Oumar BALDE, Mamadou Aliou BALDE

**POTENTIALIZING AND ANTIOXIDIZING POWER OF TWO EXTRACTS OF PLANTS WITH HIGH ANTIPLASMODIAL ACTIVITY**

**By:** TANO KONAN DOMINIQUE

**Co-Author(s):**

**Prophylactic and Curative Antiplasmodial Capabilities of *Nauclea latifolia*, *Morinda lucida*, *Lawsonia inermis*, *Chromolaena odorata*, *Tithonia***

**diversifolia**

By: Funmilayo I. Deborah Afolayan

Co-Author(s):

**Malaria and Pregnancy 1 (Presentation 65-72)**

**ROOM 201: 16:45-18:30**

**Chair:** Prof Lars Hviid

**Co chair:** Ayodele Babalola

**Service provision assessment for Malaria at antenatal clinics in 13 regions of Tanzania**

By: Pili Kimanga

Co-Author(s): Susan Rumisha, Frank Chacky, Loveness Urio, Rogath Kishimba, Ahmed Abade

**Antenatal Care Attendance, Intermittent Preventive Treatment and occurrence of Malaria parasite infection at parturition in Abeokuta, Nigeria.**

By: Ayodele Babalola

Co-Author(s): Eniola Fabusoro, Olufunmilayo Idowu, Sammy Sam-Wobo

**Submicroscopic Plasmodium falciparum malaria and low birth weight in an area of unstable malaria transmission in Central Sudan**

By: Elhassan Mohamed Elhassan

Co-Author(s):

**Antibody responses against VAR2CSA in pregnant and non-pregnant Colombian individuals**

By: Mary Lopez-Perez

Co-Author(s): Socrates Herrera, Myriam Arevalo-Herrera, Lars Hviid

**COMPLIANCE GAPS IN INTERMITTENT PREVENTIVE TREATMENT AND EFFECT ON MATERNAL AND NEONATAL MALARIA IN TWO HEALTH FACILITIES IN**

**RIVERS STATE, SOUTH-SOUTH NIGERIA.**

By: Helen Onoja

Co-Author(s): Austin Abah, Florence Nduka

**Malaria in pregnancy is associated with Non-Malaria fever during the first three months of life in a Beninese infant population**

By: Gino Agbota

Co-Author(s):

**Monitoring malaria at the antenatal clinic: modelling the relationship between the prevalence of infection in pregnant women and clinical incidence in children under 5 in a humanitarian setting**

By: Joel Hellewell

Co-Author(s):

**Matched placental and peripheral blood parasites are genetically homologous at the var2csa ID1-DBL2X locus by deep sequencing**

By: Andreea Waltmann

Co-Author(s):

**Parasites and System biology 1 (Presentation 41-48)**

**ROOM 202: 11:15-13:00**

**Chair:** Prof Michael Alifrangis

**Co chair:** Paulina Safoa Otu

**Undernutrition and dynamic of gametocytemia following uncomplicated Plasmodium falciparum malaria treatment in children in Southern Mali**

By: Moussa Djimde

Co-Author(s):

**Investigating the effect of blood donor variability in Plasmodium falciparum phenotyping assays**

By: Laty Gaye Thiam

Co-Author(s):

**Polymorphisms in Plasmodium falciparum Apical membrane Antigen I (PfAMA1) and Reticulocyte-binding protein homolog-5 (PFRH5): implication for Malaria vaccine in Nigeria.**

By: Ajibaye Olusola

Co-Author(s):

**Temporal changes in Plasmodium falciparum reticulocyte binding protein homolog 2b (PfRh2b) in Senegal and The Gambia**

By: Cyrille Kouligueul DIEDHIOU

Co-Author(s): Ambroise Ahouidi, Daouda Ndiaye, Amy K Bei, Papa Mze Nasseridine, Alfred Ngwa, Souleymane Mboup, Rahama Moussa, Ngor Faye

**Malaria local antibodies prevalence in children under 10 years in a Sudanian area of Senegal in 2010 and 2013**

By: Fode Diop

Co-Author(s):

**Host genetic polymorphisms and asymptomatic malaria in Southern Ghana**

By: Paulina Safoa Otu

Co-Author(s):

**Combatting anemia with iron supplementation may inevitably cause a transient increase in malaria risk**

By: Morgan Goheen

Co-Author(s):

**Investigating the Malaria invadome using high-throughput protein tagging and imaging**

By: Theo Sanderson

Co-Author(s): Ellen Bushell, Oliver Billker, Frank Schwach, Burcu Anar, Julian Rayner, Gareth Girling, Rachael Coyle

**Pharmacology 1 (Presentation 81-88)**

**ROOM 202: 16:45-18:30**

**Chair:** Prof Stephane Duparc

**Co chair:** Jose Francis

**Sero-epidemiological school-based malaria survey to assess the effectiveness of malaria control programs in the Central Highlands of Madagascar**

By: Ines VIGAN-WOMAS

Co-Author(s):

**Pharmacokinetics of amodiaquine and its active metabolite, desethylamodiaquine in Ghanaian patients with uncomplicated falciparum malaria treated with fixed-dose artesunate-amodiaquine combination**

By: Thomas Anyorigiya

Co-Author(s): Abraham Hodgson, Karen I. Barnes, Lesley Workman, Paolo Denti, Fred Binka, Elizabeth Allen, Sandra Castel, Seth Owusu-Agyei, Frank Atuguba, Lubbe Wiener

**Parasite clearance and declines in artemether exposure over the course of artemether-lumefantrine treatment for Plasmodium falciparum malaria in Ugandan children**

By: Richar Kajubi

Co-Author(s):

**Influence of anti-retroviral treatment on lumefantrine exposure - a pooled population pharmacokinetic analysis.**

By: Jose Francis

Co-Author(s): Lasse Vestergaard, Pauline Byakika-Kibwika, Richard Hoglund, Joel Tarning, Paolo Denti, Lubbe Wiener, Lesley Workman, Tamara Kredo, Karen I. Barnes

**EVALUATION OF THE ABSOLUTE BIOAVAILABILITY OF OZ439 USING SIMULTANEOUS INTRAVENOUS [14C] OZ439 MICRODOSE/800 MG ORAL DOSING TO SUPPORT OZ439 FORMULATION OPTIMIZATION**

By: MYRIAM EL GAALLOUL

Co-Author(s):

**Accumulation and safety related to day 7 concentration of desethylamodiaquine after repetitive treatment of malaria patients with artesunate-amodiaquine during two years in Mali**

By: Mamadou M TEKETE

Co-Author(s): Bouran SIDIBE, Juergen BURHENNE, Oumar B TRAORE, Steffen BORRMANN, Sekou Toure, Bakary FOFANA, Walter E HAEFELI, Abdoulaye DJIMDE, Souleymane DAMA, Niawanlou DARA

**Monitoring of immunity with serological tools using magnetic bead-based multiplex assay (MAGPIXE-Luminex) for malaria control measures evaluation in Senegalese and Ivorian communities**

By: Marie Louise VARELA

Co-Author(s):

**Surveillance 1 (Presentation 25-32)**

**ROOM 205: 11:15-13:00**

**Chair:** Prof Abdisalan Noor

**Co chair:** Drissa Coulibaly

**Strengthening Capacity through Malaria Surveillance, Monitoring, and Evaluation workshops**

By: Ashley Garley

Co-Author(s):

**Fine-scale spatial and temporal variation of clinical malaria incidence and associated factors in children in a high transmission setting: a prospective cohort study from rural Malawi**

By: Alinune Kabaghe

Co-Author(s): Michael Chipeta, Martin Grobusch, Michele van Vugt, Robert McCann, Kamija Phiri

Every day they keep adding new tools but they don't take any away : Producing indicators for intermittent preventive treatment for malaria in pregnancy (IPTp) indicators from routine data in Kenya

By: George Okello

Co-Author(s):

**Evaluation of Malaria Epidemiological Surveillance System, South-West Region, Burkina Faso, 2011-2016**

By: Pedwinde Hamadou SEOGO

Co-Author(s): Cheick Ibrahim Compaore, Simon Antara, Denis Yelbeogo, Sidzabda Christian Kompaore, Brice Bicaba, Bernard Sawadogo, Yacouba Savadogo, Abdoulaye Nitiema

**EVALUATING THE MALARIA SURVEILLANCE SYSTEM IN NIGERIA: TRANSFORMING SURVEILLANCE INTO A CORE INTERVENTION TOWARDS ELIMINATION**

By: Rebecca Goldstein

Co-Author(s): Deepa Pindolia, Rashmi Mallick, Remilekun Peregrino, Perpetua Uhomoibhi, Bala Audu, Ibrahim Maikore, Festus Okoh, Omowunmi Omoniwa, Geoffrey Namara, Deepak Batra, Lynda Ozor, Remi Adeseun, Adamu Imam, Asebhoh Ebhomenye

**Determinants of the geographic distribution of malaria in Dakar, Senegal**

By: Assane Niang Gadiaga

Co-Author(s): Robert W. Snow, Mouhamadou DIALLO, Catherine LINARD

**Assessment of the South African malaria foci clearing programme one year post implementation**

By: Natasha Morris

Co-Author(s): Devanand Moonasar, Rajendra Maharaj, Ednah Baloyi, Bridget Shandukani, Siphon Msimang, Jaishree Raman, Basil Brooke, Mary Ann Groepe, Eunice Misiani

**Spatio-temporal pattern of Malaria in Bandiagara from 2009-2014**

By: Drissa Coulibaly

Co-Author(s):

**Pathogenesis and severe malaria 1 (Presentation 89-96)**

**TENTE A: 16:45-18:30**

**Chair:** Prof Patrick Duffy

**Co chair:** Pr Khady Ba Fall

**Inhaled nitric oxide and cognition in severe malaria: a randomized trial**

**By:** Paul Bangirana

**Co-Author(s):** Michael Hawkes, Kevin Kain, Christopher Miller, Sophie Namasopo, Laura Hermann, Chandy John, Conrad Liles, Andrea Conroy, Robert Opoka

**Serum and CSF values for BDNF in Zambian children with Cerebral Malaria**

**By:** Monique Stins

**Co-Author(s):** Daniel Mwimbe, Agnes Mtaja, Evans Mulendele, James Chipeta

**Significantly Higher Serum and Cerebral Spinal Fluid (CSF) levels of osteopontin in children with cerebral malaria compared to bacterial meningitis and encephalitis**

**By:** James Chipeta

**Co-Author(s):** Agnes Mtaja, Mable Mwale-Mutengo, Evans Mulendele, Monique Stins, Daniel Mwimbe

**Polymorphic variation in leukocyte-associated immunoglobulin-like receptors (LAIR1 and LAIR2) influences susceptibility to pediatric severe malarial anemia**

**By:** Fousseyni TOURE-NDOUO

**Co-Author(s):**

**Diversity of PfEMP1 sequences in beninese children suffering from cerebral malaria**

**By:** Claire Kamaliddin

**Co-Author(s):**

**Associations between genotype combinations of NF-B1 and NF-BIA promoter polymorphisms and childhood P. falciparum severe malarial anemia**

**By:** Elly O. Munde

**Co-Author(s):** Collins Ouma, Prakasha Kempaiah, Angela

Achieng , Douglas J. Perkins, Evans Raballah, Samuel B. Anyona, Caroline Ndege

**Association between Interferon gamma (IFN-g) Haplotypes and Erythropoiesis and Gene Expression in a Pediatric Population in a Holoendemic Plasmodium falciparum Transmission Area**

**By:** Evans Raballah

**Co-Author(s):** Collins Ouma, Douglas J. Perkins, Samuel B. Anyona, John M. Ong echa, Prakasha Kempaiah

**Poster Session**

**A001**

**A new challenge in malaria elimination efforts: the increase of malaria among adults after the implementation of long lasting insecticide treated bed nets (LLINs) in Dielmo Senegal**

Amele nyedzie, wotodjo

**A002**

**A package of malaria surveillance visualizations dashboards and alerts lead to improved data quality and use in malaria elimination settings in Zambia and Senegal**

Michael, Hainsworth

**A003**

**A question of logic: Should PBO combination LNs be used in areas where pirimiphos-methyl IRS (Actellic 300CS) control programmes are employed?**

Aurelie, BAILLET

**A004**

**A systematic review and meta-analysis of the risk of transfusion transmitted malaria from blood donors in sub-Saharan Africa**

Selali, Fiamanya



### A005

Antimalarial antibody detection assays: in search of a standardised tool to confirm the absence of malaria transmission

Lotus, van den Hoogen

### A006

Appropriate use of the tools of fight against malaria and the practices of the populations in six villages of Burkina Faso

Tyenou, Huguette

### A007

Assessment of Malaria Implementation activities in health facilities through Monitoring Site Visits using a Designed Template in Lagos Nigeria

Genevieve, Eke

### A007

Asymptomatic Parasite Carriers and Its Implication in Malaria Elimination in Nigeria

Ijeoma, Ogbuehi

### A008

Asymptomatic malaria detected using rapid diagnostic test among school children in Ibadan Nigeria

Eunice, Aroyewun

### A008

Atteindre la couverture universelle des MILDA en Etat d'urgence

Mary, MOLIN BERTH

### A009

Changes in malaria morbidity following Indoor Residual Spraying in Eastern and Northern Uganda: A comparative analysis of IRS and non-IRS districts 2013-2016

Joselyn Annet, Atuhairwe

### A010

Characterization of Plasmodium spp infections in asymptomatic and symptomatic patients from Lambarene and Fougamou in the central African region Gabon

Rella, Manego-Zoleko

### A011

Comparative efficacy of SumiShield a Clothianadin based Indoor Residual Spray measured through a parallel experimental hut and cluster randomized entomological trial

Sarah, moore

### A012

Coping with malaria in camps and on campuses in Cameroon: a salutogenic perspective

Valerie, Makoge Forbin

### A013

De la contribution du secteur privé dans le processus d'élimination du paludisme à Richard-Toll: «le dépistage des saisonniers des entreprises agro-industrielles»

Alassane, TALL

### A014

Decade of PMI-IRS program in Senegal 2007-2016: A

retrospective analysis of challenges gains and loss

El Hadji, Niang

**A015**

Diversity of imported Plasmodium vivax into Gulf Cooperation countries and some countries of origin in east Africa

Mr. Abdelrahim, Mohamed

**A016**

Effect of Awareness Raising by Pupils on Malaria Prevention KAP in the Health District of Mbandjock Cameroon

Line, Dongmo Lekou

**A017**

Effect of fungi skin on prevalence of the malaria in pupils from Yaoundé Cameroon

Tonye, III

**A018**

Effect of multiple rounds of Indoor Residual Spraying on malaria incidence and prevalence of parasitemia in a high transmission setting in Uganda

Joaniter, Nankabirwa

**A019**

EFFECTIVENESS OF PRIVATE SECTOR MALARIA CONTROL: THE CASE OF SUGARCANE WORKERS IN SOUTHERN MOZAMBIQUE

Joe, Brew

**A020**

Efficacy of a Non-Chemical Larvicide for Mosquito Vector Control - «Aguasophurn»

Vishan, Lakan

**A021**

Empowering Pupils To Perform Awareness-Raising Activities In Their Schools and Communities: Mbandjock Cameroon

Fidelia, Ngwanya Nyah

**A022**

Ethiopia: Assessment of malaria transmission dynamics using multiplex serological assay

Bahita, Ashenafi Assefa

**A023**

Evaluating the effectiveness and feasibility of reactive focal mass drug administration vs reactive case detection with and without reactive vector control as a community level intervention in response to confirmed passively identified malaria cases in Za

Henry, Ntuku

**A024**

Evaluation of Bio-efficacy of Olyset PlusNet against Pyrethroid Resistant Malaria Vectors in Western Kenya

Isaiah, Debrah

**A025**

Experience of mosquito release and recapture in an open environment in a context of malaria research: perceptions of the rural community and the stakes of their involvement in Bana Burkina Faso

Nourou, BARRY

**A026**

Feasibility of Malaria Diagnosis and Management in Burkina Faso Nigeria and Uganda: A Community-

## Based Observational Study

Ikeoluwapo, Ajayi

### A027

Field evaluation of novel candidate traps for surveillance of mosquitoes in area for sterile insect technique trial in Sudan

Bashir, Ali

### A028

Genetic polymorphism of Merozoite Surface Protein 1 (msp1) and 2 (msp2) genes and multiplicity of Plasmodium falciparum infection across various endemic areas in Senegal

Tolla, NDIAYE

### A029

Good performances but short lasting efficacy of Actellic 50 EC Indoor Residual Spraying (IRS) on malaria transmission in field conditions in Benin West Africa

Rock Yves, AIKPON

### A030

High frequency of the Duffy negative genotype and absence of Plasmodium vivax infections in Ghana

Charles, Brown

### A031

Identification of culturable bacteria in the midgut of Anopheles gambiae and paratransgenesis approach in Burkina Faso

Aminata, Fofana

### A032

Impact of Prevention on Two Usually Confused

Diseases: Cases of Malaria and Relapsing Fever Borreliosis in Dielmo-Ndiop Sine-Saloum Senegal

Georges, DIATTA

### A033

Impact of seasonal Malaria Chemoprevention on hospital admissions and mortality in Children under 5 years in Ouelessebougou Mali

Djibrilla, Issiaka

### A034

Indoor residual spraying in Bongo District reduces asymptomatic P falciparum prevalence with no significant changes in genetic diversity using msp2 genotyping

Charles, Narh

### A035

Introducing Malaria Service and Data Quality Improvement (MSDQI) package in resource limited countries- a case study in Tanzania

Goodluck, Tesha

### A036

Malaria entomological surveys in the Littoral and South West Regions of Cameroon after Long Lasting Insecticidal Nets mass distribution Campaigns

Philippe, Nwane

### A037

Malaria epidemiology among children in areas with pyrethroid-resistant vectors in the northern region of Cameroon

TABUE, NGOMDJUM Raymond

### A038

Malaria in Dielmo a Senegal village: is its elimination possible after seven years of implementation of long-lasting insecticide-treated nets?

Amele Nyedzie, wotodjo

### A039

Malaria Surveillance and Elimination: Country-driven and country-owned

Erin, Shutes

### A040

Malaria-NTD-WASH co-implementation pilot test in Schools in Nigeria: Experience from Ebonyi Cross-river and Jigawa States

Olusola, Oresanya

### A041

Marked Rise in the Prevalence of Asymptomatic Plasmodium falciparum Infection in Rural Gabon

Irene, PEGHA-MOUKANDJA

### A042

Near-infrared spectroscopy for identifying Plasmodium falciparum- infected Anopheles gambiae ss

Marta, Maia

### A043

Observational Evidence of a Complimentary Effect of Combining Next Generation Indoor Residual Spraying and Seasonal Malaria Chemoprevention in the Segou Region of Mali 2014

Joe, Wagman

### A044

Operational evaluation of the effectiveness of malaria control interventions (PALEVALUT project)

Franck, Remoue

### A045

Pan African Mosquito Control Association Symposium:African Entomological Capacity Analysis

Prosper, Chaki

### A046

Perceptions acceptance and appropriation of vector control new tools (genetic modification of mosquitoes and mosquitoes swarms praying) by the populations in the villages of Ramatoulaye and Mogobasso in western Burkina Faso

Hamadoum, Tamboura

### A047

Performance Outcomes from African-based Malaria Diagnostic Refresher Training Courses

Matt, Worges

### A048

Prescriber practices and patient adherence to artemisinin-based combination therapy for the treatment of uncomplicated malaria in Guinea 2016

Alioune, CAMARA

### A049

Prevalence and factors associated with plasmodium parasitemia in households with an index malaria case presenting at Nagongera HCIV Tororo district

Edward, Kayongo

#### **A050**

Prevalence of Plasmodium falciparum by Age Groups through Rapid Diagnostic Tests Light Microscopy and Polymerase Chain Reaction between 2015 and 2017 in Magude district Mozambique

Wilson, Simone

#### **A051**

Prévalence de la schistosomiase et des géohelminthiases chez les femmes enceintes dans une zone rurale du Burkina Faso

Nouhoun, Barry

#### **A052**

REASSESSMENT OF ENTOMOLOGICAL PARAMETERS OF MALARIA TRANSMISSION AFTER 10 YEARS IN BOUGOULA-HAMEAU SIKASSO (MALI)

Fatoumata I, Ballo

#### **A053**

Strategie de traitement complet sous TDO de la campagne de chimio prévention saisonnier du paludisme au niveau du District Sanitaire de Goudomp (SENEGAL)

Malick, ANNE

#### **A054**

The 2015-2016 malaria epidemic in Kitgum; what are the implications for malaria control interventions?

Rodney, Ogwang

#### **A055**

The impact of Indoor Residual Spraying with a long lasting formulation of pirimiphos-methyl on malaria

Aurelie, BAILLET

#### **A056**

The impact of malaria control strategies in Dielmo village Senegal

Nafissatou, Diagne

#### **A057**

The spread of malaria in the district of Copargo Republic of Benin: The roles of Anopheles gambiae and Anopheles funestus in the transmission

Yves, AIKPON

#### **A058**

The way forward to build capacity for malaria control and elimination: E-learning transdisciplinary multi-cultural peer and facilitator exchange and networking

Konstantina, Boutsika

#### **A059**

Thirteen years of a sustained public-private-partnership in the fight against malaria in Africa: The case of the Bioko Island Malaria Control Project

Wonder, Phiri

#### **A060**

Trends in outpatient malaria cases and effects of antimalarial intervention in the Democratic Republic of the Congo 2005-2014

Barbara, Matthys

#### **A061**

USE OF INSECTICIDES-TREATED NETS (ITNs) AND ASYMPTOMATIC MALARIA IN AREA WITH HIGH TRANSMISSION IN KALIFABOUGOU MALI

Moussa, NIANGALY

### A062

Using household surveys to monitor hotspots of malaria transmission in a low prevalence setting

Haddy, Nyang

### A063

Utility value and limitations of malaria prevalence maps in malaria control and elimination: perceptions of decision-makers in Kenya Malawi Mali and the Democratic Republic of Congo

Ludovica, Ghilardi

### A064

Vector bionomics infectivity and insecticide resistance in low malaria transmission settings in northeastern Thailand: Challenges for malaria elimination

Hans, Overgaard

### A065

Evaluation of Malaria Surveillance System in Ogun State Nigeria 2011 - 2015

Sanni, Salimat

### A066

Antimalarial Prescription Practices at 21 Public Outpatient Facilities Located In Regions of Varying Malaria Endemicity in Uganda

Kapisi, James Apollo

### A067

Assessing the usefulness of a threshold for detecting malaria epidemics in Tanzania: A case study in Hai district (Kilimanjaro region) and Bukoba Municipal Council (Kagera region)

Willilo, Ritha

### A068

Changes in confirmed and clinical malaria cases reported through the District Health Information System in Kenya 2011-2015

Githinji, Sophie

### A069

Decision-support tools to guide implementation of malaria interventions: A literature synthesis

Hai, Tajrina

### A070

Digital health system strengthening approaches for improved malaria case management surveillance and response

Roca, Aranxa

### A071

GIVeS: A collaborative effort for GIS capacity building in vector surveillance

Coleman, Michael

### A072

Improving Data Quality in District Level Routine Health Information Systems: a systematic review

Lee, Jieun

### A073

Malaria mortality in rural Western Kenya: Evidence from a Health and Demographic Surveillance System (HDSS)

Sifuna, Peter

### A074

Malaria risk assessment through Remote Sensing

## and Multi-Criteria Evaluation in Madagascar

Rakotoarison, Anthonio

### A075

#### Maternal health prenatal health and malaria prevention: An integrated approach

ADETUNDE, OLUWASEGUN

### A076

#### Population Survey on Malaria in the Kipushi Municipality Haut-Katanga Province DRC: Trends and Geospatial Analysis

Zwingerman, Nora

### A077

#### PSOP24 -377 secreted ookinete protein AS A MARKER OF INFECTIOUS BITES for assessing community level malaria transmission intensity

Badu, Kingsley

### A078

#### Real-time routine data collection strengthens malaria surveillance system in Madagascar

Yanulis, John

### A079

#### Reservoir of Malaria Infection: Evidence from School Malaria Prevalence Survey in Tanzania

Chacky, Frank

### A080

#### Risk factors of malaria in the suburbs of Dakar which determinants for better decision making in the fight against malaria?

CISSE, Birane

### A081

#### SETTING UP RAPID REPORTING SYSTEM FOR MALARIA SURVEILLANCE IN CONTROL PHASE- THE SIAYA COUNTY EXPERIENCE

Nyangau, Isabella

### A082

#### Spatial epidemiology of malaria in Benin in rainy season: focus on age and call for localized interventions

DAMIEN, Georgia Barikissou

### A083

#### The impact of travel on the epidemiology of malaria in Zanzibar: what it means for the islands vision of malaria elimination

Ngondi, Jeremiah

### A084

#### Timeliness and completeness of malaria case notification and response in Zanzibar 2013-2015

Mkali, Humphrey

### A085

#### Trend in malaria morbidity in Liberia: Comparing routine health information data and Malaria Indicator Surveys

Diboulo, Eric

### A086

#### Understanding the quality of routine Health Management Information System (HMIS) data over time: Findings from a comprehensive health facility level analysis of the Nigeria HMIS malaria data from 2014-2017

Namara, Geoffrey

### A087

A decade of SMS reports for malaria surveillance in southern Zambia: Trends in reported malaria cases and the utility of data quality validation

Lubinda, Mukuma

### A088

A Web-based Dashboard Provides Data for Decision Making in Mali

Thumm, Melissa

### A089

Assessing quality of malaria care in public health facilities in Uganda

Shah, Jui

### A090

Assumed White blood cell count of 8000 Cells/mL and 6000 cells/mL Estimates Malaria Parasite Density-An Exploratory Study

Okwusinachi, Ginika

### A091

Barriers to effective uptake of malaria prevention interventions in Ibadan South West Nigeria; A qualitative study

Oladimji, Kelechi Elizabeth

### A092

Building Capacity of Users and Producers of Evidence in Health Policy and Systems Research for Better Control of Malaria in Nigeria

ETIABA, ENYINNAYA

### A093

Contribution of outreach training and supportive supervision in improving the quality of diagnosis of malaria in DRC

LANDELA LUZOLO, ANGE

### A094

Implementing research capacity development and improving evidence generation and data quality for malaria research across the world

Lang, Trudie

### A095

Malaria investigation and treatment of children admitted to county hospitals in western Kenya

Amboko, Beatrice

### A096

Near real-time reporting through DHIS2 to drive efficiency during an LLIN mass distribution campaign: lessons from the 2016 campaign in Kinshasa DRC

Lussiana, Cristina

### A097

Priorités de recherche sur le paludisme dans le cadre d'un projet régional en Afrique de l'Ouest

SOMBIE, Issiaka

### A098

Setting a Nigeria National Malaria Operational Research Agenda: The process

Olufemi, Ajumobi



### A099

Severe anemia in Ugandan hospitals: the need for improved diagnosis increased laboratory capacity and better access to blood for transfusion

Opoka, Robert

### A100

Spatial disparities in malaria transmission in the health district of Nanoro Burkina Faso

ROUAMBA, ELI

### A101

The Clinical and Epidemiologic Implications of Scaling Postpone Parenthood and Contraceptive Technology as an Alternative Measure of Reducing Incidences of illegal Abortion and post abortion related Complications among Virally Unsuppressed Sexually activ

BOB, BENJAMIN

### A102

The role of social entrepreneurs in healthcare delivery and health innovation for Africa

Adenle, Ademola

### A103

Trends of malaria infection in asymptomatic population in Kisumu County Western Kenya

Opot, Benjamin

### A104

Understanding the social logics of pesticide use in Bouaké (Cote d'Ivoire)

Doudou, Dimi Theodore

### A105

Using health facility-based records to determine clinical malaria episodes among all age groups and evaluate antimalarial drugs prescription practices in health facilities: A two-year retrospective study in Liberia

Koko, Victor S.

### A106

Achieving Plasmodium falciparum malaria elimination using reactive case detection: A modelling study

Reiker, Theresa

### A107

Assessing the Effect of Long-Lasting Insecticide Nets Type on Adult Malaria Prevalence from the Democratic Republic of the Congo

Brazeau, Nicholas

### A108

Besoin de soins et consommation des médicaments à Cotonou au Benin : Quelle place occupe le paludisme dans les événements de santé prise en charge par la population ?

APETOH, EDWIGE

### A109

Burden of malaria in mobile populations in the Greater Accra Region Ghana: A cross-sectional study

Sarfo, Bismark

### A110

Comparing seasonal dynamics of Plasmodium falciparum malaria in Nigeria: A Time Analysis

Afolabi Bakare, Emmanuel

### A111

Contrasting Asymptomatic and Symptomatic Malaria in Infants living in a High Transmission Area in Ghana

Botwe, Akua

### A112

Demographic and socio-economic factors associated with persistence of malaria in selected regions in Tanzania

Francis, Filbert

### A113

Digital data collection in the REACT randomized controlled trial to improve data quality availability and security

Moiroux, Nicolas

### A114

Distribution of Malaria Parasites and Soil Transmitted Helminth (STH) Infection in the Middle-belt of Ghana Africa

Adu-Gyasi, Dennis

### A115

DYNAMICS AND CONTROL MEASURES FOR MALARIA USING A MATHEMATICAL EPIDEMIOLOGICAL MODEL

Onah, Ifeanyi

### A116

Dynamics of malaria transmission prevalence and incidence rates in Korhogo area northern Cote d'Ivoire

ZOGO, Barnabas

### A117

EPIDEMIOLOGICAL ASSESSMENT OF Toxoplasmosis and Malaria CO-INFECTION IN SOUTHWESTERN NIGERIA

Efenovwe, Maureen

### A118

Epidemiology of malaria in the savannah region of northern Cote d'Ivoire: malaria infection and disease

Kouadio, N'gaza Dieudonne

### A119

Expansion of malaria prevention and treatment interventions associated with reduction of all-cause childhood mortality Kenya 2003 - 2015: Evidence from individual level analysis

Mbithi, Agneta

### A120

Exploring the impact of scaling up mass testing treatment and tracking on malaria prevalence among children in the Pakro sub district of Ghana

Ignatius Cheng, NDONG

### A121

Fine-scale models of human mobility in Africa

Ciavarella, Constanze

### A122

Genetic complexity and transmissibility of imported Plasmodium falciparum into the malaria-free state of Qatar

Al-Hamidhi, Salama

### A123

#### Impact of climate variability on the transmission risk of malaria in northern Cote d Ivoire

M'Bra, Kouassi Richard

### A124

#### Improving Long-Lasting Insecticidal Nets use in Kayange community of North-Western Burundi: A Quality Improvement Study

Habonimana, Desire

### A125

#### Interactive visual analytics geo-spatial and geo-social models in the control of urogenital schistosomiasis and malaria in Eggua Ogun State Nigeria

Osundiran, Ayoade

### A126

#### INTRODUCING POST DISCHARGE MALARIA CHEMOPREVENTION (PMC) FOR MANAGEMENT OF SEVERE ANAEMIA IN MALAWIAN CHILDREN: A QUALITATIVE STUDY OF COMMUNITY HEALTH WORKERS PERCEPTIONS AND EXPERIENCES

Gondwe, Thandile

### A127

#### MALARIA HOTSPOTS WITHIN A LARGER HOTSPOT; WHAT S THE ROLE OF BEHAVIOURAL FACTORS IN FINE SCALE HETEROGENEITY IN WESTERN KENYA?

Mangeni, Judith

### A128

#### Malaria morbidity reduction among children two years after Seasonal Malaria Chemoprevention

#### scaling-up in the health district of Koutiala Mali

Maiga, Hamma

### A129

#### Modelling the influence of temperature and rainfall on malaria incidence in four endemic provinces of Zambia using semiparametric Poisson regression

Shimaponda-Mataa, Nzooma

### A130

#### Improving Long-Lasting Insecticidal Nets use in Kayange community of North-Western Burundi: A Quality Improvement Study

Habonimana, Desire

### A131

#### Molecular identification of Plasmodium vivax in febrile and afebrile children in Namibia

Haiyambo, Daniel

### A132

#### New Biomarkers of Human-Anopheles contact: from the concept to the applications

Remoue, Franck

### A133

#### Novel markers of recent malaria exposure: assessing short-term changes in malaria transmission in The Gambia with new serological tools

Wu, Lindsey

### A134

#### Novel methodologies in malaria epidemiological surveillance using facility-based data in southern Senegal

Hodson, Daniel

### A135

#### Predictors of Malaria Parasitemia among Children Under Five Years in Ghana Using Survey Data 2017

Peprah, Nana Yaw

### A136

#### Preliminary Results of Plasmodium vivax Infections in Duffy negative Individuals from the Democratic Republic of the Congo

Brazeau, Nicholas

### A137

#### Prevalence and risk factors associated with malaria infections in areas with persistent transmission from North-western and Southern regions of Tanzania

Chiduo, Mercy

### A138

#### Prevalence and risk factors for malaria infection at the Inata mining site in the health district of Djibo Burkina Faso

CISSE, Mamoudou

### A139

#### Prevalence of asymptomatic carriage of Plasmodium falciparum in urban and semi-urban areas of Gabon

Mbang Nguema, Ornella Anaise

### A140

#### prevalence of malaria among children less than 10 years old in the BE health area Nord Cameroon

TIANI, LIONEL

### A141

#### Prevalence of malaria from blood smears examination: A twenty-year retrospective study from national malaria reference laboratory Ouagadougou Burkina Faso

Ouedraogo, Alphonse

### A142

#### Prevalence of Malaria Parasite among Delegates attending Baptist Students Conference in BOWEN Iwo Nigeria

Ogunwola, Oluwatosin

### A143

#### Prevalence of Plasmodium species in a rural population of Gabon: a cross-sectional study

Held, Jana

### A144

#### Preventing malaria mortality due to the Boko Haram insurgency in Borno State Nigeria

Briet, Olivier

### A145

#### Reduction of clinical malaria incidence in a longitudinal cohort in Kalifabougou Mali over a 6-year period

Dumbo, Safiatou Niare

### A146

#### Remote sensing for malaria epidemiology in African cities

LINARD, Catherine

#### A147

Repeated Artemisinin-based combination treatment and dynamics of Plasmodium falciparum strains in Uganda and the Democratic Republic of the Congo

Muhindo Mavoko, Hypolite

#### A148

School age children disproportionately contribute to the potential P falciparum transmission reservoir in Southern Malawi

Mathanga, Don

#### A149

Seasonal Malaria Chemoprevention (SMC) as a Tool for Malaria Prevention among School-age Children in Ibadan Nigeria

Omobowale, Mofeyisara

#### A150

Small-for-Gestational Age as a predictor for malaria during the first two years of life

AGBOTA, Gino

#### A151

Soil-Transmitted Helminths affect Schistosoma haematobium effect on Plasmodium falciparum infection in school-age children living in rural areas of Central Africa region

Dejon Agobe, Jean-Claude

#### A152

Spatial patterning and fine-scale heterogeneity of malaria risk along an urban-rural continuum in Blantyre Malawi

Wilson, Mark

#### A153

Submicroscopic Plasmodium falciparum malaria and low birth weight in an area of unstable malaria transmission in Central Sudan

Elhassan, Elhassan Mohamed

#### A154

The burden of malaria infection among 0-6 month old African infants in settings with low to high intensity of malaria transmission

Nahum, Alain

#### A155

The Social Co-relation between Malaria Water Sanitation and Hygiene among Internally Displaced People {IDPs} and illegal Migrant Health: An Epidemiological Review of social Implication of Migration and Population Health in Sub-Saharan Africa

BOB, BENJAMIN

#### A156

Treatment-seeking behaviour in low- and middle-income countries estimated using a Bayesian model

Alegana, Victor

#### A157

Understanding the relationship between haemoglobin and haematocrit using pooled data from malaria clinical trials

Banda, Clifford

### A158

---

Usefulness of *P falciparum* multiplicity of infection for malaria epidemiology studies in Nanoro Burkina Faso

Sondo, Paul

### A159

---

Repeated Artemisinin-based combination treatment and dynamics of *Plasmodium falciparum* strains in Uganda and the Democratic Republic of the Congo

Robertson, Molly

### A160

---

Zero malaria deaths in 2015 : a global target based on the wrong metrics Illustration with Sahelian countries

Derra, KARIM

## Abstract Panels

### 2. Panel : Resource allocation and advocacy

**Tuesday 16th April 09:45-10:45**

**Moderator:** Honourable Minister of State, Prof Awa Marie Coll Seck

**Discussants:**

- Dr Matishido Moeti, WHO African Region Director;
- Mrs Joy Phumaphi, ALMA CEO;
- Dr Tore Godal, Special Adviser to the Prime Minister on Global Health, Norway;
- Dr Lutz Hegemann, Novartis CEO

The purpose of this panel discussion is to raise awareness about resource allocation and advocacy for decision makers and other stakeholders with a range of malaria experts, Civil Society and Private actor to improve the results and sustain the commitment to support malaria elimination of the era of the SDGs.

Rationale for topic discussion: For many years, the global response to malaria was considered one of the world's great public health achievements. WHO reported time and again on the massive roll-out of effective disease-cutting tools, and on impressive reductions in cases and deaths. Malaria case incidence has fallen globally since 2010, the rate of decline has stalled and even reversed in some regions since 2014. Mortality rates have followed a similar pattern. But African Region continues to account for about 90% of malaria cases and deaths worldwide. Fifteen countries – all but one in sub-Saharan Africa – carry 80% of the global malaria burden.

Some of the issues preventing countries from moving towards elimination include, the risks of conflict in endemic areas, abnormal patterns of climate change, and emergence of parasite resistance to antimalarial drugs and mosquito resistance to insecticides and above all, the lack of sustainable and predictable national and international funding, the lack of funds for relevant research and innovation (WMR 2017). These last challenges will be developed during this panel discussion

## Symposium Session

### S13

**How to confirm absence of transmission in the last step towards elimination?**

**PC room: 9:00 - 10:45**

**Chairs:** Yakou Dieye and Elizabeth Chizema (to be confirmed)

**Speaker 1:** Chris Drakeley, Professor, Infection & Immunity, London School of Hygiene and Tropical Medicine, Keppel St, Bloomsbury, London WC1E 7HT, UK

**Speaker 2:** Caterina Guinovart, Senior Advisor, Research and Implementation, PATH MACEPA and Barcelona Institute for Global Health, Rossello, 132, 7th floor 08036 Barcelona, Spain

**Speaker 3:** Asefaw Getachew, Senior Technical Advisor, PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Getu Commercial Center, rear side Kirkos Sub-City, Kebele 01, H 999, Addis Ababa, Ethiopia

**Speaker 4:** Mulenga Mwenda, Laboratory Scientist, PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Mikwala House, Stand 11059, off Brentwood Lane, Longacres, Lusaka, Zambia

**Speaker 5:** Gillian Stresman, Research Fellow, London School of Hygiene and Tropical Medicine, Keppel St, Bloomsbury, London WC1E 7HT, UK

**Purpose and Objective:** To discuss different approaches to confirm absence of malaria transmission and present results from studies that have used them in areas approaching elimination.

### S14

**Malaria in pregnancy programmes: challenges and priorities in antimalarial drug development for African pregnant women**

**Room 205: 9:00 - 10:45**

**Chairs:** Prof. Feiko ter Kuile and Dr Montserrat Blazquez-Domingo

**Speaker 1:** Feiko O. ter Kuile, Professor, Liverpool School of Tropical Medicine (LSTM), School of Tropical Medicine,

Pembroke Place, Liverpool, United Kingdom, L3 5QA (based at KEMRI-LSTM in Kenya)

**Speaker 2:** Clara Menendez Santos, Professor, ISGlobal - Barcelona Institute for Global Health, Hospital Clinic of Barcelona-University of Barcelona Rossello, 132, 5-1, Barcelona, Spain, 08036

**Speaker 3:** Moses R. Kanya, Professor, Makerere University College of Health Sciences, Old Mulago Hill Road, New Mulago Hospital Complex P.O Box 7072, Kampala, Uganda

**Speaker 4:** Esperanca Sevene, Professor, Centro de Investigaro em Saude de Manhica, CISM & Eduardo Mondlane University, Salvador Allende Ave, 702 R/c, Maputo257, Mozambique

**Speaker 5:**

**Purpose and Objective:** In Africa, it is estimated that approximately 30 million pregnant women are exposed to the Plasmodium parasite, which is responsible for 10 000 maternal deaths, 900 000 babies being born with low birth weight, and 100 000 infant deaths each year. Conducting malaria interventions in endemic countries are essential to deliver to the affected populations new and improved medicinal products that are safe, efficacious, affordable and accessible. There is an urgent need to develop alternative drugs for pregnancy-associated malaria, mainly in HIV-infected pregnant women, to effectively prevent and treat infection (especially in the first trimester of gestation) in low-income countries. Moreover, the systematic exclusion of pregnant women from clinical trials (by most product developers) coupled with the challenges (ethical, social, cultural) of conducting this research limits the development of new antimalarials. The current World Health Organization (WHO) policy recommends intermittent preventive treatment with sulphadoxine-pyrimethamine (IPTp-SP) in pregnancy. However, this policy though still highly cost-effective in most endemic African countries, is compromised by the risk of parasite resistance to SP and it is contraindicated in HIV-positive pregnant women receiving cotrimoxazole prophylaxis

(CTXp), leaving the more vulnerable women the less protected. In view of this, WHO has recommended further research in IPTp during pregnancy. Maternal and child health remains a high priority research area in EDCTP and the Programme has a significant track record in malaria prevention and treatment studies involving pregnant

women and their newborns. Recently, EDCTP awarded two multicentre studies to investigate the potential use of dihydroartemisinin piperazine (DP) for the prevention of malaria in HIV-negative and HIV-infected pregnant women in areas where SP resistance is low

(Gabon and Mozambique) to medium and high (Kenya, Tanzania and Malawi), by replacing SP by DP.

## S15

### Achievements in Capacity Building for IRS in Africa

**Room 201: 9:00 - 10:45**

**Chairs:** Allan Were

**Speaker 1:** Vera Connolly, Associate Director, EnCompass LLC, 1451 Rockville Pike Ste 600, Rockville

**Speaker 2:** Wilson Chauke, National Vector Control Officer, National Malaria Control Program, Zimbabwe, Ministry of Health, Harare, Zimbabwe

**Speaker 3:** Dr. Baltazar Candrinho, Program Manager National Malaria Control Program, Mozambique, Ministry of Health Mozambique, Ministry of Health, Maputo, Mozambique

**Speaker 4:** Dereje Dengela, Technical Director, The PMI AIRS Project, Abt Associates Inc., 4550 Montgomery Ave #800N, Bethesda, MD 20814

**Speaker 5:**

**Purpose and Objective:** To share the experiences, challenges, and successes of efforts to build the capacity of country level stakeholders to plan, implement, and monitor IRS programs and campaigns across various countries in Africa.

## S16

### Providing the LINKs to strengthen the use of data for malaria decision-making in sub-Saharan Africa

**Tente A: 9:00 - 10:45**

**Chairs:** Professor David Schellenberg

**Speaker 1:** Lauren Hashiguchi, MSPH, The data-to-impact pathway and programme activities of LINK - description of the data-to-impact pathway that forms the foundation of LINK s approach. In parallel, she will detail the activities



that LINK undertakes to achieve its

**Speaker 2:** Dr Benson Droti (MBChB, MPH, Dr PH), Role of Health Observatories in monitoring universal health coverage (UHC) and Sustainable development goals (SDGs) in the African Region The African Health Observatory has been operational since the beginning of 2011.

**Speaker 3:** Peter M Macharia, Temporal prediction of county level malaria prevalence in Kenya: A modified areal-level model was adopted for improved sub-national estimates of malaria suited for NMCPs. Comparisons with alternative approaches were carried out

**Speaker 4:** Dr Samuel Juana Smith, MD, MPH, FWACP, Country perspectives: Data for decision-making in Sierra Leone. Dr Smith will speak about the use of malaria data for decision-making. The focus will be on describing the use of data for planning the mass drug administration

**Speaker 5:**

**Purpose and Objective:** Accurate health information is the cornerstone of effective decision-making and the reliable assessment of disease burden. The design and funding of malaria control in Africa is at a critical juncture, requiring better targeting of limited resources to improve impact, sustain recent gains and preserve malaria control tools. The international donor community is constrained by the global financial crisis and ministries of health struggle to justify increased investment of national domestic funding for malaria control. Malaria control requires more and more granularity of public health information to address the heterogeneity of malaria risk within countries as well as to provide data to make decisions at sub-national levels. LINK as part of the Strengthening the use of data for decision-making project has been one vehicle to address these issues. LINK works with national malaria programmes and stakeholders to collate, synthesise, model and interpret data in 13 sub-Saharan African countries with a high burden.

## S17

### ACCESS-SMC: Scaling-up Seasonal Malaria Chemoprevention in the Sahel: final results, lessons learned, and long-term outlook

**Tente B: 9:00 - 10:45**

**Chairs:** Diego Moroso, Tibenderana James and Milligan Paul

**Speaker 1:** Paul Milligan, Dr, London School of Hygiene and Tropical Medicine, London School of Hygiene and Tropical Medicine

**Speaker 2:** Diego Moroso, Dr, Regional Project Director ACCESS-SMC, ACCESS-SMC

**Speaker 3:** Yacouba Savadogo, Dr Director of National Malaria Control Program (Burkina Faso), Burkina Faso

**Speaker 4:** Issaka Sagara, Prof, Malaria Research and Training Centre, Bamako (Mali), Mali

**Speaker 5:** Jean Louis Ndiaye, Prof, University Cheikh Anta Diop (UCAD), Dakar (Senegal), Dakar Senegal

**Purpose and Objective:** The ACCESS-SMC project aimed to catalyse scaling-up of seasonal malaria chemoprevention (SMC), a new approach to malaria control. Following successful completion of the project in February 2018, this symposium will share success stories and identify the key lessons to be learned about successful scaling-up of new interventions. The session will highlight challenges of implementation at scale, the importance of national ownership, the challenges of quality assurance, the methods for scientific monitoring of intervention delivery, efficacy, safety and public health impact, and the key findings from the project.

## S18

### At the Crossroad of Antimalarial Drug Resistance: Challenges and Solutions

**Oval Room: 11:15 - 13:00**

**Chairs:** Prof. Arjen M. Dondorp and Prof. Wilfred Mbacham

**Speaker 1:** Wilfred Mbacham, Prof., Laboratory for Public Health Research Biotechnologies, The Biotechnology Centre, University of Yaounde, Yaounde, Cameroon, The Biotechnology Centre, University of Yaounde, Yaounde, Cameroon

**Speaker 2:** Dr. Stephen Duparc, Chief Medical Officer, Medicine for Malaria Venture (MMV)

**Speaker 3:** Dr. Rob van der Pluijm, MD, Mahidol Oxford Tropical Medicine Research Institute, Bangkok, Thailand

**Speaker 4:** Prof. Maciej F. Boni, PhD, Department of Biology, Pennsylvania State University, USA

**Speaker 5:**

**Purpose and Objective:** Artemisinin combination therapies (ACTs) are used worldwide as first-line treatment for *Plasmodium falciparum* malaria. ACTs have contributed substantially to reducing the global burden of malaria. However, emerging resistance to artemisinin and the ACT partner drugs now threaten these gains. Artemisinin resistance was first detected in South East Asia, and has spread in the region. Outstanding questions are whether or when resistant parasites will spread globally, or will emerge independently on the African continent. How can we avoid this scenario, and should we be prepared that the situation in Asia today can be the future of Africa? In certain countries in Southeast Asia, ACTs are now failing. New treatment strategies are needed using existing drugs, since new antimalarial drugs will likely not arrive in the market within the next years. The symposium will discuss the global extent of antimalarial drug resistance, in

particular artemisinin and ACT partner drug resistance, and the promising pipeline of new antimalarial drugs. In addition, a new strategy using triple combinations of existing drugs will be discussed as a treatment for multidrug resistant malaria and as a potential approach to delay spread and emergence of drug resistance. Finally, the symposium will discuss the deployment of multiple first line treatments in the same area as a strategy to delay the emergence and spread of antimalarial drug resistance.

## S19

### malERA Refresh: How can we innovate to accelerate to elimination?

**PC room: 11:15 - 13:00**

**Chairs:** Regina Rabinovich and Pedro Alonso

**Speaker 1:** Abdoulaye Diabate, Developing new tools for communities, Institut de Recherche en Sciences de la Sante/Centre Muraz, Bobo-Dioulasso, Burkina Faso

**Speaker 2:** Fredros Okumu, Implementation science: testing solutions in the field, Ifakara Health Institute, Ifakara Health Institute, Tanzania

**Speaker 3:** Diana Measham, Investing in innovation to accelerate to elimination, Bill & Melinda Gates Foundation, BMGF, Seattle, USA

**Speaker 4:** Awa Coll Seck, Country programmes and

research partnerships, Ministry of Health, Senegal, Ministry of Health, Senegal

**Speaker 5:** Pedro Alonso, Evidence-based policy making, WHO Global Malaria Programme, 20 Appia Avenue, Geneva, Switzerland

**Purpose and Objective:** The purpose of this Round Table is to hear perspectives from a range of malaria experts and the MIM audience on the innovation needed to reach the goals in the WHO Global Technical Strategy for malaria. The recent malERA Refresh update of the malaria elimination and eradication research and development agenda will provide the framework for this Round Table discussion at MIM.

## S20

### Minimally invasive autopsies as a tool to determine malaria direct and indirect contribution as cause of death in endemic regions

**Room 205: 11:15 - 13:00**

**Chairs:** Carla Carrilho

**Speaker 1:** Jaume Ordi, Minimally invasive autopsy methodology and results in all age groups, Hospital Clinic de Barcelona / Barcelona Institute for Global Health ISGlobal, Department of Anatomical Pathology Hospital Clinic de Barcelona, Villarroel 170, 5th floor

**Speaker 2:** Clara Menendez, Malaria and maternal mortality in Sub-Saharan Africa/Mozambique, Barcelona Institute for Global Health - ISGlobal, ISGlobal; Rossello 132, 5-1; Barcelona 08036; Spain

**Speaker 3:** Steve Kamiza, Definitive confirmation of cerebral sequestration of Malaria parasites by supraorbital postmortem brain sampling in Malawi, University of Malawi, College of Medicine, Pathology Department, Mahatma Gandhi Campus, Blantyre, Malawi

**Speaker 4:** Khatia Munguambe, Introducing the MIA concept in settings without previous experience of post-mortem examination, Manhica Health Research Centre - CISM, Manhica Health Research Centre; Rua 12, Cambeve, Vila de Manhica, CP 1929, Maputo, Mozambique

**Speaker 5:**

**Purpose and Objective:** The main objective of this symposium proposal is to review the utility of minimally

invasive post-mortem methodologies in developing countries, and its potential use for malaria diagnosis as a cause of death in all age groups.

## S21

### Gene drive for malaria control

**Tente A: 11:15 - 13:00**

**Chairs:** Maureen Coetzee

**Speaker 1:** Maureen Coetzee, Prof., University of the Witwatersrand, Imperial College London Rm W2.7, Kennedy Building Silwood Park Campus Ascot, Berks. UK SL5 7PY

**Speaker 2:** Nikolai Windbichler, Dr., Imperial College London

**Speaker 3:** Austin Burt, Prof, Imperial College London

**Speaker 4:** Thomas Kariuki, Dr., Alliance for Accelerating Excellence in Science in Africa, African Academy of Science

**Speaker 5:** Faith Osier, Prof, Chair of Bioscience, The KEMRI|Wellcome Trust Research Programme

**Purpose and Objective:** The objective of the session is to discuss the role that gene drive based technologies could play in eradicating malaria in Africa, as part of integrated malaria control strategies. The discussion will highlight the potential and challenges of such approaches, not only from a technical or scientific perspective but also in terms of acceptance and regulatory pathways.

## S22

### Pan African Mosquito Control Association Symposium: African Entomological Capacity Analysis

**Tente B: 11:15 - 13:00**

**Chairs:** MMs Emma Orefuwa, Dr Silas Majambere and Bart Knols

**Speaker 1:** Ms Emma Orefuwa, Dr, PAMCA, Mbaghati road, 00100 Nairobi, Kenya

**Speaker 2:** Silas Majambere, Dr, IVCC, Pembroke Place, 003-Liverpool, UK

**Speaker 3:** Bart Knols, Dr, Malariaworld, Kalkestraat 20, 6669CP Dodewaard The Netherlands

**Speaker 4:** Fredros Okumu, Dr, Ifakara Health Institute,

Kiko Avenue, Plot 463 Mikocheni Dar es Salaam, Tanzania

**Speaker 5:**

**Purpose and Objective:** To present the findings and recommendations of the capacity assessment work carried out by PAMCA and discuss how to address the human resource gap- especially look at how do we train and retain personnel and strengthen institutional capacity across the continent.

## S23

### Responding to the emergence of multi-drug resistance: an update on the Novartis drug discovery and development pipeline

**Auditorium: 14:30 - 16:15**

**Chairs:**

**Speaker 1:** Bernhards Ogutu and Martin Grobusch

**Speaker 2:**

**Speaker 3:**

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** The emergence of multi-drug resistance calls for the development of novel antimalarial treatments. A few years following the launch of Coartem, Novartis embarked on a drug discovery program in its Novartis Institute of Tropical Diseases. Currently, two successful drug candidates are in Phase 2 clinical development. The purpose of this symposium is to give an overview of the unmet medical need in malaria treatment, and to give an update on the ongoing clinical development program of two compounds: KAF156 and KAE609.

## S24

### The role of Multiple First Line Therapies in the drive to malaria elimination

**Oval Room: 14:30 - 16:15**

**Chairs:** Prof. Wilfred Mbacham and Prof Ogobara Doumbo

**Speaker 1:** Maciej F Boni, Associate Professor, Penn State University, Old Main, State College, PA 16801, USA

**Speaker 2:** Lucy Okell, Dr, Imperial College London Faculty

of Medicine, School of Public Health, Medical School Building, St Mary's Hospital, Norfolk Place, London W2 1PG, United Kingdom

**Speaker 3:** Gilbert Kokwaro, Professor, Strathmore business school Consortium for National Health Research: CNHR Kenya, Ole Sangale Rd, Nairobi City, Kenya

**Speaker 4:** Mohamadou Siribie, Dr., Groupe de recherche et d'action en santé du Burkina Faso,

**Speaker 5:**

**Purpose and Objective:** The use of multiple first line therapies (MFT) refers to a drug policy in which more than one effective treatment for uncomplicated malaria is made available in both the public and the private sectors. In some schemas, patients and clinicians can choose which therapy to use; in others, several therapies are recommended concurrently as first-line treatment options and are prescribed to individual patients randomly. Mathematical modelling of the multi-year effect of MFT demonstrate its potential to delay emergence of resistance and treatment failure, and to slow resistance progression once it emerges. This symposium will recap these recent modelling results and examine the experience and challenges of MFT implementation at programme levels.

## S25

### Malaria elimination: Country-driven and country-owned

**PC Room: 14:30 - 16:15**

**Chairs:** Dr. Ebenezer Baba, WHO/AFRO, Brazzaville, Congo

**Speaker 1:** Dr. Kim Lindblade is the Elimination Team Lead for the WHO Global Malaria Programme, Geneva, Switzerland

**Speaker 2:** Dr. Abdisalan Noor is the Surveillance, Monitoring and Evaluation Team Lead for the WHO Global Malaria Programme, Geneva, Switzerland

**Speaker 3:** Dr. Elizabeth Chizema is director of the National Malaria Elimination Programme at the Zambia Ministry of Health.

**Speaker 4:** Dr. Medoune Diop is the Director of the Senegal National Malaria Control Program.

**Speaker 5:**

**Purpose and Objective:** To discuss implementation and operationalization of new WHO guidance on malaria elimination and surveillance by national malaria elimination programs. Participants will hear about the opportunities and challenges presented by malaria elimination and how to tailor malaria elimination intervention strategies to the continuum of transmission within a country.

## S26

### Estimating malaria transmission through exposure in pregnancy: a promising sentinel surveillance approach

**Room 205: 14:30 - 16:15**

**Chairs:** Alfredo Mayor and Francine Ntoumi

**Speaker 1:** Ana Campillo, Performance of highly sensitive diagnostic tools in the detection of Plasmodium falciparum during pregnancy, Foundation for Innovative New Diagnostics (FIND), FIND, Campus Biotech, Chemin des Mines 9, 1202 Geneva, Switzerland

**Speaker 2:** Alfredo Mayor, Pregnancy-specific serology to monitor malaria transmission in elimination contexts, Barcelona Institute for Global Health (ISGlobal), Carrer Rossello 149 - CEK building, 1st floor, E-08036 Barcelona, Spain

**Speaker 3:** Eusebio Macete, Malaria at first antenatal visit and at delivery among pregnant women in three sentinel sites in Southern Mozambique, Manhica Health Research Center (CISM), Rua 12, Manhica, Mozambique

**Speaker 4:** Patrick Walker, Using exposure to P. falciparum malaria in pregnancy to quantify transmission in the general population: insights from data and modelling, MRC Centre for Outbreak Analysis and Modelling, Imperial College London, Norfolk Place, London, W2

**Speaker 5:**

**Purpose and Objective:** Exposure of pregnant women to Plasmodium falciparum reflects patterns of transmission within the general population, making them a promising sentinel group to track malaria trends in the community. Routine malaria detection at first ANC visit can provide a stable, continuous, indicator of malaria transmission, but the relationship between observed prevalence at the ANC and transmission in the general population needs to be well defined, incorporating the unique

immunobiology of malaria in pregnancy. In this symposium we aim to present a multi-disciplinary range of research with the following objectives: 1. Present the value of pregnant women as a convenience sampling resource to provide a consistent estimation of other population-level transmission metrics. Through the lens of malaria elimination, we aim to discuss the potential of pregnant women at ANCs as a source of reliable data to quantify the impact of community-based chemotherapy campaigns and to identify localized geographical areas with higher burdens of malaria (hotspots). 2. Discuss cutting-edge technical developments to assess infection and exposure during pregnancy. We will discuss new ground-breaking epidemiological, molecular and immunological methodologies that can allow the development of a toolkit to measure exposure (current and past) to *P. falciparum* in pregnancy for surveillance purposes. 3. Discuss future research needed to develop models that can describe and predict general population transmission from ANC data. We will discuss how to integrate clinical, immunological and molecular ANC data in mathematical models that can reconstruct and forecast population-level malaria transmission as well as the impact of control and elimination activities through screening of pregnant women at ANCs.

## S27

### Fostering the next generation of malaria researchers in Africa: Gaps and emerging opportunities

**Tente A: 14:30 - 16:15**

**Chairs:** Gilbert Kokwaro and Fred Binka

**Speaker 1:** Professor Francine Ntoumi, Malaria immunology and pathogenesis research capacity in Central Africa, University Marien Ngouabi, Brazzaville, Republic of Congo

**Speaker 2:** Professor Lizette Koekemoer, Malaria vector research capacity in Africa, University of the Witwatersrand, Johannesburg, South Africa

**Speaker 3:** Professor Abdoulaye Djimde, Malaria treatment and antimalarial drug resistance in West Africa., Univerity of Bamako, Bamako, Mali

**Speaker 4:** Professor Wilfred Mbacham, Malaria treatment and antimalarial drug resistance in Central Africa., Univeristy of Younde 1, Younde, Cameroon

**Speaker 5:** Professor Kwadwo Koram, Malaria epidemiology research capacity for elimination and control in Africa, Noguchi Memorial Institute for Medical Research and University of Ghana, Accra, Ghana

**Purpose and Objective:** 1. To highlight the importance of continuous investment in training and monitoring of young African scientists. 2. To highlight persistent or emerging gaps in malaria research capacity in Africa. 3. To share experiences and good research capacity strengthening practices. 4. To provide networking opportunities for collaborations in research and training.

## S28

### Driving impact from entomology: Implications of entomological data on vector control implementation in southern Africa

**Tente B: 14:30 - 16:15**

**Chairs:** Chadwick Sikaala and Tara Seethaler

**Speaker 1:** Neil Lobo, Research Associate Professor, University of California, San Francisco - Malaria Elimination Initiative; University of Notre Dame, 550 16th Street, 3rd Floor, Box 1224, San Francisco, CA 94158, USA

**Speaker 2:** litula Severin litula, Insectary Manager, National Vector-Borne Diseases Control Program, Oshakati Hospital Complex, Oshakati, Namibia

**Speaker 3:** Givemore Munhenga, Medical Scientist, National Institute for Communicable Diseases, National Health Laboratory Services, P. Bag X4, Sandringham 2131, Johannesburg, South Africa

**Speaker 4:** Krijn Paaijmans, Assistant Research Professor, Barcelona Institute for Global Health, Rossello 132-4, Barcelona, Spain

**Speaker 5:**

**Purpose and Objective:** The purpose of the symposium is to share experience and learnings from the southern Africa region on applying entomological data to vector control implementation. While the presentations are focused on the southern Africa region, the implications are relevant to vector control decisions around the world.

## S29

### Pyramax a new fixed dose ACT to fight against P.falciparum and P.vivax malaria

**Oval Room: 16:45 - 18:30**

**Chairs:**

**Speaker 1:** Stephan Duparc, Medical Director, MMV, Geneva, Switzerland

**Speaker 2:**

**Speaker 3:**

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** With the goal to end malaria by 2030, the international community has the responsibility to develop new technologies against Malaria. The public and private partnership has shown its capacity to be an important player. MMV and Shin Poong have developed a new ACT: Pyramax (pyronaridine - artesunate) which will be an innovative treatment for uncomplicated P.falciparum and P.vivax.

## S30

### The Impact of IRS on Measures of Malaria Transmission and Incidence: An Old Solution for Existing Problem

**Room 205: 16:45 - 18:30**

**Chairs:** Dereje Dengela

**Speaker 1:** Sylvester Coleman, : A reduction in malaria transmission intensity in Northern Ghana after 7 years of indoor residual spraying, PMI AIRS project, Abt Associates, Abt Associates, Ghana

**Speaker 2:** Ms. Joselyn Atuhairwe, Advisor at the National Malaria Control Program, Uganda, National Malaria Control Program, Uganda, National Malaria Control Program, Uganda

**Speaker 3:** Dr. Fomba Seydou, The impact of IRS in the Segou regional of Mali 2012-2015: implications for cost-effective decision-making, National Malaria Control Program, Mali, National Malaria Control Program, Mali

**Speaker 4:** Ashley Thomas, - Difference-in-Difference analysis of Switches in IRS Insecticide Class between 2013 and 2016 and Malaria Case Burden in Manicaland Province, Eastern Zimbabwe, PMI Vectorlink, Abt Associates Inc., 4550 Montgomery Ave, Suite 800 N | Bethes

**Speaker 5:**

**Purpose and Objective:** 1.Participants will gain information on how indoor residual spraying significantly reduced malaria incidence as measured by the health facility data. 2.Participants will learn how withdrawal of IRS led to re-bounding of malaria incidence as measured using health facility data. 3.Participants learn how IRS reduced the potential transmission of malaria by reducing the longevity and entomological inoculation rates of malaria vectors.

## S31

### Overcoming barriers to access to malaria care through integrated community case management and engagement of the private sector

**Tente A: 16:45 - 18:30**

**Chairs:** Professor Rose Leke and Professor Fred Binka

**Speaker 1:** Fatima Suleman, Professor of Pharmacology, School of Health Sciences, University of KwaZulu-Natal, Durban, South Africa

**Speaker 2:** Dr Salim Saddrudin, Team Leader, Rapid Access Expansion Project, WHO/GMP, World Health Organisation, Av. Appia 20, 1211 Geneva

**Speaker 3:** Dr Theodoor Visser, senior manager in the Global Malaria Program for the Clinton Health Access Initiative (CHAI), Clinton Health Access Initiative (CHAI), Nairobi, Kenya

**Speaker 4:** Dr George Jagoe, EVP for Access & Product Management at Malaria for Medicines Venture, Malaria for Medicines Venture (MMV), Geneva, Switzerland

**Speaker 5:**

**Purpose and Objective:** This symposium will present the results of the WHO-led Rapid Access Expansion (RAcE) 2015 Programme, focused on reducing child mortality due to malaria, pneumonia and diarrhoea by increasing access to diagnostics, treatment and referral services for these diseases at the community level. It will also highlight

current challenges and opportunities to ensure universal right for access to health care in remote rural areas most affected by malaria. Participants will also be informed on challenges and opportunities to increase access to quality malaria diagnostics and medicine in the informal private sector, to maximize impact on malaria mortality in high burden countries of Africa.

## S32

### Emerging diagnostic solutions to improve the quality of malaria diagnosis

**Tente B: 16:45 - 18:30**

**Chairs:** Jane Cunningham and Luis Benavente

**Speaker 1:** Sumedh Ramachandra, MS, Clinton Health Access Initiative (CHAI), KG 5 Avenue Kigali Rwanda

**Speaker 2:** David Bell, MD, Intellectual Ventures, United States

**Speaker 3:** Daniel Fletcher, PhD, University of California, Berkeley, United States

**Speaker 4:** Daouda Ndiaye, PhD, Cheikh Anta Diop University (UCAD), Dakar, Senegal

**Speaker 5:**

**Purpose and Objective:** The purpose of this symposium is to inform the audience of recent innovations to strengthen malaria diagnostics. The objective of this symposium is to learn about: 1. Performance of apps to diagnose malaria using microscopy and RDTs 2. Lateral flow assay (LFA) signal enhancement through assay redesign 3. Performance of a new loop mediated isothermal amplification (LAMP) in detecting asymptomatic cases

## Oral Session

### Health Systems and Resource allocation (Presentation 97-104)

**Auditorium: 11:15 -13:00**

**Chair:** Prof Pascal Magnussen

**Co chair:** Vito Baraka

L'application d un audit de la qualite des donnees

### du paludisme dans le district sanitaire de Kribi, Cameroun

**By:** Kodjo Morgah

**Co-Author(s)** Naibei Mbaibardoum, Mathurin Dodo, Eric Tchinda

### A national movement to increase commitment to malaria elimination

**By:** Mamadou Bismoy

**Co-Author(s)** Fara Ndiaye, Hana Bilak, Philippe Guinot, Abdoulaye Diop, Aminatou Sar, YAKOU DIEYE, Jean Louis Lankia, Yacine Djibo

### Malaria and malnutrition: a thorough gap analysis

**By:** Debashish Das

**Co-Author(s)** on behalf of WWARN Haematology Study Group, Philippe J Guerin

### Coverage and determinants of uptake of intermittent preventive treatment for malaria control in pregnancy. A cross-sectional survey in regions with high malaria transmission in mainland Tanzania

**By:** Vito Baraka

**Co-Author(s)**

### Comparative effectiveness of malaria prevention measures: A systematic review and network meta-analysis

**By:** Kinley Wangdi

**Co-Author(s)**

### Bed net use and misuse: A complex, cross-sectoral picture on Lake Tanganyika

**By:** Amy Lehman

**Co-Author(s)**

### Adherence to Ebola-specific malaria case management guidelines in Guinea during the 2014-2016 Ebola epidemic

**By:** Mateusz Plucinski

**Co-Author(s)** Barbara Marston, Alioune CAMARA, Timothee Guilavogui, Matthew Freeman, Ian Hennessee, Eric Halsey

**Private Public Partnership: A key to Achieving Malaria Control Targets in the country: A Case Study of Ghana**

**By:** KEZIAH MALM

**Co-Author(s)** Charles Allotey, Constance Bart-Plange, Isaac Morrison, Kwesi Hanson, Nana Yaw Peprah, Sylvester Segbaya, Alexander Asamoah, Kofi Addo Agyekum

**Social and health economics  
(Oral presentation 129-136)**

**Auditorium: 16:45-18:30**

**Chair:** Prof Obinna Onwujekwe

**Co chair:** Tidiane Ndoye

**Willingness to pay for small solar-powered fans to increase LLIN use: results of a Becker DeGroot Marschak auction in Ghana**

**By:** Olivier Briet

**Co-Author(s)**

**Illuminating knowledge engagement in gene drive research**

**By:** Delphine Thizy

**Co-Author(s)** Samba Diop, Annet Namukwaya, Bakara Dicko, Mamadou Coulibaly, Jonathan Kayondo, Abdulaye Diabate, Sarah Hartley, Barry Nourou, Lea Pare Toe

**Large-scale delivery of seasonal malaria chemoprevention to children under 10 in Senegal: an economic analysis**

**By:** Catherine Pitt

**Co-Author(s)**

**The Cost-Effectiveness of Seasonal Malaria Chemoprevention in Seven Countries in the Sahel**

**By:** Colin Gilmartin

**Co-Author(s)** Fadima Bocoum, Justice Nonvignon, David Collins, Diego Moroso

**Cost changes at health centres after the introduction of a community case management programme in South West Uganda.**

**By:** Sham Lal

**Co-Author(s)** Kristian Hansen, Richard Ndyomugenyi, Sian Clarke, PASCAL Magnussen, Daniel Chandramohan

**What has changed? Community level perspectives on malaria prevention and control efforts in northern Mozambique**

**By:** Sandrine Martin

**Co-Author(s)** Elizabeth Streat, Jorge Bande, Sergio Tsabete

**A Qualitative Assessment of Community Health Committees participation, with and without Community Dialogues intervention, in the province of Inhambane, Mozambique**

**By:** Sandrine Marie Martin

**Co-Author(s)** Dieterio Magul, Ester Mboa

**Control and Elimination 2 (Presentation 145-152)**

**PC Meeting: 16:45-18:30**

**Chair:** Dr Peter De Vries

**Co chair:** ELHADJI BA

**Malaria in Botswana: what we learned and new challenges**

**By:** Giacomo Paganotti

**Co-Author(s)**

**Condemned to repeat it: the past, present and future of theories of malaria eradication.**

**By:** Jo Lines

**Co-Author(s)**



**Efficacy and safety of high-dose ivermectin on mosquito mortality when co-administered with dihydroartemisinin-piperazine in Kenyan adults with uncomplicated malaria (IVERMAL): a randomised, double-blind, placebo-controlled trial**

By: Menno Smit

**Co-Author(s)** Meghna Desai, David Waterhouse, John Gimnig, Tao Chen, Simon Kariuki, Duolao Wang, Eric Ochomo, Nabie Bayoh, Aaron Samuels, Penelope Phillips-Howard, Steve Ward, Hannah Slater, Ghaith Aljanyoussi, Bernard Abong o, Feiko ter Kuile, Titus Kwambai, Teun Bousema,

**TOLERABILITY AND IMPACT OF SEASONAL MALARIA CHEMOPREVENTION ON MALARIA MORBIDITY IN SOUTHERN OF SENEGAL FROM 2013 TO 2016**

By: Isaac A. Manga

**Co-Author(s)**

**Prevalence of Poor Artemisinin-Based Combination Antimalarial Medicines in Sub-Saharan Africa and Cambodia**

By: Harparkash Kaur

**Co-Author(s)** Facundo M Fernandez, Michael Green,

**Safety and tolerability of mass drug administration using dihydroartemisinin-piperazine (DHA-PQ) in malaria hotspots in Central Senegal**

By: FASSIATOU TAIROU

**Co-Author(s)** ELHADJI BA, Paul Milligan, Jean Ndiaye, Ousmane SY, Cheikh SOKHNA, Oumar Gaye, Clare Flach, Ousmane Faye, Catherine Pitt, Jules Francois Gomis, Babacar Faye, Abdoulaye Diallo, Badara Cisse

**SAFETY OF LOW DOSE PRIMAQUINE COMBINED WITH ARTHEMETER LUMEFANTRINE FOR THE TREATMENT OF UNCOMPLICATED MALARIA IN CAMEROON**

By: Valentine NCHAFOR NDIKUM

**Co-Author(s)** Emmanuel Fru NSUTEBU, BASSOG Jeremie Gautier, wilfred Mbacham

**Inequalities in child survival in a rural area of Senegal where malaria has declined**

By: ELHADJI BA

**Co-Author(s)**

**Vector Biology 1 (Presentation 129-136)**

**ROOM 201: 11:15 -13:00**

**Chair:** Prof Charles Wondji

**Co chair:** Leon Mugenzi

**Impact of L119F-gste2 metabolic resistance and A296S-RDL target site resistance on the vectorial capacity of Anopheles funestus in Cameroon**

By: Magellan TCHOUAKUI

**Co-Author(s)**

**Investigating the molecular basis of transcriptional regulation of CYP6P9a, a major pyrethroid resistance gene in the malaria vector, Anopheles funestus s.s.**

By: leon Mugenzi

**Co-Author(s)** Gareth Lycett, Jacob Riveron, Charles Wondji, Fidelis Cho-Ngwa

**Impact of glutathione S-transferase-based metabolic resistance on the vector competence of the malaria vector, Anopheles funestus, against natural isolates of Plasmodium falciparum**

By: Cyrille Ndo

**Co-Author(s)** Parfait Hermann Awono-Ambene, Edmond Kopya, Charles Wondji

**Impact of DDT resistance on life traits and vectorial competence of Anopheles coluzzii, a major malaria vector in sub-Saharan Africa**

By: TCHUENCHEU TIMO DANIELLE PAMELA

**Co-Author(s)**

**Efficacy and residual performance of Fludora's**

**Fusion a next generation combination insecticide (Clothianidin + Deltamethrin) developed for Indoor Residual Spraying for the control of malaria vector mosquitoes : First Six months of WHO cone bioassay evaluations in northern Zambia**

**By:** Mbanga Muleba

**Co-Author(s)** Jay Sikalima, Osbert Namafente, Victor Daka

**Biogenic amine (BA) receptors in the mosquito ear: From hearing modulation to swarming behaviour**

**By:** Marta Andres Miguel

**Co-Author(s)** Joerg Albert, Jason Somers, Matthew Topping

**Assessment of -cyhalothrin residues and heavy metals in Anopheles gambiae breeding sites from vegetable farms and their contributions in insecticide resistance profiles**

**By:** Rousseau Djouaka

**Co-Author(s)**

**Large scale spatio-temporal patterns of insecticide resistance in African malaria vectors**

**By:** Penny Hancock

**Co-Author(s)**

## **Epidemiology 2 (Presentation 105-112)**

**ROOM 201: 14:30 -16:15**

**Chair:** Prof. Umberto D'Alessandro

**Co chair:** Fitsum G Tadesse

**Repeated malaria infections accelerate cellular ageing: A 30-years longitudinal study of malaria and telomere length dynamics in a rural village nyamisati, Tanzania**

**By:** Muhammad Asghar

**Co-Author(s)**

**Dealing with indeterminate outcomes in antimalarial drug efficacy trials: A comparison between**

**complete case analysis, multiple imputation and inverse probability weighting**

**By:** Prabin Dahal

**Co-Author(s)** on behalf of WWARN Haematology Study Group, Ric Price, Julie Simpson, Philippe J Guerin, Umberto Dalessandro

**Widespread distribution of Plasmodium vivax malaria in Mauritania on the interface of the Maghreb and West Africa**

**By:** Ba Hampate

**Co-Author(s)** Mamadou Yero Diallo, ambroise ahoudi, Yacine Boubou Deh, Abderahmane Tandia, David J Conway, Craig W Duffy

**Investigating effectiveness and synergy of repellents and odour-baited traps in Malaria vector control using a stochastic, agent-based model**

**By:** Adrian Denz

**Co-Author(s)** Thomas Smith, Nakul Chitnis

**Inferring Malaria Testing Practices from Routine Data: Case Studies from Guinea and Senegal**

**By:** Mateusz Plucinski

**Co-Author(s)** Julie Thwing, Timothee Guilavogui, Moustapha Cisse, Alioune CAMARA, Medoune Ndiop

**Impact of the G6PD deficiency on the prevalence of malaria infection in sickle cell patients under 15 years old living in Burkina Faso**

**By:** C Edith Bougouma

**Co-Author(s)** Alphonse Ouedraogo, Sodiomon B. Sirima, B Alfred Tiono

**Drivers and diversity of residual malaria transmission: implications for national malaria programs**

**By:** Jeffrey Hii

**Co-Author(s)**

The relative contribution of symptomatic and asymptomatic Plasmodium vivax and Plasmodium falciparum infections to the infectious reservoir in a low-endemic setting in Ethiopia

By: Fitsum G Tadesse

Co-Author(s)

### Malaria and Pregnancy 2 (Presentation 153-160)

**ROOM 201: 16:45-18:30**

**Chair:** Prof Rose Leke

**Co chair:** Nsoh Godwin Anabire

Effect of efavirenz on lumefantrine pharmacokinetics during pregnancy in Nigerian Women with HIV-Malaria coinfection

By: Adebajo Adegbola

Co-Author(s) Adeniyi Olagunju, Andrew Owen, Marco Siccardi, Julius Soyinka, Oluseye Bolaji, Omotade Ijarotimi

Impact of Efavirenz and Pregnancy on Piperazine Exposure in Ugandan Pregnant Women

By: Richar Kajubi

Co-Author(s)

DYNAMICS OF IMMUNOGLOBULIN G RESPONSES TO VAR2CSA IN PRIMIPAROUS WOMEN DURING THE POSTPARTUM PERIOD IN NANORO, BURKINA FASO

By: Wendkieta Isidore YERBANGA

Co-Author(s)

IMPACT OF PLACENTAL PLASMODIUM FALCIPARUM MALARIA INFECTION ON THE CAMEROONIAN MATERNAL AND NEONATE S PLASMA LEVELS OF SOME CYTOKINES KNOWN TO REGULATE T CELL DIFFERENTIATION AND FUNCTION

By: Rosette MEGNEKOU

Co-Author(s)

IPTp with SP versus DP for the prevention of malaria and improving Birth outcomes

By: Richard Kajubi

Co-Author(s) Moses Kanya, Grant Dorsey, Abel Kakuru, Teddy Ochieng

Malaria infection & Sulfadoxime Pyrimethamine resistance markers in pregnant women attending urban and rural ANC units in Mali

By: Safiatou Niare Doumbo

Co-Author(s) Nana Cisse, Alassane Fofana, Renaud Piarroux, Chiara Sepulcri, Ogobara K Doumbo, Lynda Rita

MALARIA PARASITAEMIA, RISK PERCEPTION AND PREVENTIVE PRACTICES AMONG WOMEN ATTENDING ANTE-NATAL CLINICS IN OGUN STATE

By: Hakeem Yusuff

Co-Author(s) Steven Adebawale, Ikeoluwapo Ajayi, Ajumobi Olufemi, Patrick Nguku

EVIDENCE OF ALTERED LIVER FUNCTION AND IMMUNE RESPONSE AMONG MALARIA AND HEPATITIS B CO-INFECTED PREGNANT WOMEN

By: Nsoh Godwin Anabire

Co-Author(s)

### Surveillance, Treatment and community management (Presentation 113-120)

**ROOM 202: 11:15 -13:00**

**Chair:** Pr Babacar Faye

**Co chair:** Médoune Ndiop

Spatially optimizing malaria surveys for risk mapping: adaptive sampling designs

By: Francois Rerolle

Co-Author(s) Hugh Sturrock, Adam Bennett

Using ICT Opportunities to Enhance Data Usage For Improving Malaria Service Delivery In Tanzania

**By:** Renata Mandike

**Co-Author(s)** Ikupa Akim, Franky Chacky, Fabrizio Molteni, Sumaiyya Thawer, Anna Mahendeka, Ally Mohamed

**CARAMAL: Addressing the remaining burden of malaria deaths by optimizing the use of rectal artesunate**

**By:** Aita Signorell

**Co-Author(s)** Christian Lengeler, Antoinette Tshefu, Valentina Buj, Lyudmila Nepomnyashchiy, Manuel Hetzel, Phyllis Awor, Christian Burri, Elizabeth Omoluabi, Jean Okitawutshu

**Analysis of Benin's Routine Malaria Information System (RMIS)**

**By:** Richard Dossou-Yovo

**Co-Author(s)** Alexis Tchevoede, Gilbert Andrianandrasana, Michelle Kouletio, Adicatou-lai Adeothy, Bella Hounkpe Dos Santos, Lorens Zinsalo, Pio Bakary, Fortune Dagnon, Monica Patton

**Efficacy and safety of artemether-lumefantrine for Plasmodium malariae, Plasmodium ovale, and mixed Plasmodium malaria in Gabon: a prospective clinical trial**

**By:** Mirjam Groger

**Co-Author(s)** Albert Lalremruata, Michael Ramharter, Pierre-Blaise Matsiegui, ayola adegnika, Peter Kreamsner, Jonathan Rempis, Rella Manego-Zoleko, Selidji Agnandji, Ghyslain Mombo Ngoma, Johanna Kim, Anna Klicpera, The Nguyen, Chiara Cattaneo, Luzia Veletzky, Benjamin Mordmueller, Johannes Mischlinger, Lena Flohr, Lilian Endamne

**Fine-scale spatiotemporal monitoring of malaria: integrating entomological and burden indicators in repeated crosssectional surveys in southern Malawi.**

**By:** Robert McCann

**Co-Author(s)** Peter Diggle, Willem Takken, Steve Gowelo, Benjamin Amoah, Kamija Phiri, Dianne Terlouw, Alinune Kabaghe, Tinashe Tizifa, Monicah Mburu, Michele van Vugt, Michael Chipeta

**Novel use Of Hydroxyurea in an African Region with Malaria (NOHARM): a randomized controlled trial**

**By:** Robert Opoka

**Co-Author(s)** Adam Lane, Teresa Latham, Christopher Ndugwa, Heather Hume, Philip Kasirye, James Hodges, Chandy John, Russell Ware

**Safety of artesunate-amodiaquine combined with methylene blue or primaquine for the treatment of uncomplicated falciparum malaria in young African children: A non-inferiority randomised controlled trial**

**By:** Margarida Mendes Jorge

**Co-Author(s)** Olaf Miller, Eric Nebie, Guillaume Compaore, Johannes Krisam, Peter Meissner, Meinhard Kieser, Boubacar Coulibaly, Lucienne Ouermi, Christina Klose, Frank Mockenhaupt, Ali Sie

**Diagnosis and reagents 2 (Presentation 121-128)**

**ROOM 202: 14:30 -16:15**

**Chair:** Davis Nwakanma

**Co chair:** Edwige Guissou

**THE ROLE OF CXCL10 AND HEME IN MALARIA PATHOGENESIS**

**By:** Cecilia Lekpor

**Co-Author(s)**

**In the search of biomarkers for severe malaria: the potential of miRNAs**

**By:** Himanshu Gupta

**Co-Author(s)** Antonio Siteo, Pau Cisters, Lola Madrid, Rosauero Varo, Inocencia Augusto Cuamba, Quique Bassat, Alfredo Mayor, Mercedes Rubio

**Implication of FcγRI-IgE polynuclear neutrophils in the pathogenesis of malaria: possible association with the severity of disease and with cerebral forms of malaria**

By: Babacar Mbengue

Co-Author(s)

---

**Exploiting mosquito sugar feeding to reveal infection with malaria parasites**

By: Edwige Guissou

Co-Author(s)

---

**Evaluation of malaria urban risk by using an immuno-epidemiological biomarker of human exposure to Anopheles bites**

By: Dipomin Francois TRAORE

Co-Author(s)

---

**Declining performance of two malaria RDTs in a low transmission setting in Cameroon seven years after implementation indicates the need for effective quality assurance monitoring**

By: Innocent Ali

Co-Author(s) Ernest Jum, Carole Kenfack, Dorothy Achu, wilfred Mbacham, Randolph Ngwafor, Jude Bigoga, Esther Tallah, Akindeh Nji, Jules-Roger Kuate, Rose Leke

---

**A genetic association study of NCR3 with clinical malaria in Senegalese patients**

By: thiam alassane

Co-Author(s)

---

**A modified Magnetic cytosmear device for cytological analyses in global health and diseases**

By: Deborah Sumari

Co-Author(s) Brian Grimberg, D Arbra Blankenship, Lee Moore, Maciej Zborowski,

---

**Drug Resistance 1 (Presentation 161-168)**

**ROOM 202: 16:45-18:30**

**Chair: Prof. Carol Sibley**

**Co chair: Laurent DEMBELE**

---

**Prevalence of DHPS and DHFR mutations in Plasmodium falciparum isolates from pregnant women treated or not with sulfadoxine pyrimethamine (SP)**

By: Jean Erick massamba

Co-Author(s)

---

**HIGH PREVALENCE IN SOUTHERN CHAD OF MUTATIONS IN pfkelch13 GENE NOT ASSOCIATED WITH RESISTANCE**

By: Mehul Dhorda

Co-Author(s) Tog-Yeum Nagorngar, Ranitha Vongpromek, Teeradet Khomvarn, Mallika Imwong, Suttipat Srisutham, Philippe J Guerin, Carol Sibley, Kerah Hinzoumbe Clement

---

**Toward novel antimalarial treating K13 artemisinin resistant parasites to prevent it spread to Africa**

By: Laurent DEMBELE

Co-Author(s)

---

**Selective sweeps and genetic lineages of PfCRT , Pfdhfr , Pfdhps mutations in Kenya**

By: DENNIS JUMA

Co-Author(s)

---

**Malaria in urban, semi-urban and rural areas of southern of Gabon: comparison of the Pfmdr 1 and PfCRT genotypes from symptomatic children**

By: Jean Bernard Lekana-Douki

Co-Author(s) Lady Charlene KOUNA, Pierre-Blaise Matsiegui, Fousseyni TOURE-NDOUO, Sydney Maghendji-Nzondo, Larson BOUNDENGA

---

**MONITORING OF MOLECULAR MARKERS OF PLASMODIUM FALCIPARUM RESISTANCE TO SULFADOXINE PYRIMETHAMINE AND AMODIAQUINE AFTER TWO YEARS OF SEASONAL MALARIA CHEMOPREVENTION IMPLEMENTATION IN SOUTHERN SENEGAL**

By: Marie Pierre Diouf

Co-Author(s)

**Seven years (2011-2017) of current monitoring of antimalarial drugs in Thies, Senegal**

By: Baba Dieye

**Co-Author(s)** Muna Affara, Tolla NDIAYE, Khadim Diongue, Mouhamad Sy, Mouhamadou Ndiaye, Mamadou Samb Yade, Ngayo SY, Amy Gaye, Amy K Bei, aminata mbaye, Aida Badiane, Awa B. Deme, Yaye Die Ndiaye, Donald Krogstad, Mame Cheikh Seckh, Daouda Ndiaye, Ousmane Koita, Mamadou Alpha Diallo, Ibrahima Mbaye Ndiaye, Davis Nwakanma

**Poster Session**

**B001**

**Clinical Research Capacity Building from IHI Perspective in Equatorial Guinea during PfSPZ Vaccine Trials**

Mwajuma, Chembera

**B002**

**Communication with Potential Participants during Informed Consenting in two Malaria Vaccine Trials: Lessons Learned in Equatorial Guinea**

Esther, Eburi

**B003**

**EFFECT OF MORINGA OLEIFERA LEAF POWDER ON MALARIA RE-INFECTION OF SCHOOL CHILDREN 4-5 YEARS OLD IN OBA COMMUNITY NIGERIA**

Ogolo Bernice, Amala

**B004**

**Monitoring plasmodium diversity for malaria elimination in Africa: Progress and updates from the Plasmodium diversity network Africa**

Deus, Ishengoma

**B005**

**Repository of Open Access Malariometric Data**

Mike, Thorn

**B006**

**Research Capacity Strengthening and Knowledge Management for Health Teams towards Improvement in Disease Control in Ghana (Ghana RCS4FIVE)**

Evelyn, Korkor

**B007**

**Supporting malaria clinical trials: Data standardisation and the WWARN Toolkit of resources**

Barney, McManigal

**B008**

**The Role of Community Engagement in the Success of the First Malaria Vaccine Trials in Equatorial Guinea Esther, Eburi**

**B009**

**THE ROLE OF COMMUNITY HEALTH WORKER IN STRENGTHENING INTEGRATED DELIVERY OF SUSTAINABLE MALARIA TREATMENT AND COMMUNITY CASE MANAGEMENT IN AFRICA**

BENJAMIN, BOB

**B010**

**Antimalarial Drug Utilization and Expenditure from a Community Pharmacy in south-western Nigeria**

Aduragbenro, Adedapo

**B011**

**FEVER AND MALARIA MANAGEMENT INVOLVING**

**INAPPROPRIATE DIAGNOSIS AND OVER-TREATMENT  
IN SUBSAHARAN AFRICAN COUNTRIES : THE CASE OF  
SANTCHOU HEALTH DISTRICT CAMEROON**

Ghyslaine Bruna, Djeunang Dongho

**B012**

**Risk maps to resource allocation: The role of cost-effectiveness and geographic heterogeneity in malaria policy making**

Tom, Drake

**B013**

**Sustaining Co-Payment Financing Initiative: An Assessment of Availability And Pricing Of Co-Paid ACTs In Ghana 2017E**

Alexander, Asamoah

**B014**

**Le traitement du paludisme chez les enfants en temps de politique de sante globale au Cameroun**

Fosso Albert, Legrand

**B015**

**Acceptability and willingness to pay for malaria vaccine directed at under five children in two communities of Enugu State**

Benjamin, Uzochukwu

**B016**

**Child bed net use following implementation of malaria lesson plans and bed net distribution in primary schools on Bioko Island Equatorial Guinea**

Kenneth, Murray

**B017**

**Community knowledge practices and perceptions**

**on indoor residual spraying for malaria prevention: a case study of the Fungurume Health Zone Democratic Republic of Congo**

Godwill, Mlambo

**B018**

**Community perceptions attitudes knowledge and practice on risk factors associated with persistence of malaria transmission in selected areas of North-western and Southern regions of Tanzania**

Isolide, Massawe

**B019**

**Financing flows for malaria control in Burkina Faso**

Seydou, YABRE

**B020**

**Going from pilot trials to wide-scale interventions: considerations for the economic evaluation of two community-based malaria control interventions in low-transmission areas**

Blandine, Binachon

**B021**

**Impact of Malaria Control on Fertility in Mali**

Hamidou, NIANGALY

**B022**

**INFLUENCE OF ENVIRONMENTAL FACTORS AND SOCIO ECONOMIC STATUS IN THE DISTRIBUTION OF MALARIA INFECTION IN PREGNANT WOMEN AND CHILDREN LESS THAN FIVE YEARS**

Funmilola, Rebecca Akanbi

**B023**

**Larval Source Management in Africa: A lost**

opportunity to strengthen the evidence base on cost effective African malaria control

Eve, Worrall

**B024**

LES JEUX D'ACTEURS DANS L'UTILISATION DE LA MOUSTIQUAIRE IMPREGNEE D'INSECTICIDES A TORI-BOSSITO (BENIN) : QUELLE VISION A L'HORIZON 2041 ?

AZALOU Tingbe, Emilia

**B025**

Opportunity cost of malaria morbidity among households in the Okavango Delta Botswana

Dirontsho, Maphane

**B026**

Paludisme et sécurité alimentaire dans les communes d'Athiémé et de Grand-Popo au Sud-Ouest du Bénin K. Anselme, SEDE

**B027**

Perception et mode de traitement du palu dans les familles à Cotonou au Bénin 2016

LE, HESRAN

**B028**

REDUCING MALARIA MORTALITY AT THE LOWEST BUDGET: AN OPTIMIZATION TOOL FOR SELECTING MALARIA PREVENTATIVE INTERVENTIONS APPLIED TO GHANA

Christophe, Sauboin

**B029**

Scaling up community involvement for malaria prevention and control in Mozambique: key lessons learned from a 6 years project (2011-2017) in two

highly affected malaria Provinces

Sandrine Marie, Martin

**B030**

Scaling up malaria interventions for elimination: Using cost effectiveness data for planning resource allocation and improving efficiency in Senegal

Sophie, Faye

**B031**

Tell me when you sleep and I'll tell you who you are' Effects of social norms on exposure to malaria infection in southern Burkina Faso

Federica, Guglielmo

**B032**

The cost of indoor residual spraying and malaria infection in a high- transmission district in central Mozambique

Sergi, Alonso

**B033**

The educational impact of malaria elimination: evidence from Southern Mozambique

Laia, Cirera

**B034**

A Research Methodology on the Role of Community Health Workers and Volunteers in Scaling Integrated Delivery of Community Case Management Implementation for the Elimination of Malaria in Sub-Sahara Africa (A Field Experience and strategic Approach for St

BENJAMIN, BOB



**B035**

**Alternative Malaria Preventive Mechanism among Moving population in Oyo State**

Omolara, Ejiade

**B036**

**Antimalarial drug utilization and parasite density of patients requesting blood film for malaria parasite at the Clinical Pharmacology unit in a Nigerian Teaching Hospital**

Aduragbenro, Adedapo

**B037**

**Assessing Community Case Management of Malaria in Zimbabwe and DRC**

Amihan, Jones

**B038**

**Cameroon Baptist Convention-Health Services: Six Decades of Trials and Triumphs in Implementing Malaria Control Guidelines**

Dr. Nfor Emmanuel, Nfor

**B039**

**CHOICE OF CARE AND TREATMENT SEEKING BEHAVIOUR AMONG CAREGIVERS OF FEBRILE CHILDREN IN RURAL COMMUNITIES IN IBADAN NIGERIA**

Chinenye, Afonne

**B040**

**Contribution des Agent de Sante Communautaire (ASC) à l'amelioration de la prevention et la prise en charge du paludisme dans le district de Kribi Cameroun**

Kodjo, Morgah

**B041**

**Enhancing caregivers care-seeking behaviors for febrile children under five through Behavior Change Communication in Benin (West Africa): randomized trial**

Georgia Barikissou, DAMIEN

**B042**

**Epidemiology and therapeutic responses of Plasmodium falciparum to artesunate amodiaquin as well as co-infection with Schistosoma haematobium in the Ikata-Likoko area of Southwest Cameroon**

Helen, Kimbi

**B043**

**Factors influencing choice of care seeking for acute fever comparing private chemical shops with health centres and hospitals in Ghana: a study using case control methodology**

Evelyn, Korkor

**B044**

**Improving Severe Malaria Outcomes**

Kim, van der Weijde

**B045**

**Malaria case management by Community Health Workers in the Central African Republic from 2009-2014: overcoming challenges of access and instability due to conflict**

Laura, Ruckstuhl

**B046**

**Malaria Rapid Diagnostic Tests and malaria microscopy for guiding malaria treatment of**

**uncomplicated fevers in Nigeria and pre-referral cases in three African countries**

Catherine O, Falade

**B047**

**Overriding the geographical indicators Assessing the impact of war in Yemen on the country's malaria burden**

Rachel, Haig

**B048**

**Perception of malaria risk and acceptability of reactive focal administration of presumptive treatment and indoor residual spraying a qualitative study from the malaria elimination setting of Namibia**

Cara Smith, Gueye

**B049**

**Profile of drug use during pregnancy at peripheral health centres in Burkina Faso**

Toussaint, Rouamba

**B050**

**Projet Paludisme et Maladies Tropicales Négligées au Sahel (P/MTN) : vers des stratégies communautaires et transfrontalières pour la prévention et le contrôle du paludisme au Sahel**

Cesaire, Ahanhanzo

**B051**

**Severe Malaria Case Management in Selected Health Facilities in the Tamale Metropolis Ghana - 2017**

ENOCH, OPOKU ANTOH

**B052**

**STUDIES ON THE CURRENTLY USED TECHNIQUES OF MALARIA DIAGNOSIS IN IMO STATE**

FRANCIS, IHENETU

**B053**

**Tackling The Inconvenient Truth: Finding the most effective solutions to the problem of rising malaria deaths in Central African countries crippled by conflict**

Richard, Allan

**B054**

**A human 3D cell-based platform for drug screening of liver-stage Plasmodium infection**

Ana Catarina, Brito Montes

**B055**

**A simple bead-based assay for measuring antibody-mediated phagocytosis for different malarial antigens**

Yukie, Lloyd

**B056**

**ANTIMALARIAL AND ANTI-INFLAMMATORY STUDIES OF GEDUNIN AND GEDUNIN-2-HYDROXY PROPYL-CYCLODEXTRIN IN RODENTS**

M.Olufunmilayo, Ologe

**B057**

**Antiplasmodial and toxicological evaluation of curcumin-artesunate poly (DL-lactic-co-glycolic acid) nanoparticle**

Oyetunde, Oyeyemi

**B058**

Assessment of some natural compounds for potential antiplasmodial application

Ifeoma, Ezenyi

**B059**

Curative effect of aqueous extract of *Euphorbia cordifolia* Elliot (Euphorbiaceae) against rodent malaria

Gounoue, Raceline

**B060**

Efficacy and safety of KAF156 in combination with LUM-SDF in adults and children with uncomplicated *Plasmodium falciparum* malaria

Cornelis, Winnips

**B061**

Elevated IL4 IFN $\gamma$  and IL17 levels in semi-immune anaemic mice infected with *Plasmodium berghei*

ANKA Gedeon, Helegbe

**B062**

Evaluation of Antibodies to VAR2CSA in Pregnant Women and the Effect on Pregnancy Outcomes after a Mass Prevention Campaign in Etoudi Cameroon

jean Claude, Djontu

**B063**

Fosmidomycin as an antimalarial drug: a meta-analysis of clinical trials

Jose Francisco, Fernandes

**B064**

Hydroxypyridinone Catecholate Bioisosteric Effects in Antiplasmodial Aminoquinoline Based Double Drugs with CYP3A4 Inhibition activities and in silico studies of their inherent CYP3A4 inhibition potency

warren, andayi

**B065**

IMMUNOMODULATORY AND ANTI-MALARIAL EFFECTS OF *Ajuga remota* AND *Caesalpinia volkensii* EXTRACTS DURING MALARIA INFECTION IN BALB/C MICE

Lucy Wanjeri, Kamau

**B066**

In vitro and In vivo anti-malarial activity of extracts from *Terminalia mantaly* (Combretaceae)

Mariscal Brice, TCHATAT TALI

**B067**

In vitro anti-*Plasmodium falciparum* activity and cytotoxicity profile of the aqueous extracts from three Cameroonian plants

Rodrigue, Keumoe

**B068**

KAF156 and LUM Combination Phase 2 Study Pharmacokinetic Run-in Cohort Results

Cornelis, Winnips

**B069**

Synthesis Characterization and Biological Evaluation of a Dihydroartemisinin Histone deacetylase inhibitor conjugate as a potential dual acting antimalarial agent

Ukpe, Ajima

### **B070**

The scavenger receptor CD36 expressed by CD14 CD16 monocytes is crucial for severe malaria outcomes

Agnes, Aubouy

### **B071**

Asymptomatic Loa loa infection in Equatoguinean adult subjects in a whole sporozoite malaria vaccine trial: what is a researcher to do?

Beltran, Ekuu

### **B072**

Asymptomatic-malaria in three riverine communities in Niger Delta Nigeria

IFEYINWA, CHIJIJOKE- NWAUCHE

### **B073**

Changing Plasmodium falciparum genotypes during long term and short time culture in drug free media

REDEMPTAH, YEDA

### **B074**

Changing Plasmodium falciparum genotypes during long term and short time culture in drug free media

Sergi, Alonso

### **B075**

Coagulation and Fibrinolysis Indicators and Placental Malaria Infection in an Area Characterized by Unstable Malaria Transmission in Central Sudan

Elhassan Mohamed, Elhassan

### **B076**

Deciphering the targets of retroviral protease

inhibitors in Plasmodium berghei

Noah, Onchieku

### **B077**

Distribution of Plasmodium spp infection in asymptomatic carriers a potential target in perennial and low seasonal malaria transmission settings in West Africa

Constant Guy N'Guessan, Gbalégba

### **B078**

Effect of hemoglobinopathies on Plasmodium falciparum gametocyte conversion in vitro

Eduard, Rovira-Vallbona

### **B079**

Effects of In vitro exposure to Dihydroartemisinin-Lumefantrine on parasite phenotype and genetic diversity Agnes, Cheruiyot

### **B080**

Efficacy and safety of artesunate-amodiaquine and dihydroartemisinin- piperaquine for the treatment of uncomplicated falciparum malaria in mainland Tanzania

Celine, Mandara

### **B081**

Elevated Plasmodium infection rates and high pyrethroid resistance 1 in major malaria 2 vectors in a forested area of Cameroon highlight challenges of malaria control

KOPYA, EDMOND

### **B082**

Elevated Plasmodium infection rates and high

pyrethroid resistance in major malaria vectors in a forested area of Cameroon highlight challenges of malaria control

Edmond, Kopya

### B083

EPIDEMIOLOGICAL AND PARASITOLOGICAL ASPECTS OF MALARIA DIAGNOSED IN THE HEALTH CENTRE (HOSPITAL SILENCE) IN ZIGUINCHOR(SENEGAL) IN 2015 and 2016

Baba Sokhna, NIANG

### B084

Establishing national malaria slide bank: in Ethiopia

Abeba, Reda

### B085

Genetic diversity of the msp-1 and msp-2 genes of Plasmodium falciparum isolates in asymptomatic and symptomatic patients in south of Benin

azizath, Moussiliou

### B086

Haematological parameters among helminth and malaria parasite infected individuals in the Middle-belt of Ghana

Dennis, Adu-Gyasi

### B087

Impact of Artemisinin-based combination therapy on P falciparum gametocytes density and infectivity to Anopheles gambiae

dinkorma, ouologuem

### B088

In vitro lifespan and gametocytogenesis of

Plasmodium falciparum gametocytes

Gebbru, Tamirat

### B089

Incidence of congenital malaria in two neonatology units in Yaounde Cameroon

Laure, NGANDO

### B090

INFLUENCE OF A MALARIA RAPID DIAGNOSTIC TEST DETECTING PLASMODIUM FALCIPARUM-SPECIFIC HISTIDINE-RICH PROTEIN-2 (RDT- PFHRP2) ON THE DIAGNOSIS OF OTHER CAUSES OF FEVER IN CHILDREN UNDER-5 YEARS OF AGE IN HIGH SEASONAL MALARIA TRANSMISSION AREA

Francois, Kiemde

### B091

Leptin insulin like growth factor-I levels and histology-diagnosed placental malaria in an area characterized by unstable malaria transmission in central Sudan

Elhassan Mohamed, Elhassan

### B092

Malaria control in Ghana: Prevalence of parasite and host factor

Aminata Colle, LO

### B093

Malaria epidemiology in the sahelian zone of Mauritania: A two-year longitudinal prospective study in Kobeni near the Malian-Mauritanian border

Ali Mohamed Salem, Boukhary

**B094**

**Plant-Mediated Effects on Mosquito Capacity to Transmit Human Malaria**

Domonbabele, Francois de Sales Hien

**B095**

**Plasmodium falciparum erythrocyte binding antigen 175 and reticulocyte binding protein homologue 5 serum antibody levels and their association with clinical malaria protection in rural Gambia**

Mamadou, BAH

**B096**

**Plasmodium falciparum msp1 and msp2 genetic diversity and allele frequency in parasites isolated from symptomatic malaria patients in Bobo-Dioulasso Burkina Faso**

A. Fabrice, SOME

**B097**

**Plasmodium falciparum population genetic complexity influences expression dynamics and immune recognition among highly related genotypic clusters**

Amy, Bei

**B098**

**Polymorphisms in Plasmodium falciparum Apical membrane Antigen I (PfAMA1) and Reticulocyte-binding protein homolog-5 (PfRH5): implication for malaria vaccine in Nigeria**

AJIBAYE, OLUSOLA

**B099**

**Prevalence of intestinal helminth infection in Equatoguinean infants children adolescent and**

**adults and its impact on immunogenicity to a live attenuated whole sporozoite malaria vaccine**

Jose, Raso

**B100**

**Prevalence of pfhrp2 and/or pfhrp3 gene deletions in Plasmodium falciparum in Kedougou a highly endemic region in Senegal**

Awa B., Deme

**B101**

**Regulation of PfEMP1-VAR2CSA by a Plasmodium translation-enhancing factor**

Sherwin, Chan

**B102**

**Single-cell RNA sequencing of malaria parasites**

Arthur, Talman

**B103**

**Spatial profile of Plasmodium falciparum infections in clinical malaria and infected asymptomatic contact pairs in The Gambia**

Fatoumatta, Kanuteh

**B104**

**STATUS AND MECHANISMS OF INSECTICIDE RESISTANCE IN ANOPHELES MOSQUITOES FROM MWEA SUB-COUNTY AND KWALE COUNTY AND THEIR MALARIA PARASITE INFECTION RATES**

Pauline, Orondo

**B105**

**Success rates of mosquito infection in direct skin feeding assays in Kisumu Western Kenya**

gladys, chemwor

### B106

Surveillance of malaria vector population density and biting behaviour in western Kenya

Ednah, Ototo

### B107

The effect of antiretroviral naive HIV-1 infection on the ability of Natural Killer cells to produce IFN- $\gamma$  upon exposure to Plasmodium falciparum-infected Erythrocytes

Carole, Stephanie SAKE NGANE

### B108

The Effects of Pregnancy-Associated Malaria on Gene Expressions and Pathways in the Placenta

Livo, Esemu

### B109

CLINICAL FEATURE AND OUTCOME OF CHILDREN WITH SEVERE MALARIA IN NORTHERN NIGERIA

Folake, Afolayan

### B110

Acute kidney injury in pediatric severe malaria is a risk factor for mortality neurologic deficit and long-term cognitive impairment

Andrea, Conroy

### B111

An in vitro system to modulate alterations of the brain endothelial barrier induced by Plasmodium blood stage factors

Teresa, Pais

### B112

Assessment of Behavioral Change Communication (BCC) intervention in Seasonal Malarial Chemoprevention (SMC) in Ghana 2017

Nana Yaw, Peprah

### B113

Case of symptomatic P vivax infection with parasite density higher than commonly observed in Duffy-blood-group negative patient in Mali West Africa

Amadou, Niangaly

### B114

Cerebrospinal fluid cytokine and chemokine levels and neurocognitive function in Ugandan children with cerebral malaria

Dibyadyuti, Datta

### B115

CXCL10 Gene Promoter Polymorphism -1447A>G is Associated with Susceptibility to malaria in Ghanaian Children

Botchway, Felix

### B116

Effect of Ascaris suum secreted proteins on host immune response to Plasmodium berghei crude extract in BALB/c mice

Clovis Hugues, Seumen Tiogang

### B117

Effect of Malaria-HIV co-infection on the incidence of Severe Malarial Anaemia in Children in western Kenya

Eric, Ogola

### **B118**

Effects of Malaria on Some Liver Function Profiles of Children in Port- Harcourt Rivers State Nigeria  
Gloria Ngozika, Wokem

### **B119**

Hemostasis and coagulation status in malaria: experience of three pediatric health facilities in Kinshasa(DRC)

CELESTIN, NSIBU

### **B120**

Licensed S1P modulator fingolimod rescues BBB dysfunction in vitro

Michael, Hawkes

### **B121**

Prevalence of abnormality of beta chain hemoglobin and Glucose-6- Phosphate Dehydrogenase deficiency (G6PD) in children with uncomplicated malaria living in Banfora and Sapone (Burkina Faso)

Emilie, Badoum

### **B122**

Prevalence of malaria and anemia among patients attending Reference Health Center in Niore du Sahel Mali West Africa

Mahamadou, Diakite

### **B123**

Profile of Tumour Necrosis Factor Alpha Interferon Gamma and Interleukin-10 among patients with uncomplicated malaria in Lagos Nigeria

Oyibo, Aghogho Wellington

### **B124**

Raised levels of markers of endothelial activation and inflammation in paediatric Ghanaian children with acute malaria

Gertrude, Ecklu-mensah

### **B125**

Relapse characteristics treatment options and clinical presentation of human Plasmodium ovale malaria: A systematic review

Mirjam, Groger

### **B126**

Role of Autophagy Related-Gene 10 (ATG10) promoter polymorphisms on severe malaria anemia outcome in children from western Kenya

Caroline, Ndege

### **B127**

STRONG ION GAP IN SEVERE MALARIA IN LIMITED RESOURCE SETTINGS

CELESTIN, NSIBU

### **B128**

TRAITEMENT ANTIRETROVIRAL ET PALUDISME CHEZ LES ENFANTS INFECTES PAR LE VIH AU CAMEROUN

Charlie, NGO BAYOI

### **B129**

Variant surface antigens (VSAs) play a critical role in severe malaria pathogenesis

Abdoulaye Kassoum, Kone

### **B130**

Widespread distribution of Plasmodium vivax



malaria in Mauritania on the interface of the  
Mahgreb and West Africa

Ba, Hampate

**B131**

Analgesic Antipyretic and Anti-inflammatory  
Properties of *Ocimum gratissimum* a common  
Ethnomedicinal Antimalarial Plant

Abayomi, Ajayi

**B132**

Antimalarial activity of extracts of *Vernonia cinerea*  
Less against *Plasmodium berghei* infection in mice  
in Bobo Dioulasso Burkina Faso

Aboubakar, SOMA

**B133**

Antiplasmodial activity and toxicity of *Rauvolfia*  
*vomitorea* leaves

Cynthia, Goma Nkoua

**B134**

Assesment of antipasmodial activity of *Cassia*  
*siamea* extracts and pures compounds

Gelase Fredy, Nsonde Fredy

**B135**

Ethnobotanical review and antiplasmodial activity  
of some medicinal plants used to treat malaria in  
Benin

Gerard H, TIKO

**B136**

Ethnobotanical survey and in vitro antiplasmodial  
effect of some medicinal plants used in malaria

management in south Benin

Rock, DJEHOUE

**B137**

Ethnopharmacological survey and antiplasmodial  
activity of Annonaceae medicinal plants used to  
treat malaria in four areas of Cameroon

Patrick Valere, Tsouh Fokou

**B138**

Evaluation de l'activite larvicide des extraits de  
*Vernonia cinerea* Less (Asteraceae) sur les larves  
de *Anopheles gambiae* ss de l'IRSS/DRO Bobo  
Dioulasso Burkina Faso

Aboubakar, SOMA

**B139**

Evaluation of the safety profile of Standardised  
Hydroethanolic Extract of *Cassia singueana* Delile  
used in malaria ethnopharmacy

Bulus, Adzu

**B140**

HARMONISATION DE PROTOCOLE POUR LA  
MULTIPLICATION EFFICIENTE EN CULTURE CONTINUE  
DE SOUCHES PLASMODIALES DE REFERENCES NF54  
ET K1

TANO KONAN, DOMINIQUE

**B141**

In vivo anti-plasmodial activity of *Guiera*  
*senegalensis* JF Gmel leaves extract

Lea Nadege, BONKIAN

**B142**

In vivo antiplasmodial and toxicological effect of

**Maytenus senegalensis traditionally used in the treatment of malaria in Tanzania**

Hamisi, Masanja Malebo

**B143**

**Larvicidal activities of Burkina Faso local plants *Leucas martinicensis* and *Striga hermonthica* against *Anopheles gambiae* s.l malaria vector**

Felix, Yameogo

**B144**

**Natural products as potent and pan-reactive antimalarial agents: Discovery isolation and biochemical characterisation**

Phanankosi, Moyo

**B145**

**Potent antiplasmodial extracts from *Terminalia mantaly* and *Terminalia superba***

Cedric Derick Jiatsa, Mbouna

**B146**

**RISK-BASED ASSESSMENT AND MAPPING OF MALARIA DISTRIBUTION IN RURAL KWARA STATE NIGERIA**

Oluwasogo A, Olalubi

**B147**

**The anti-plasmodial activity of extracts of Kenyan growing *Carissa edulis* and its constituent phytochemicals**

Festus M., TOLO

**B148**

**The study on the prophylactic and curative potency of crude extracts of *Alchornea laxiflora* on**

***Plasmodium berghei* infected swiss albino mice**

FUMILOLA, OMOYA

**B149**

**TOXICITY OF TWO HIGH ANTIPLASMODIAL POTENTIAL PLANT EXTRACTS**

TANO KONAN, DOMINIQUE

**B150**

**Assessment of RDT performance in endemic area in Sakaraha Madagascar**

RALAISEHENO, YVON

**B151**

**Breathprinting in the diagnosis of Malaria**

Bryan, Tegomoh

**B152**

**Comparative Assessment of Microscopy and Rapid Diagnostic Test (RDT) as Malaria Diagnostic Tools among Children Visiting Private Laboratory in Edo State Nigeria Olubisi, Ajala**

**B153**

**Comparative Evaluation of the Performance of Three Histidine Rich Protein- 2 (HRP-2) Based Malaria Rapid Diagnostic Tests Against Microscopy and PCR in Ibadan South West Nigeria for Guiding Malaria Treatment**

ROLAND, FUNWEI

**B154**

**Comparative performances of four malaria rapid diagnostic tests (RDTs) in febrile patients in a**

### sentinel site for malaria survey in Gabon

Bridy Cheslie, Moutombi Ditoumbi

#### **B155**

Comparison of LAMP and RT-PCR methods for Plasmodium falciparum detection in field-collected Anopheles gambiae mosquitoes

Athanase, Badolo

#### **B156**

Comparison of the Performance of Routine Microscopy with the MOMALA Smartphone Application for Malaria Diagnosis in Two Malaria Endemic Regions in Kenya

Dick, Montijn

#### **B157**

COMPARISON OF VENOUS AND CAPILLARY BLOOD FOR MALARIA DIAGNOSIS

Oyibo, Aghogho Wellington

#### **B158**

Creation of the Ghana Malaria Diagnostic Slide Bank for Training and Proficiency Testing of Microscopists in Africa

David, Dooso

#### **B159**

Dealing with variability in outputs on parasite prevalence estimates in low transmission from ultrasensitive diagnostic methods

Ndey Fatou, Drammeh

#### **B160**

Development of an application for calculating

malaria parasite density and archiving information: DensiPara

Felix, KOUKOUIKILA KOUSSOUNDA

#### **B161**

District-Based Supervision and Mentorship Program for Improving the Quality of Malaria Rapid Diagnostic Testing in Uganda 2014- 2016

BOSCO, AGABA

#### **B162**

Evaluation of different commercially available rapid diagnostic test kits in the diagnosis of Plasmodium falciparum infection in Nigerian children

Johnson, Ojo

#### **B163**

Evaluation of the performance of hypersensitive mRDTs compared to conventional mRDT and hypersensitive PCR for the diagnosis of malaria

Ingrid, Felger

#### **B164**

Evaluation of the Quality of Microscopy Stains Used for Malaria Diagnosis in Plateau State Nigeria

Stephen, Akar

#### **B165**

Factors influencing utilization of malaria rapid diagnostic test by health care workers in Zamfara State Nigeria

Rabi, Usman

#### **B166**

FIELD EVALUATION OF A DIGITAL MICROSCOPE BASED

## ON MACHINE LEARNING FOR READING MALARIA SMEARS

Mehul, Dhorda

### B167

## Frequency of G6pd Deficient Variant Among Some Malaria Holoendemic Communities of South Western Nigeria

Ogunmola, Oluwadamilare

### B168

## High sensitivity prototype HRP2 rapid diagnostic test evaluation in an antenatal care setting

Patience, Nayebare

### B169

## Malaria burden in hospitalized Children in Lambarene (Gabon)

Jose Francisco, Fernandes

### B170

## Malarial Antigen and Parasitemia Detection Using Miniaturized Flow Cytometry on the Musee Cell Analyzer

Kamala, Tyagarajan

### B171

## MALNUTRITION ASSOCIATED TO UNCOMPLICATED MALARIA IN SUB- SAHARAN AFRICAN ADULTS: SOCIO-DEMOGRAPHIC FACTORS CLINICAL AND BIOLOGICAL IMPACT

SERGE, HENRI ZANGO

### B172

## OMNIGEN Kit accuracy for Plasmodium falciparum

## saliva detection in Senegal

Souleye, Lelo

### B172

## Performance of Malaria Rapid Diagnostic Test in Febrile Under-five Children at Oni Memorial Children s Hospital in Ibadan Nigeria 2016

Nurudeen, Adebisi

### B174

## Performance of Rapid Diagnostic Test for Malaria Diagnosis at the Different Specialized Hospitals in Wad Medani Gezira State Sudan

Bakri, Nour

### B175

## Persistence of Plasmodium falciparum DNA in Saliva Samples Stored at Room Temperature for One Year

Kehwalla, Mutia

### B176

## Prevalence of Malaria Parasites at the Malabo Blood Bank on Bioko Island Equatorial Guinea

Tobias, Schindler

### B177

## Prevalence of non-falciparum and falciparum malaria infections in selected areas of Southern and Western Provinces Zambia

Lungowe, Sitali

### B178

## Proof of concept study for a computer-assisted microscopy system for malaria diagnosis

Andrea, Kreidenweiss

**B179**

Rapid and highly sensitive detection of *P falciparum* using Magnetic Resonance Relaxometry for point of care diagnostics

Peter, Preiser

**B180**

SCHISTOSOMIASIS HBV HIV AND MALARIA CO-INFECTIONS AMONG ADULTS LIVING IN ORILE AND EBUTE IGBOORO EGGUA NIGERIA

IKEOLUWA, OLAYINKA

**B181**

Stabilization of RDT target antigens present in dried *Plasmodium falciparum*-infected samples for validating malaria rapid diagnostic tests at the point of care

Collins, Misita

**B182**

The prevalence of Glucose-6-Phosphate Dehydrogenase Deficiency among Apparently Healthy Individuals in Selected Malaria Endemic Areas from Different Agroecological Zones of Ethiopia using Phenotyping and Genotyping approaches

Getasew, Shitaye

## Symposium Session

### S33

**Safety and efficacy of ACTs for the treatment of malaria in all trimesters of pregnancy and the impact of drug resistance on the effectiveness of intermittent preventive therapy with sulphadoxine-pyrimethamine for the prevention of malaria in pregnancy**

**PC Room: 09:30-10:45**

**Chairs:** Dr Mwayi Madanitsa and Dr Kassoum Kayentao

**Speaker 1:** Esperanca Sevene, Dr, Eduardo Mondlane University, PO Box 257, Maputo, Mozambique

**Speaker 2:** Makoto Saito, Dr, WorldWide Antimalarial Resistance Network (WWARN), Centre for Tropical Medicine and Global Health, University of Oxford, Oxford OX3 7FZ, UK

**Speaker 3:** Anna Maria van Eijk, Dr, Department of Clinical Sciences, Liverpool School of Tropical Medicine, Liverpool L3 5QA, UK

**Speaker 4:** Georgina Humphreys, Dr, WWARN, Centre for Tropical Medicine and Global Health, University of Oxford, Oxford OX3 7FZ, UK

**Speaker 5:**

**Purpose and Objective:** To present the latest evidence for the current WHO strategy for the treatment and prevention of malaria in pregnancy in sub-Saharan Africa. Objectives: 1. To review data on the safety and efficacy of antimalarials for treatment of malaria in all trimesters of pregnancy. 2. To review data on the impact of SP resistance on the effectiveness of IPTp-SP for the prevention of malaria in pregnancy in sub-Saharan Africa. 3. To demonstrate a new online tool which aims to inform strategic policy decisions to protect pregnant women in malaria endemic regions against further spread or emergence of resistance to SP. .

### S34

**Approaching elimination in Africa using population-wide interventions: lessons from the field**

**Room 205: 9:00 - 10:45**

**Chairs:** Elizabeth Chizema and Kim Lindblade

**Speaker 1:** Bernard Nahlen, SUFI impact assessment: optimizing implementation, President's Malaria Initiative (PMI), USA

**Speaker 2:** Kafula Silumbe, Transitioning malaria MDA from Research to Programmatic Mode; The Case of Zambia, Malaria Control and Elimination Partnership in Africa (MACEPA), Zambia

**Speaker 3:** Beatriz Galatas, Optimizing MDA implementation after four MDA rounds in Magude District, Mozambique, Mozambican Alliance Toward Elimination of Malaria (MALTEM), Mozambique

**Speaker 4:** Adoke Yeka, Impact of population based Indoor residual Spraying (IRS) in combination with mass drug administration (MDA) on key malaria indicators in a high transmission setting in north eastern Uganda, Pilgrim Africa, Uganda

**Speaker 5:** Hannah Slater, Modeling MDA in Africa: can MDA be used to accelerate towards elimination?, Imperial College London, UK

**Purpose and Objective:** The purpose of this symposium is to present recent results and lessons from the field from the implementation of population-wide interventions for malaria elimination especially Mass Drug Administration (MDA) - in Sub-Saharan Africa and to consider how these interventions can be optimized for future impact. The primary objectives are: (1) to share lessons learned from recent MDA campaigns in Mozambique, Uganda, and Zambia; (2) to explore how population-wide interventions can complement and build upon the successes of the Scale Up for Impact (SUFI) approach; and (3) to identify future learning questions and consider the way forward for population-wide interventions.

### S35

**Strengthening the use of health information with technology: malaria surveillance with DHIS2**

**Room 201: 09:00-10:45**

**Chairs:** Desmond Chavasse, PhD, Population Services International (PSI), Nairobi, Kenya

**Speaker 1:** Andrew Muhire, MSc, Ministry of Health, Rwanda

**Speaker 2:** Bridget Shandukani, MPH, National Department

of Health, South Africa

**Speaker 3:** Cristina Lussiana, MSc, Populations Services International (PSI), Kenya

**Speaker 4:** Abdisalan Noor, PhD, WHO, Global Malaria Programme, Geneva, Suisse

**Speaker 5:**

**Purpose and Objective:** DHIS2 has been adopted by more than 40 Ministries of Health to manage health data information, allowing multiple users access to analyze and extract data, visualize data and drive data-informed decisions. Surveillance is the cornerstone of success for malaria elimination, providing quality and timely data to inform planning and potential shifts in programming. The urgency to find a common platform for Ministries of Health and stakeholders to share and interpret malaria data has never been greater. Key stakeholders will share expectations, investments, and experiences in using DHIS2, with a focus on data use for malaria surveillance through the data funnel, from data collection and reporting at scale, to data analysis for planning national budget, to data use for prioritizing interventions, to integration of malaria surveillance systems within the national HMIS. The panel consists of representatives of the Ministries of Health, international agencies and implementers of health services.

## S36

### Optimizing health facility survey information to assess and improve quality of malaria care

**Tente B: 09:30-10:45**

**Chairs:** Jui A. Shah and Samantha Herrera

**Speaker 1:** Jui A Shah, MEASURE Evaluation, ICF, Washington, DC, USA

**Speaker 2:** Pamela Kakande, Uganda Bureau of Statistics, Uganda

**Speaker 3:** Samantha Herrera, MEASURE Evaluation, ICF, Rockville, MD, USA

**Speaker 4:** Dejan Zurovac, Wellcome Trust/KEMRI, Kenya

**Speaker 5:**

**Purpose and Objective:** To review country experience with health facility surveys, efforts to improve and standardize

methods and indicators, and future potential for this method to inform and improve the quality of malaria care at the facility level.

## S37

### The role of reactive case detection strategies in malaria elimination

**Auditorium: 11:15-13:00**

**Chairs:** John Miller and Caterina Guinovart

**Speaker 1:** Reine Rutagwera, Malaria surveillance specialist, PATH Malaria Control and Elimination Partnership in Africa (MACEPA), Mikwala House, Stand 11059, off Brentwood Lane, Longacres, Lusaka, Zambia

**Speaker 2:** Calisile Malambe, Surveillance supervisor, National Malaria Control Programme of Swaziland, 2nd Floor, Ministry of Justice & Constitutional Affairs Building, Mhlambanyatsi Road, Mbabane, Swaziland

**Speaker 3:** Yakou Dieye, Senior public health adviser, PATH/Senegal National Malaria Control Programme, BP 15115, Dakar-Fann, Dakar, Senegal

**Speaker 4:** Francisco Saute, Director, Mozambique Malaria Elimination Initiative, Manhica Health Research Center, Rua 12, Cambeve, Vila de Manhica, CP 1929, Maputo, Mozambique

**Speaker 5:** Caterina Guinovart (moderator), Senior adviser on research and implementation, ISGlobal, Rossello, 132, 7th floor, 08036, Barcelona

**Purpose and Objective:** One of the most technically and logistically challenging aspects of malaria elimination involves stopping the last cases and while local transmission exists, so does the threat of resurgence. Current strategies, such as mass drug administration and high vector control, can quickly drop parasite populations, but have often been followed by a return of malaria if the interventions are not sustained. This symposium will explore the potential for malaria case investigation and reactive case detection to achieve elimination in low transmission settings, using examples from diverse contexts in Africa. The objectives of this symposium are: 1. To learn how national malaria control programs in different countries implement case investigation with different variants of reactive case detection. 2. To learn how to optimize implementation of case investigation with reactive case detection. 3. To learn whether the

discussed strategies have had an impact on malaria transmission and are enough to reach elimination in very low transmission settings.

## S38

### DHA/PQP : Actualite clinique de cette combinaison therapeutique dans le traitement du paludisme. Presentation des dernieres etudes realisees en Afrique Noire Francophone

Room 205: 11:15-13: 00

Chairs: HERBERT HERNANDEZ

**Speaker 1:** OGOBARA K DOUMBO, MB, PhD, Professeur en Parasitologie-Mycologie, Faculte de Medecine de l'Universite des Sciences, des Techniques et des Technologies de Bamako, Mali, B.P. E2528, Bamako

**Speaker 2:** PROFESSEUR SAME EKOBO ALBERT, professeur en Parasitologie, Faculte de Medecine et des sciences biomedicales de l'universite de Yaounde, Route de Kribi, Yaounde, Cameroun

**Speaker 3:** Professeur Chelo David, pediatre, Fondation Chantal Biya de Yaounde, B.P.1936, Yaounde CAMEROUN

**Speaker 4:** Herbert Hernandez, Area Manager, laboratoires Salvat, 08950 Esplugues de Llobregat, Barcelone. Espagne

**Speaker 5:**

**Purpose and Objective:** L'objectif de ce symposium est la restitution de 3 études cliniques réalisées au Mali et au Cameroun sur des populations adultes et pédiatriques dans le traitement du paludisme simple avec la DHA/PQP (traitement recommandé en 1ère intention par l'OMS). Ce qui est d'autant plus important que le nombre d'études réalisées en Afrique occidentale est peu élevé alors que l'Afrique subsaharienne représente une part importante (90%) de la charge mondiale du paludisme.

## S39

### Empowering African institutions and future malaria research leaders through capacity development and partnerships

Tente A: 11:15-13: 00

Chairs: Dr Christiane Druml, Prof. Frederick Newton Binka

and Prof. Godfrey Tangwa

**Speaker 1:** Prof Abdoulaye Djimde, Developing and implementing African led Fellowship programmes, University of Science, Techniques and Technologies of Bamako, Mali, MRTC FAPH, Point G, Bamako, Mali, Tel: +22320228109

**Speaker 2:** Prof Kamija Phiri, Experiences and Challenges of leading a Knowledge Management Network, College of Medicine, University of Malawi, Private Bag 360, Chichiri, Blantyre 3, Malawi

**Speaker 3:** Prof. Margaret Gyapong, Opportunities and challenges in linking policy makers and researchers, University of Health and Allied Sciences, Centre for health Policy and Implementation Research

**Speaker 4:** Prof Francine Ntoumi, Challenges in malaria surveillance activities in the CANTAM network of institutions, Fondation Congolaise de la recherche Medicale, Villa D6, campus WHO/AFRO, Brazzaville, Rep Congo

**Speaker 5:** Dr Christiane Druml, Ethics and clinical research future challenges, Medical University of Vienna, Waehringerstrasse 25, 1090 Vienna, Austria

**Purpose and Objective:** Globally, health is the foundation upon which the social and economic values are built and health research and innovation are key drivers of sustainable development. In majority of the sub-Saharan African (SSA) countries, there is a glaring mismatch between the high burden of disease and the limited research capacity to combat them in a sustainable manner. Health research capacity development in SSA requires a conducive research environment, supported and propelled by empowered local researchers and institutions. SSA institutions require support and strengthening in the areas of promotion of networks, forming new partnerships, infrastructural development, research management and strategic planning. This in turn will ensure generation of a critical mass of talented and well equipped researchers with staff retention measures in place. In addition, these institutions will attract high quality African scientists who are future research leaders and role models.

## S40

### Symposium on Plasmodium vivax in Sub-Saharan Africa



**Tente B: 11:15-13:00**

**Chairs:** Ogobara Doumbo and Louis H Miller

**Speaker 1:** Ogobara Doumbo, Plasmodium vivax in Mali, Univeristy of Bamako, Mali

**Speaker 2:** Didier Menard , Discoveries of P. vivax in Madagascar, Institut Pasteur Paris, Paris

**Speaker 3:** Chetan Chitnis , Vaccines and immune response to P. vivax, Insitut Pasteur Paris, Paris

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** The symposium: 1. Ogobara Doumbo, Bamako, Mali has studied an area in Northern Mali where P. vivax is a problem in a Duffy negative area and may be the cause of anemia in children. 2. P. vivax in recent years has been shown to be a problem in many parts of Africa. It was brought to a head by the description of P. vivax in Madagascar by Didier Menard, Institute Pasteur, France and Madagascar. He has found expansion of certain genes that may be selected by P. vivax to make infection possible. 3. Chetan Chitnis is the leader of vaccine development against P. vivax will discuss the information on the development of a vaccine against blood stage of P. vivax. As is known, there is no vaccine against any malaria at present, but the P. vivax looks promising. 4. The other names are African scientists who are working in different areas and can tell their story of P. vivax in their countries. As this is MIM, it is important to give the young scientists an opportunity to tell their story.

**S41**

**Housing and malaria: progress in a randomized controlled trial to evaluate the impact of 'household screening + eave tubes' on malaria transmission in central Cote d'Ivoire**

**PC room: 14:30 -16:15**

**Chairs:** Matthew Thomas and Raphael N'Guessan

**Speaker 1:** Matthew Thomas, Dr, Penn State, Penn State, University Park, PA, USA

**Speaker 2:** Malal Mamadou Diop, Dr, In2Care, In2Care, Wageningen, The Netherlands

**Speaker 3:** Serge Assi, Dr, Institut Pierre Richet, Institut

Pierre Richet, Cote d'Ivoire.

**Speaker 4:** Raphael N'Guessan, Dr, London School Hygiene and Tropical Medicine, LSHTM, Keppel Street, London, UK; Institut Pierre Richet, Bouake, Cote d'Ivoire.

**Speaker 5:** Dimi Doudou, Dr, Universite Alassane Ouattara, Universite Alassane Ouattara, Bouake, Cote d'Ivoire.

**Purpose and Objective:** Provide an overview and preliminary results of a large Cluster Randomised Controlled Trial currently being conducted across 40 villages in central Cote d'Ivoire. The RCT forms a key part of a larger \$10 million grant from the Bill and Melinda Gates Foundation to take a new mosquito control intervention (eave tubes) from concept through to implementation. Eave tubes are a type of housing modification that exploits the behavior of many Anopheles vectors to feed indoors and enter houses through the eaves. The eave tubes provide focal points for delivering insecticides as mosquitoes attempt to enter the house. When combined with household screening (windows and doors where appropriate), the approach provides household level protection while at the same time turning the house into a 'lethal lure'. When deployed at scale, it is expected that eave tubes + screening will have a community level effect on transmission. In a recent blog post Bill Gates identified eave tubes as one of a handful of new technologies that he believes could make a genuine contribution towards the goal of malaria elimination in the next 10-15 years. We feel this is the perfect time to introduce the technology to the MIM community and present some of the promising preliminary results from the current Phase III evaluation.

**S42**

**Decision making in National Malaria Control Programmes for the procurement and deployment of new vector control tools**

**Room 205: 14:30 -16:15**

**Chairs:** Dr. Samson Awolola and Dr. Tolu Arowolo

**Speaker 1:** WHO representative, TBA, WHO, Review Attachment

**Speaker 2:**

**Speaker 3:**

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** The objective of this symposium is to discuss the latest scientific evidence and the WHO recommendation on the conditions for deployment of PBO LLINs in the context of country adoption and procurement of these new bed nets. This symposium will be a platform for countries to share challenges and experiences with decision-making at country level and discuss practicalities around the implementation of a new WHO guidance for more effective vector control tools in areas faced with the challenges of insecticide resistance. Target Audience : National Malaria Control Programmes

**S43**

**Challenges of Malaria Elimination in Africa  
Molecular Epidemiology for Malaria Elimination**

**Tente A: 14:30-16:15**

**Chairs:** Professor Daouda Ndiaye and Professor Dyann Wirth

**Speaker 1:** Richard W. Steketee, MD, MPH, Director, MACEPA, PATH, Seattle, WA USA

**Speaker 2:** Fatou Ba ScD, Member of the Research team and chief of the vector control section, National Malaria Control Program, Dakar, Senegal

**Speaker 3:** Julie Thwing MD, Medical Epidemiologist, Centers for Disease Control and Prevention, Atlanta, GA USA

**Speaker 4:** Dr. Elizabeth Chizema, Director, National Malaria Elimination Program , Zambia Ministry of Health, Lusaka, Zambia

**Speaker 5:** Sarah Volkman, ScD, Principal Research Scientist, Harvard T.H. Chan School of Public Health, Boston, MA USA

**Purpose and Objective:** « Participants will learn about the key knowledge gaps and challenges for malaria elimination in Africa. « Participants will learn about the progress toward malaria elimination in Senegal from the programmatic perspective. « Participants will learn about the progress toward malaria elimination in Zambia from the programmatic perspective. « Participants will learn about molecular epidemiological strategies for malaria elimination and how application of these strategies can guide decision-makers about malaria control and

elimination. « Participants will be better informed about considerations of what molecular epidemiological tools to deploy, when to deploy them, and how to implement them in the context of ongoing operational activities.

**S44**

**Improving Severe Malaria Outcomes**

**Tente B: 14:30-16:15**

**Chairs:** Pierre Hugo, MMV and Ali Cameron, UNITAID

**Speaker 1:** Alex Ogwal: CHAI, Malaria Program Manager, Local program manager of ISMO in Uganda, CHAI funded

**Speaker 2:** Dejan Zurovac: Malaria Public Health Department at KEMRI/Wellcome Trust Research Programme, epidemiologist, leading researcher of QoC in Kenya, MMV funded

**Speaker 3:** Martin de Smet: MSF, Malaria coordinator, MSF funded

**Speaker 4:** Elizabeth Chizema: NMEC Zambia, Director of Disease Control, Surveillance and Research, MMV funded

**Speaker 5:** Kim van der Weijde: MMV, Access and Product Management, Manager of Severe Malaria Observatory, MMV funded

**Purpose and Objective:** The tools required to manage severe malaria effectively have improved significantly in the past seven years. This symposium will share key learnings and experiences related to operationalizing the delivery of severe malaria treatments and increasing quality case management of severe malaria. In addition, the symposium will highlight opportunities to facilitate crosscountry sharing about improvements in severe malaria case management, as well as approaches that countries have adopted to overcome implementation challenges.

## Oral Session

### Control and Elimination 3 (Presentation 201-208)

**Auditorium: 14:30-16:15**

**Chair: Dr Jane Achan**

**Co chair: Glwadys Cheteug**

**Genomic methods of Plasmodium falciparum surveillance reveal patterns across the transmission gradient in Senegal**

**By:** Rachel F. Daniels

**Co-Author(s):** Sarah Volkman, Daniel L. Hartl, Awa B. Deme, Dyann Wirth, Moustapha Cisse, Amy K Bei, Duncan Earle, Alioune B Gueye, Rachel Daniels, Philip A Eckhoff, Oumar Sarr, Gnagna Dieng, Joshua L Proctor, YAKOU DIEYE, YAYE DIE NDIAYE, Fatou BA, Algaye Ngom, Philippe Guinot, Caterina Guinovart, Edward A. Wenger, Baba Dieye

**Evaluation of the quantity of blood ingested by Anopheles: interest in the implementation of interventions blocking the transmission of malaria**

**By:** Mouonniba Bernard SOME

**Co-Author(s):** Dari Yannic Frederic Da

**IMPACT OF INDOOR RESIDUAL SPRAYING WITH PIRIMIPHOS-METHYL CS ON THE HUMAN BITING RATE AND ENTOMOLOGICAL INOCULATION RATE OF AN. FUNESTUS S.S. IN ZAMBIA DURING THE 2015 SPRAY SEASON**

**By:** Evelyne Alyko

**Co-Author(s):**

**Is implementing full coverage of Long-Lasting Insecticidal Nets (LLINs) a good alternative strategy after Indoor Residual Spraying (IRS) with bendiocarb withdrawal in pyrethroid resistance areas?**

**By:** Razaki Adiho OSSE

**Co-Author(s):** Akogbeto Martin

**My Net, My Life : Household Ownership and Utilization of Long-Lasting Insecticidal Nets following Routine Distribution in Mazowe District, Zimbabwe**

**By:** Ekpenyong Ekanem

**Co-Author(s):** Joseph Mberikunashe, Patrick Chinyamuchiko, Martin Netsa

**Use of salivary biomarker of anopheles to evaluate the exposition of human to malaria vector bites in the localities of Manoka and Youpwe, Littoral Cameroon**

**By:** Glwadys Cheteug

**Co-Author(s):** Emmanuel Elanga, Carole Eboumbou

**A new challenge in malaria elimination efforts: the increase of malaria among adults after the implementation of long lasting insecticide treated bed nets (LLINs) in Dielmo, Senegal**

**By:** Amele Nyedzie Wotodjo

**Co-Author(s):** Souleymane Doucoure, nafissatou Diagne, Cheikh SOKHNA, Jean Gaudart, Adama Tall

**Decade of IRS program in Senegal, 2007-2016: an analysis of challenges, gains, and losses**

**By:** El Hadji Amadou Niang

**Co-Author(s):** Ibrahima Dia, Badara Samb, Ousmane Faye, Libasse Gadiaga, Massila Wague Senghor, Mamadou Demba Sy, Abdoulaye Diop, Oumar Sarr, Lassana Konate, Adama Kone

### Vector Biology 2 (Presentation 169-176)

**Oval room: 11:15-13:00**

**Chair: Dr Abdoulaye Diop**

**Co chair: Adilson De Pina**

**Isolation and characterization of heat-sensitive lethal strain of Anopheles arabiensis (Diptera: Culicidae) using Ethyl Methane Sulfonate**

**By:** Yacouba POUMACHU

Co-Author(s):

**Multiple insecticide resistance in *Anopheles gambiae* from Tanzania: a major concern for malaria vector control**

By: Theresia Nkya

Co-Author(s): Lena Lorenz, Bilal Kabula, William N. Kisinza, Dennis Massue, Stephen Magesa, Hans Overgaard, Zawadi Mageni, George Greer, Richard Reithinger, sarah moore

**Assessing exposure thresholds and behavioural impacts of insecticide net treatments using a bench top human-baited test**

By: Charles Kakilla

Co-Author(s): Josephine Parker, Karen Nelwin, Geraldine Foster, Alphaxard Manjurano, David Towers, Fabian Mashauri, Philip McCall

**Bioecology and insecticide susceptibility of *Anopheles gambiae* in Santiago Island, Cape Verde**

By: Adilson De Pina

Co-Author(s): Antonio Moreira, Ibrahima SECK, Ousmane Faye

**Changes in the sensitivity of Anopheline mosquitoes to insecticides and its impact on the control of malaria.**

By: James Iles

Co-Author(s): Ellie Sherrard-Smith, Thomas Churcher, Hilary Ranson

**INCREASED REPORT OF INSECTICIDE RESISTANCE IN ANOPHELES MOSQUITOES: PROGRESS TOWARDS THE DEVELOPMENT OF A NATIONAL PLAN FOR RESISTANCE MANAGEMENT IN NIGERIA 2017-2020**

By: Adedapo Adeogun

Co-Author(s):

**Insecticide resistance in *Anopheles gambiae* s.l. (Diptera: Culicidae) from Ethiopia (2012-2016): a nationwide study for insecticide resistance monitoring**

By: Louisa Messenger

Co-Author(s):

**Insecticide resistance in *An. arabiensis* populations from Dakar and its suburbs: Role of target site and metabolic resistance mechanisms**

By: Abdoulaye Kane DIA

Co-Author(s):

### Vector Biology 3 (Presentation 209-216)

Oval room: 14:30-16:15

Chair: Prof Martin Donnelly

Co chair: Marceline Finda

**Evaluating *Anopheles gambiae* responses to vector control treatments using video tracking**

By: Geraldine Foster

Co-Author(s): Jay Hutchinson, Hilary Ranson, Amy Guy, Mischa Emery, Christian Kroner, David Towers, Vitaly Voloshin, Annabel Murphy, Philip McCall

**Effects of insecticide resistance on the reproductive potential of the malaria vector *An. coluzzii***

By: Ibrahima Dia

Co-Author(s): Mawlouth Diallo, Ousmane Faye

**Development of multiplex TaqMan assays for the LabDisk an automated diagnostic platform for malaria vectors**

By: Nadja Wipf

Co-Author(s): Mara Specht, Pie Muller, Sandrine Medves, Sebastian Hin, Konstantinos Mavridis, Konstantinos Mitsakakis, John Vontas, Bill Carman

**How the vector residual malaria transmission impact the global transmission in the context of malaria elimination?**

By: Tanjona Rakotoniaina

Co-Author(s): Tsiriniaina RAKOTONDRANAIVO, Lala

RAFARASOA, Ousmane NDIATH

**Monitoring malaria residual transmission: Investigating magnitude and drivers of persistent Plasmodium infections in East and West Africa**

By: Marceline Finda

Co-Author(s):

**ResistanceSim development and acceptability study of a serious game to improve understanding of insecticide resistance management in vector control programmes**

By: Edward Thomsen

Co-Author(s): Michael Coleman, Bobby Farmer, Marlize Coleman, Kirsten Duda, Charlotte Hemingway, Claire Dormann

**Urbanization and dynamics of Anopheles. gambiae sl larvae in the city of Yaounde (Cameroon)**

By: DJAMOUKO DJONKAM Landre

Co-Author(s):

**Competence of the secondary vectors An. coustani, An. squamosus and An. rufipes for Plasmodium falciparum as measured by direct membrane feeding assays**

By: Domonbabele Francois de Sales Hien

Co-Author(s): R. Serge Yerbanga, Dieudonne Diloma Soma, Cedric Penner, Dari Yannic Frederic Da, Thierry Lefevre, Edwige Guissou, Nicolas Moiroux, Kounbobr Roch Dabire, Bienvenue Kouraogo Yameogo, Karine Mouline, Anna Cohuet

**Integrated vector management 2 (Presentation 177-184)**

**PC Meeting: 11:15-13:00**

**Chair:** Prof Ousmane Faye

**Co chair:** Dr Alphonsine Koffi

**Does mosquito mass-rearing produce an inferior**

**mosquito?**

By: Dieudonne Diloma Soma

Co-Author(s):

**Impact of the mass drug administration and the universal coverage of long lasting insecticidal nets on malaria and lymphatic filariasis transmissions in endemic areas of Burkina Faso**

By: Coulibaly Sanata

Co-Author(s):

**Indoor residual spraying with chlorfenapyr (a pyrrole insecticide) provides long residual efficacy against pyrethroid resistant Anopheles gambiae sl in southern Benin**

By: Corine Ngufor

Co-Author(s):

**Phase III community study of SumiShield 50WG, a new mode of action insecticide for Indoor Residual Spray (IRS) in malaria vector control**

By: Emile Tchicaya

Co-Author(s):

**Post-deployment effectiveness of long lasting insecticide treated net and indoor residual spraying against malaria in Benin, West Africa**

By: Georgia Barikissou DAMIEN

Co-Author(s):

**Recycling Plastic Bottles in the Presidents Malaria Initiative Africa Indoor Residual Spraying Project**

By: Peter Chandonait

Co-Author(s): Yemane Yihdego

**Sterile insect technique against malaria vector Anopheles arabiensis in Northern Sudan: Dispersal ability and mating competitiveness**

By: Tellal Ageep

Co-Author(s):

**Evaluation of Fludora-Fusion (a Clothianidin and deltamethrin mixture) in phase I and phase II for indoor residual spraying against pyrethroid resistant *Anopheles gambiae* sl in Benin.**

**By:** Augustin FONGNIKIN

**Co-Author(s):** Corine NGUFOR

### Drug Efficacy 1 (Presentation 193-200)

**ROOM 201: 11:15-13:00**

**Chair:** Prof Phillipe Guerin

**Co chair:** Abdoul Habib Beavogui

**Fosmidomycin-piperaquine as non-artemisinin-based combination therapy for acute uncomplicated *Plasmodium falciparum* malaria**

**By:** Lia Betty Dimessa Mbadinga

**Co-Author(s):** Ghyslain Mombo-Ngoma, Rella Manego-Zoleko

**Time to second and third episodes of malaria of Dihydroartemesinine + piperaquine vs Artesunate + amodiaquine and Atesunate + pyronaridine vs Artemeter+lumefantrine in Bougoula-Hameau, Mali**

**By:** Bakary FOFANA

**Co-Author(s):** Kassim Sanogo, Abdoulaye DJIMDE, Hamadoun Diakite, Sekou Toure, Issaka Sagara, Ogobara K Doumbo

**Single low dose primaquine efficacy and safety: a review and individual patient data meta-analysis**

**By:** Georgina Humphreys

**Co-Author(s):**

**M5717 First in Class *Plasmodium falciparum* PeEF2 inhibitor Successful completion of preclinical package to enable initiation of First in Human and Induced Blood Stage Malaria Challenge Model studies**

**By:** Claude Oeuvray

**Co-Author(s):**

**Cochrane Systematic Review: Primaquine or other 8-aminoquinolines for reducing *Plasmodium falciparum* transmission**

**By:** Leslie Choi

**Co-Author(s):** Patricia Graves, Hellen Gelband, Paul Garner

**Adherence to treatment with artesunate-amodiaquine or artemether-lumefantrine for uncomplicated malaria in Freetown, Sierra Leone: A mixed-methods study**

**By:** Kristin Banek

**Co-Author(s):** Emily Webb, Clare Chandler, Daniel Chandramohan, Samuel Juana Smith, Sarah Staedke

**A DECADE OF CLINICAL EFFICACY AND SAFETY OF ARTEMISININE-BASED COMBINATION THERAPY IN CAMEROON (2006-2016)**

**By:** Akindeh Nji

**Co-Author(s):** Olivia Achonduh, Marcel Moyeh, Esther Tallah, Cyrille Mbanwi, Randolph Ngwafor, Rose Leke, Dorothy Achu, wilfred Mbacham, Marie-Solange Evehe, Barbara Atogho Tiedeu, Jude Bigoga, Innocent Ali, Palmer Masumbe Netongo

**Parasite Clearance after treatment with Artesunate/amodiaquine and Artemether/lumefantrine in *Plasmodium falciparum* malaria patients in Cote d Ivoire**

**By:** Offianan Andre TOURE

**Co-Author(s):**

### Drug Efficacy 2 (Presentation 217-225)

**ROOM 201: 14:30-16:15**

**Chair:** Prof Jean Bosco Ouedraogo

**Co chair:** Kolapo Oyebola

**Artesunate plus Sulfadoxine-Pyrimethamine retain high efficacy against *P. falciparum* and *P. vivax* in**

### **Khartoum North and New Halfa, Sudan**

**By:** muzamil abdelhamid

**Co-Author(s):**

### **Effect of Artemisinin combination repeated Treatment on blood cell lines parameters in Individuals Infected with Acute Uncomplicated Plasmodium falciparum Malaria in Burkina Faso**

**By:** ISSIAKA SOULAMA

**Co-Author(s):** Alphonse Ouedraogo, Sodiomon B. Sirima, Amidou Diarra, Jean Moise Kabore, Issa N Ouedraogo, Noelie Henry, A Sam Coulibaly, B Alfred Tiono, Benjamin S Sombie, Maurice Ouattara, Amidou Ouedraogo, C Edith Bougouma

### **Survey of antimalarial medicines and pharmacopoeial quality of artemether-lumefantrine tablets sold in private pharmacies and drug shops in Tororo district**

**By:** Loyce Nakalembe

**Co-Author(s):** Moses Ocan, Godfrey Bbosa

### **Misclassification of antimalarial treatment outcome with PCR genotyping**

**By:** Kasia Stepniewska

**Co-Author(s):** WWARN Clinical Trials Methodology Study Group

### **Intramuscular Artesunate for Severe Malaria in African Children: A Multicenter Randomized Controlled Trial**

**By:** Aurore Hounkpatin

**Co-Author(s):**

### **Identical genomic barcodes of Plasmodium falciparum infections before and after treatment with Artemether/Lumefantrine in Nigeria**

**By:** Kolapo Oyebola

**Co-Author(s):**

### **EVALUATION OF THE EFFICACY AND SAFETY**

### **OF ARTESUNATE/AMODIAQUINE (ASAQ) VS SULFADOXINE-PYRIMETHAMINE/AMODIAQUINE (SPAQ) PRELUDE TO THE SEASONAL MALARIA CHEMOPREVENTION IN THE NORTH AND FAR NORTH OF CAMEROON**

**By:** Randolph Ngwafor

**Co-Author(s):** wilfred Mbacham

### **Efficacy of artesunate-amodiaquine for the treatment of uncomplicated Plasmodium falciparum in Zanzibar, and the safety of adding a single low dose of primaquine: a report of the first in vivo assessment conducted in the era of malaria pre-elimination with the use of a new screening and referral sys**

**By:** Mwinyi Msellem

**Co-Author(s):** Andreas Martensson, Abdul-wahid Al-mafazy, Abdullah Ali, Ulrika Morris, Berit Aydin-Schmidt, Faiza Abass, anders bjorkman

### **Late breaker 1 (Presentation 337-344)**

**ROOM 202: 09:30-10:45**

**Chair:** Evelyn Ansah

**Co chair:** Aida Badiane

### **Impact of malaria-protective human gene polymorphisms on Plasmodium falciparum invasion**

**By:** Silvia Kariuki

**Co-Author(s):** Alejandro Marin-Menendez, Ellen Leffler, Gavin Band, Kirk Rockett, Alex Macharia, Johnstone Makale, Francis Ndung'u, Dominic Kwiatkowski, Thomas Williams, Julian Rayner

### **Experience in Conducting the Mid-Term Review of the National Malaria Strategic Plan (2015-2020) in Mainland Tanzania**

**By:** RITHA NJAU

**Co-Author(s):** Adiel Mushi, Ally Mohammed, Anna Mahendeka, Renata Mandike, Sigsbert Mkude, Charles Dismas Mwalimu, Winfred Mwafongo, Leah Ndekuka, Limo

Ghasia, Winna Shango, Bilali Kabula, Jubilate Bernard, Andrea Makono, Yusuph Mwita, Khoti Gausi, Bayo Fatunmbi, Fabrizio Molteni, Anthony Yeta, Michael Kayange, Frank Chacky

**Spit is the new prick: Overcoming challenges with diagnostics of malaria infection in developing countries**

By: Jovikka Antallan

Co-Author(s):

**The role of automated malaria diagnosis as a universal tool in support of malaria elimination initiatives**

By: Theresa Coetzer

Co-Author(s): Evashin Pillay, Monwabisi Litshie

**TRACKING ANTIMALARIAL DRUG RESISTANCE IN NEAR-REAL TIME MOLECULAR SURVEILLANCE FOR ACT PARTNER DRUG RESISTANCE IN THE GREATER MEKONG SUBREGION**

By: Mehul Dhorda

Co-Author(s): Suttipat Srisutham, Thuy-Nhien Nguyen Than, Ranitha Vongpromek, Teeradet Khomvarn, Mayfong Mayxay, Olivo Miotto, Francois Nosten, Frank Smithuis, Rob van der Pluijm, Lorenz von Seidlein, Carol Sibley, Philippe J Guerin, Nicholas P J Day, Arjen Dondorp, Mallika Imwong

**Acceleration towards a sustainable 3GIRS market through co-payment, forecast guarantees and increased competition the Unitaid-funded Next Generation IRS project (NgenIRS) is shaping markets**

By: David McGuire

Co-Author(s):

**No Entry! Preventing Plasmodium falciparum invasion by targeting the Rh5/RIPr/CyRPA protein complex**

By: Julie Healer

Co-Author(s): Wilson Wong, Jenny Thompson, Thomas Jorgensen, Christopher Weir, Wian de Jongh, Alan Cowman

**Can improved housing provide additional protection against clinical malaria over current best practice? A household-randomised controlled study**

By: Margaret Pinder

Co-Author(s):

**Treatment and community management (Presentation 185-192)**

ROOM 202: 11:15-13:00

Chair: Prof Pascal Magnussen

Co chair: Izuchukwu Frank Obi

**Perception of Malaria Rapid Diagnostic Test and Factors Influencing Compliance with Test Result among Health workers in Ebonyi State, 2017**

By: Izuchukwu Frank Obi

Co-Author(s): Olufemi Ajumobi, Patrick Nguku, Micheal Urom, Kabiru Sabitu, Lawrence Nwankwo, Abdulhakeem Olorukooba, Suleiman Idris, Okechukwu Ossai

**Examining the referral processes for community case management of malaria: a synthesis of two studies undertaken in Uganda**

By: Sham Lal

Co-Author(s): Kristian Hansen, Richard Ndyomugenyi, Daniel Chandramohan, Sian Clarke, PASCAL Magnussen

**A comparison of prescribing practices for the treatment of malaria in public and private health facilities in southeast Nigeria**

By: Chinyere Okeke

Co-Author(s): Benjamin Uzochukwu

**Evaluating the effect of a mass radio campaign on treatment-seeking for malaria among children aged under five in Burkina Faso: Findings from a cluster randomised controlled trial**

By: Cathryn Wood

Co-Author(s): Roy Head, Simon Cousens, Moctar



Ouedraogo, Nicolas Meda, Pieter Remes, Sophie Sarrassat, Jo Borghi, Matthew Lavoie, Hermann Badolo, Frida Kasteng, Mireille Belem, Joanna Murray, Henri Some, Robert Bambara

**Contribution de la socio-anthropologie dans la mise en place des strategies de lutte contre le paludisme au Senegal : exemple de la CPS**

**By:** Tidiane NDOYE

**Co-Author(s):** mady ba, Ouleye BEYE, Fatou BA, Abdoulaye Moussa DIALLO, jean ndiaye, Youssoupha TALL

**Bridging Community Health Workers Skills and Capacity Gaps for Malaria Prevention and Control: Challenges and Lessons Learnt from Implementation Research in Malindi, Kenya**

**By:** Lydia Kibe

**Co-Author(s):** Daniel Muia, Anne Kamau

**Adherence to antimalarial treatment in the context of reactive case detection in Zanzibar**

**By:** Abdul-wahid Al-mafazy

**Co-Author(s):** Bakar Fakh, Abdullah Ali, Manuel Hetzel, Joshua Yukich, Logan Stuck

**Quality of fever case management in urban slums in Kampala, Uganda**

**By:** Sian Clarke

**Co-Author(s):** Elizeus Rutebemberwe, Anthony Mbonye, Phyllis Awor, Kristian Hansen, Miriam Kayendeke, Eleanor Hutchinson, PASCAL Magnussen

**Parasites and System biology 2 (Presentation 225-232)**

**ROOM 202: 14:30-16:15**

**Chair:** Prof David Roos

**Co chair:** Ben Katowa

**High infectivity of Anopheles melas to Plasmodium in Southern Benin: Implications for Malaria**

**Transmission**

**By:** ADIGBONON Claudiane

**Co-Author(s):**

**Schistosoma haematobium associated with a decreasing of malaria infection in 4 to 8 years children**

**By:** Tokplonou sigrane

**Co-Author(s):**

**Plasmodium falciparum genetic relatedness between baseline and 30-day follow-up visits during reactive case detection in rural southern Zambia**

**By:** Ben Katowa

**Co-Author(s):** Mukuma Lubinda, Harry Hamapumbu, Kelly Searle, Douglas Norris, Jennifer Stevenson, Tamaki Kobayashi, Philip E. Thuma, William Moss

**Vivax malaria in the Saharan zone of Mauritania: morbidity, molecular markers of chemoresistance and efficacy of chloroquine against Plasmodium vivax**

**By:** Jemila Deida

**Co-Author(s):**

**EXPLORING THE ANTIMALARIAL POTENTIAL OF DRIED WHOLE PLANT (WP) CYMBOPOGON CITRATUS (LEMON GRASS) AND ITS MALARIA INDUCED OXIDATIVE STRESS MODULATORY EFFECT**

**By:** Uchechukwu Chukwuocha

**Co-Author(s):**

**Evaluation of Malaria Surveillance System in Kano State, Nigeria, 2013-2016**

**By:** Visa Tyakaray

**Co-Author(s):**

**Recurrence behaviour of Plasmodium malariae and Plasmodium ovale spp. and relapse characteristics of P. ovale spp. in Gabon**

By: Mirjam Groger

**Co-Author(s):** Benjamin Mordmueller, Johannes Mischlinger, Elias Meyer, Anna Klicpera, Ghyslain Mombongo, Rella Manego-Zoleko, Markus Winterberg, Hans-Peter Fuehrer, Daniel Blessborn, Michael Ramharter, Albert Lalremruata, Chiara Cattaneo, Luzia Veletzky

**Field evidence for manipulation of vector host choice by the human malaria parasite, Plasmodium falciparum with important epidemiological consequences**

By: Thierry Lefevre

Co-Author(s):

## Poster Session

### C001

**Molecular characterization of insecticide resistance in malaria and arbovirus vectors and access to advanced diagnostic tools**

Emmanouil, Fotakis

### C002

**A cluster-randomized trial to assess impact and cost-effectiveness of combining indoor residual spraying with long-lasting insecticidal nets for malaria control in central Mozambique**

Carlos, Chaccour

### C003

**A model of the spatial population dynamics of malaria mosquito vectors in Burkina Faso**

Ace, North

### C004

**A modified design of the West African experimental hut for improved evaluation of vector control products**

Rhodri, Edwards

### C005

**Abundance and diversity of malaria vectors in selected areas with persistent malaria transmission in North-western and Southern regions of Tanzania**

Yahya, Derua

### C006

**Adherence to treatment guidelines for uncomplicated malaria in Southern Tanzania Regions**

Joseph, MUGASA

### C007

**An association between the 1014F kdr allele and Plasmodium falciparum infection in Anopheles gambiae populations in Burkina Faso**

Alphonse, TRAORE

### C008

**An evaluation of the efficacy of SumiShield TM 50 WG and Deltamethrin WDG against susceptible and resistant strains of three species of mosquitoes**

Rosemary, Lees

### C009

**An Observational Analysis of the geographical shift of IRS operations from the Segou Region to Mopti of Mali: 2016 -2017**

Joe, Wagman

### C010

**Analyzing malaria surveillance monitoring and evaluation system: Experience from Madagascar s National Malaria Control Program**

HANITRA RANAIVOARISON, Irene

### C011

**Anopheles (Cellia) multicolor and An arabiensis larvae develop in highly saline waterpools in Nouakchott Mauritania**

Lemrabott Mohamed, aly

### C012

**Anopheles diurnal biting behavior could increase the risk of malaria transmission in Dielmo Senegal**

Souleymane, Doucoure

### C013

**Anopheles funestus sensu stricto Giles (Diptera:Culicidae) bites late in the morning at two rural villages in northern Malawi and its implications for malaria vector control**

Themba, Mzilahowa

### C014

**Anopheline mosquitoes diversity blood meal source and infection rate in the city of Ouagadougou Burkina Faso**

Justine, KABORE

### C015

**Anti-malarial drug efficacy in Africa and network meta-analysis**

Solange Youdom, Whegang

### C016

**Assessing insecticide-susceptibility status and efficacy of Pirimiphos- methyl (Actellic) to primary malaria vectors in Magude and Manhiça district southern Mozambique**

Mara, Maquina

### C017

**Assessment of malaria prevalence in relationship to the use of LLINs in Okola a forested area in Cameroon**

Dominique M, NGNINPOGNI

### C018

**Assessment of L-cyhalothrin residues and heavy metals in Anopheles gambiae breeding sites from vegetable farms and their contributions in insecticide resistance profiles By R Djouaka A Talom R Akoton G**

Tchigossou M Soglo F Zeukeng S Atoyebi ETossou T Tch Rousseau, Djouaka

### C019

**Association between deltamethrin resistance / Plasmodium falciparum infection and the Vgsc-L1014S resistance mutation in Anopheles gambiae from Tanzania**

Bilali, Kabula

### C020

**Autodissemination of pyriproxyfen for controlling self-sustaining captive populations of An arabiensis: An exit from semi field cages to field intervention**

Dickson Wilson, Lwetoijera

### C021

**Behavioral interactions between humans and mosquitoes to assess the protective efficacy of insecticidal nets and the extent of residual malaria transmission (MALTEM-INTERACT)**

Celso, Alafo

## C022

Bendiocarb resistance in *Anopheles gambiae* s.l. populations in areas with and without indoor residual spraying in Mali West Africa

Moussa, Keita

## C023

Bio-efficacy and residual activity of the neonicotinoid clothianidin on various wall surfaces for malaria vector control

Leonard, Ngwej

## C024

BIOEFFICACY AND RESIDUAL LIFE OF CHLORFENAPYR INSECTICIDE AGAINST ANOPHELES SPECIES IN THE GUINEA SAVANNAH NORTH CENTRAL NIGERIA

Petrus, Inyama

## C025

Blood Meal Preference of Main Malaria Parasite Vector Species after an Intensive use of Insecticide on Malaria Vector Control in Madagascar

Alice, zilera

## C026

Building capacity within African Malaria Programmes to lead the forecast development validation and consolidation process that will support ongoing IRS insecticide volume guarantees made by donors their implementers and self-funded programmes

Marlize, Coleman

## C027

Cameroon Baptist Convention-Health Services: Six Decades of Trials and Triumphs in Malaria Control

## and Prevention Programs

NFOR, EMMANUEL NFOR

## C028

Changes on malaria vector composition and behavior induced by the construction of a large dam in South Cameroon

Lili Ranaise, MBAKOP

## C029

Characterization of the expression of cytochrome P450 enzyme by aging of insecticide-resistant *Anopheles gambiae* ss mosquitoes

Joseph, CHABI

## C030

Characterization of the impact of Plasmodium and Trypanosoma co- infections on the vectorial capacity of *Anopheles* mosquitoes

Maty, Fofana

## C031

Comparison of mammalian host blood meal preferences on unfed and blood fed wild caught mosquitoes in malaria endemic communities of Manicaland province Zimbabwe

Nobert, Mudare

## C032

Controlling malaria epidemics during a conflict: Evaluation of Permanet 30 for Malaria Prevention in an internally displaced people s camp Bentiu Unity State South Sudan

Richard, Allan

### C033

#### Current Status of Insecticide Resistance In The Gambia

Musa, Jawara

### C034

#### Daily movements of parasitic insects attracted to their hosts observed with entomological lidar

Samuel, Jansson

### C035

#### Des usages differencies des CTA entre Benin et Ghana : quand l'organisation du systeme pharmaceutique et les relations avec les acteurs transnationaux influencent la consommation pharmaceutique

Carine, Baxerres

### C036

#### DETERMINANTS OF QUALITY OF SERVICE IN MANAGING MALARIA BY COMMUNITY HEALTH VOLUNTEERS BUNGOMA COUNTY KENYA

Enock, Marita

### C037

#### Development of New Approach to Effectively Measure Malaria Vector Abundance: Potentials in Using Mosquito Swarms

Simon P., SAWADOGO

### C038

#### Distribution and behavioural patterns of malaria vectors in the context of wide Long Lasting Insecticidal Net use in North Cameroon

Ekoko Wolfgang, Eyisap

### C039

#### Dynamic density sporozoite rates and entomological inoculation rates of Anopheles gambiae at Tori-Bossito Benin

Yadouleton, Anges

### C040

#### Effect of DEET - multiple exposures on behavior and life history traits in the malaria mosquito vector Anopheles gambiae ss

Margaux, Mulatier

### C041

#### Effect of kdr (L1014F) gene porting on the nocturnal activity rate in anopheles vectors of malaria in Burkina Faso

Amadou Sekou, Traore

### C042

#### Effect of Seasonal Malaria Chemoprevention on malaria morbidity in district of Toliara II Madagascar

Maurice, Ye

### C043

#### Effects of the neem tree oil (Azadirachta indica) in Anopheles population larvae from Marovoay District Madagascar

Solohery Fanomezana, Randriamanarivo

### C044

#### EFFICACY & RESIDUAL ACTIVITY OF CLOTHIANIDIN + DELTAMETHRIN WP- SB A COMBINATION FORMULATION FOR IRS

Matt, Kirby

### C045

Efficacy and residual performance of Fludora™ Fusion a next generation combination insecticide (Clothianidin + Deltamethrin) developed for Indoor Residual Spraying for the control of malaria vector mosquitoes : First Six months of WHO cone bioassay evalu

Mbanga, Muleba

### C046

Elucidating the complexity and diversity of Anopheles across Africa and implications on malaria vector surveillance and control

Allison, Hendershot

### C047

Entomological factors sustaining residual malaria transmission in the coastal Kenya

Joseph, Mwangangi

### C048

Entomological Impact of Indoor Residual Spraying with pirimiphos-methyl: A pilot study in an area of low malaria transmission in Senegal

Ousmane, SY

### C049

Epidemiology of malaria transmission in two neighboring villages in the rural commune of Andriba Madagascar

Jessy Marlane, GOUPEYOU YOUNSI

### C050

Evaluation of four local plant species as larvicidal agents against malaria vector Anopheles arabiensis in Nouakchott Mauritania

Khadijetou, Kane

### C051

Evaluation of the physical integrity and bio-efficacy of long-lasting insecticidal nets after three years of use in Dielmo/ Ndiop Fatick Senegal

Souleymane, Doucoure

### C052

Evidence et evolution de multiples mecanismes de la resistance aux insecticides chez les populations d Anopheles gambiae sl vecteurs du paludisme au Niger Afrique de l'Ouest

SOUMAILA, HADIZA

### C053

EVIDENCE OF INCREASED RESISTANCE TO PYRETHROIDS AND DDT WITH SUSTAINED SUSCEPTIBILITY TO ORGANOPHOSPHATES AND CARBAMATES IN ANOPHELES GAMBIAE SL IN AN AREA OF INTENSIVE DISTRIBUTION OF LLIN IN NIGERIA

Adedapo, Adeogun

### C054

Evolution of the bionomic of the malaria vector An gambiae sl in the cities of Yaounde and Douala in Cameroon a challenge for malaria vector control in urban settings

Antonio-Nkondjio, Christophe

### C055

Extent of Plasmodium falciparum infections within Anopheles funestus and Anopheles arabiensis in Blantyre southern Malawi

Themba, Mzilahowa

### C056

First detection of N1575Y mutation in An gambiae sl

population in Mali and its effect on the performance of malaria control tools

Nafomon, Sogoba

**C057**

First report of malaria vectors susceptibility to insecticides in the Moyen Ogooue Province of Gabon

Stravensky Terence, Boussougou Sambe

**C058**

Frequency of 2La chromosomal Inversion and its correlation with Insecticide Resistance and Plasmodium falciparum infection rates in Anopheles gambiae s.l

Damaris, Matoke

**C059**

From insecticide to new tools: Exploiting vector reproductive system for malaria control in Sub-Saharan Africa

Sessinou Benoit, ASSOGBA

**C060**

Functional genomic dissection of para gene function in Anopheles coluzzii

LUISA, NARDINI

**C061**

Games to enhance knowledge confidence and decision-making in malaria control and elimination programmes

Edward, Thomsen

**C062**

Geospatial variation in vector species composition

insecticide resistance and malaria transmission

Catherine, Moyes

**C063**

High kdr resistance in Anopheles coluzzii and Anopheles gambiae malaria vectors in Kovie a rice growing area of Togo west Africa

Adjovi Djifa, AMOUDJI

**C064**

High malaria transmission vectored by An gambiae in the city of Yaounde Cameroon

BELISSE Patricia Lucie, DOUMBE

**C065**

High mosquito burden population knowledge and attitude on malaria prevention in Yaounde the capital city of Cameroon

ABDOU, TALIPOUO

**C066**

High pyrethroid resistance intensity of Anopheles gambiae s.l from phase II hut trial station in KOLOKOPE Central Togo: A potential site to assess the next generation of Long Lasting Insecticidal nets (LLINs)

Koffi Mensah, AHADJI-DABLA

**C067**

How vector control threat related to anopheles behaviour and insecticide resistance after use of LLINs: a studies case in Marovoay Madagascar

Tsiriniaina, RAKOTONDRANAIVO

**C068**

IDENTIFICATION OF BLOOD MEAL SOURCES IN

## MALARIA MOSQUITO VECTORS BY MALDI-TOF MS

sirama, niare

### C069

Impact of a Glutathione S-transferase-based metabolic resistance on the effectiveness of various bed nets against *Anopheles funestus* a major malaria vector in Africa

Benjamin, Menze Djantio

### C070

Impact of the effectiveness of Long Lasting Insecticidal Nets (LLINs) on malaria transmission in the low and high resistance zones of vectors to pyrethroids in southern Benin

Tacheme Filemon, TOKPONNON

### C071

Improving entomological intelligence for evidence based vector control and malaria elimination

Neil, Lobo

### C072

Improving Integrated Community Case Management quality of care among Patent Proprietary Medicine Vendors in Nigeria through supportive supervision and feedback

Joseph, Lewinski

### C073

Influence of blood meal and age of mosquitoes on susceptibility to pyrethroids in *Anopheles gambiae* from Western Kenya

Maxwell, Machani

### C074

INNOVATIVE BIOLOGICAL TOOL FOR PYRETHRINOID METABOLIC RESISTANCE STUDY IN ANOPHELES COLUZZII COTE D'IVOIRE

Alphonsine, Koffi

### C075

Insecticide resistance and frequency of target site mutations (ace-1 Rdl and Kdr) in *Anopheles gambiae* sl populations in southeastern Senegal

El Hadji, Diouf

### C076

Insecticide Resistance Of *Anopheles gambiae* sl In Kinshasa Idjwi Island Lubumbashi Kimpese and Kwilu-Ngongo Sugarcane Plantations Democratic Republic of the Congo

Thierry, Bobanga

### C077

Insecticide resistance status of *Anopheles* mosquito from Ila-Orangun Southwest Nigeria

isaac, oyewole

### C078

Insecticide susceptibility and role of *An. melas* in an area of malaria residual transmission in Senegal

Pape Cheikh, Sarr

### C079

Insecticide susceptibility status of *Anopheles gambiae* *Aedes aegypti* and *Culex quinquefasciatus* in Ado Ekiti South Western Nigeria

OKOH HILARY, IWEGBUNEM



### C080

Investigation into intra-species indoor and outdoor resting behaviour in malaria vectors

Majidah, Hamid-Adiamoh

### C081

Is malaria transmission risk associated with flooding in Dakar urban?

Seynabou Mocote, DIEDHIOU

### C082

Knock down resistance (kdr) of *Anopheles gambiae* (Diptera: Culicidae) an eye opener on resistance surveillance in Zimbabwe

Aramu, Makuwaza

### C083

La revelation pour la premiere fois d hybrides *Anopheles coluzzi*/*Anopheles gambiae* ss et a proportion elevee au sein des populations anopheliennes de Niamey- Niger (Afrique de l'Ouest)

Abdoul-Aziz Mamadou, MAIGA

### C084

LABORATORY EVALUATION OF EFFECTS OF *Cupressus lusitanica* *Ocimum basilicum* and *Petroselinum crispum* ON THE DEVELOPMENT OF THE MALARIA VECTOR SPECIES *Anopheles coluzzii* Coetzee & Wilkerson sp 2013 (Diptera: Culicidae)

Tamunjoh Stella Shinwin, Ateyim

### C085

Launch of the online Malaria Atlas Project - Insecticide Resistance database

Anna, Trett

### C086

Lessons learned from National Malaria Control Program review Madagascar

Maurice, Ye

### C087

Mapping the distribution of *Anopheles funestus* across Benin highlights a sharp contrast of susceptibility to insecticides and infection to *Plasmodium* between populations

Romarc, Akoton

### C088

Mass rearing *Anopheles arabiensis* using a local food; How much t can save?

Omnia Fathelrhman Abdelwhab, Altahir

### C089

Maternal Child Survival Project - MCSP

Reed, Thorndahl

### C090

Methodological and analytical improvements of the Mark-Release- Recapture technique for estimating the population size and dispersal of the malaria mosquito *Anopheles coluzzii*

Frederic, Tripet

### C091

Molecular characterization of DDT and permethrin resistance in an *Anopheles funestus* from Benin

Genevieve, Tchigossou

### C092

Monitoring mosquito resistance using near infrared

spectroscopy

Ben, Lambert

**C093**

**Mosquito distribution and malaria transmission in urban and periurban districts of the city of Yaounde**

Carmene Sandra, NGADJEU

**C094**

**New larval food for laboratory mass rearing of the malaria vector *Anopheles arabiensis***

Omnia Fathelrhman Abdelwhab, Altahir

**C095**

**NgenIRS product pipeline and the future of resistance management**

Andrew, Saibu

**C096**

**Non-pyrethroid Treated Durable wall Liners impacts on malaria vectors age in Muheza Tanzania**

Basiliana, Emidi

**C097**

**Non-pyrethroid Treated Durable wall Liners impacts on malaria vectors age in Muheza Tanzania**

Basiliana, Emidi

**C098**

**Novel insecticide with extended mortality effect: A case of SumiShield 50WG against wild resistant populations of *Anopheles arabiensis* from Northern Tanzania**

Eliningaya, Kweka

**C099**

**PARADIGM SHIFT AND SEASONAL VARIATION IN MALARIA PREVALENCE AND ANAEMIA IN IJEDE IKORODU LOCAL GOVERNMENT AREA LAGOS STATE**

Oluwagbemiga, Aina

**C100**

**Post-discharge Malaria Chemoprevention (PMC) in Malawi: caregivers acceptance and preferences with regard to delivery methods**

Sarah, Svege

**C101**

**Potential of MAI-7316 for IRS and ITNs against susceptible and resistant strains of mosquitoes**

janneke, Snetselaar

**C102**

**Profile of mosquito vectors from indoor pyrethrum spray in Northern Namibia**

Isaac, Quaye

**C103**

**Pyrethroid resistance in *Anopheles arabiensis* in Nouakchott Mauritania**

Aichetou Mint Mohamed Lemine, Mint Mohamed Lemine

**C104**

**Reduced efficacy of LLINs usage in Cameroon: exploration of factors contributing to residual malaria transmission in the equatorial forest region**

Roland, BAMOU

**C105**

**Report of *Anopheles melas* (Diptera: Culicidae) in**

## Muanda Democratic Republic of Congo

Mitterrand, Moyo

### C106

Resistance101 acceptability study of a serious game to improve understanding of insecticide resistance

Kirsten, Duda

### C107

Review of MOH s effort in developing and implementing Quality Assurance (QA) plan for Global Fund-supported antimalarial drugs: A case study of Nepal in the context of malaria elimination

Reed, Thorndahl

### C108

Scalable technologies for widespread Anopheles insecticide resistance mapping using DNA diagnostics

### C109

Science and Nature: Susceptibility of Wild Caught Adult Anopheles gambiae ss to Insecticides May Not Decrease With Age

Kevin, Opondo

### C110

Seasonal variability in malaria transmission in Kwilu Province Democratic Republic of Congo

Emery, METELO MATUBI

### C111

Spatial and temporal expansion of deltamethrin resistance and kdr mutations in Anopheles gambiae sl from North Cameroon

Stanislas Elysee, MANDENG

### C112

Species composition and characterization of mosquito (Diptera: Culicidae) larval habitats in Nouakchott Mauritania

Ousmane, ndiaye

### C113

Study on the efficacy of different concentrations of Piperonyl butoxide plus Deltamethrin against wild strains of An stephensi on different surfaces by using bioassay biochemical and quantitative analytic assay for Integrated Vector Management strategy

Fatemeh, Nikpour Aljaran

### C114

SUSCEPTIBILITY OF ANOPHELES MOSQUITO TO SOME AGRICULTURAL INSECTICIDES IN THE ADANSI NORTH DISTRICT GHANA

Nicholas Ato, Egyir

### C115

Susceptibility status of Anopheles gambiae sl to insecticides commonly used for malaria control in Kinshasa Democratic Republic of Congo

JOSUE NICOLAS, ZANGA

### C116

The behaviour and ecology of highly insecticide resistant malaria vectors in south-western Burkina Faso

Antoine, SANOU

### C117

The impact of pyrethroid resistance on the efficacy and effectiveness of indoor residual spraying for

## malaria control in Africa

Ellie, Sherrard-Smith

### C118

The kdr mutations among malaria vectors in a high insecticide treated net coverage area of western Kenya

Judith, Mangeni

### C119

The kdr mutations among malaria vectors in a high insecticide treated net coverage area of western Kenya

Andrew, Obala

### C120

The threat of insecticide resistance on malaria control and elimination

Melinda, Hadi

### C121

Using mass Soviet mosquito dissection experiments to estimate the lifespan of wild mosquitoes

Ben, Lambert

### C122

Variations of Anopheles gambiae population density behaviour and resistance to insecticide from rural to urban localities of Burkina Faso

Aboubakar, Sanon

### C123

Vector bionomics and transmission intensities of malaria vectors on Bioko Island over 13 years of integrated vector control

Godwin, Fuseini

### C124

Vectors diversity insecticide resistance and malaria transmission patterns in the South-West region (Diebougou) of Burkina Faso : Pre-intervention study

Dieudonne Diloma, Soma

### C125

Video tracking behaviour of An gambiae sl at holed LLINs

Josephine, Parker

### C126

What eats an Anopheles? Predators and competitors of Anopheles gambiae sl

Mathilda, Collins

### C127

Modelling the potential impact of intermittent preventive therapy of malaria in pregnancy on spread of antimalarial drug resistance

Deus, Thindwa

### C128

A new approach for Malaria vector Control: Contribution of Minimal tillage and intermittent flooding in the reduction of Anopheles densities in rice field agro-ecosystems of Malanville

Innocent, Djegbe

### C129

A new IRS combination product containing clothianidin and deltamethrin for the control of malaria vectors: results from experimental hut trials in Madagascar

Sanjiarizaha, RANDRIAMAHERIJAON

### C130

Assessing the usability of a national guideline on malaria-lymphatic filariasis co-implementation in Nigeria

Olusola, Oresanya

### C131

Associations between household net care and repair behavior and ITN field durability in four Districts in Madagascar

Stephen, Poyer

### C132

Automated «sample to answer» diagnostic platforms (MalVecLabDisk / ArboVec-Disk) for improving the impact of vector control interventions

John, Vontas

### C133

catholic university of central africa

Estelle, KOUOKAM

### C134

Collection and Disposal of Obsolete DDT Insecticide in Ethiopia

Peter, Chandonait

### C135

Combining primary schools and Ante-Natal Care as channels for effective continuous Mosquito net distribution to maintain high net coverage post mass campaign

Anthony, Nuwa

### C136

Comparing PBO LLINs: Efficacy of PermaNet 30 and Olyset Plus against wild resistant populations of Anopheles gambiae sl in experimental huts in Kolokopé Togo

Melinda, Hadi

### C137

Development of a mid-infrared spectroscopy based tool for mosquito surveillance

Francesco, Baldini

### C138

DIVERSITY AND DISTRIBUTION OF NON-TARGET MACRO-INVERTEBRATES ASSOCIATED WITH ANOPHELES GAMBIAE BREEDING HABITATS IN SELECTED VILLAGES ALONG SEZIBWA RIVER UGANDA

Hudson, ONEN

### C139

Do insecticides have the same effectiveness against infectious and non- infected mosquitoes?

Soromane, Camara

### C140

Effects of drug policy changes on evolution of markers of Plasmodium falciparum resistance to Chloroquine Amodiaquine and Sulphadoxine-Pyrimethamine in Mutengene Cameroon

Marcel Moyeh, Nyuylam

### C141

Efficacy of Interceptor G2 a new long lasting net against wild pyrethroid- resistant Anopheles gambiae ss from Cote d Ivoire: a semi-field trial

Soromane, Camara

### C142

Efficacy of Sumishield 50 WG against resistant *Anopheles gambiae* in an experimental hut trial in Cote d'Ivoire

Constant, Edi

### C143

Exploration of the microbiote of *Anopheles gambiae* and *An. funestus* in Senegal for alternative malaria vector control strategies

Hubert, BASSENE

### C144

Frameshift mutation in a conserved *Plasmodium* protein associated with piperazine resistance in *Plasmodium berghei* ANKA

Daniel, Kiboi

### C145

Geographical distribution of mosquitoes and infection in Upper River Region of The Gambia

Lamin, Camara

### C146

High resolution population data for improved targeting and monitoring of interventions: application of household enumeration data for an improved Indoor Residual Spraying program in Chobe district Botswana

KATELYN, WOOLHEATER

### C147

Higher Proportion of Outdoor Biting by *Anopheles* Mosquitoes in Eastern Gambia

Abdullahi, Ahmad

### C148

Ifakara Ambient Chamber Test (I-ACT) - a high throughput means of measuring bednet efficacy

sarah, moore

### C149

Interceptor G2 and Sylando: New paradigms in managing malaria vectors

James, W Austin

### C150

Key Gains in IRS Coverage with a Mobile Tool

Anne, Martin

### C151

Lessons learnt from a simultaneous multi-province ITN mass distribution campaign in Angola

Joseph, Lewinski

### C152

Mosquitocidal and antioviposition effects of *Cassia siamea*(Fabaceae) extracts coumarin and betulinic acid on female *Anopheles stephensi* (Diptera: Culicidae)

Gelase Fredy, Nsonde Fredy

### C153

Multiplex competitive growth assays for measuring the biological impact of fitness in drug-resistant *Plasmodium falciparum*

Manuela, Carrasquilla

### C154

Perfect association between swarm segregation

and the X-chromosome island of speciation in hybridizing *Anopheles coluzzii* and *Anopheles gambiae* populations

Abdoulaye, Niang

### C155

Physical integrity and insecticidal activity of used PermaNet 30 LLINS on Bioko Island two years after mass distribution campaign

Godwin, Fuseini

### C156

Predicting resistance to current and future partner drugs to artemisinin derivatives used in malaria treatment in Northcentral and Southwest Nigeria

Chimere O., Agomo

### C157

Rapid improvements to rural Ugandan housing and their association with malaria from intense to reduced transmission

Lucy, Tusting

### C158

Recycling Cardboard Boxes into Greeting Cards

Peter, Chandonait

### C159

Repellency of Low Concentrations of Essential Oil from *Clausena anisata* against Mosquitoes

Ayaba Zita, ABAGLI

### C160

RESEARCH OF ALTERNATIVE TOOLS AND INSECTICIDE RESISTANCE MANAGEMENT IN AN GAMBIAE SL IN

## COTE D'IVOIRE

Alphonsine, Koffi

### C161

Risk factors for malaria transmission in Niamey Niger

Rabiou, LABBO

### C162

SIBLING SPECIATION AND BITING PREFERENCES OF *Anopheles gambiae* sl and *Anopheles funestus* sl COMPLEXES IN KOMBWA WESTERN KENYA

GLADYS, KERICH

### C163

Survival preference and use rates of 8 types of LLINs 6 12 and 24 months after a mass distribution campaign in Senegal

Mbaye, DIOUF

### C164

Targeting outdoor biting malaria vectors using insecticide-treated cow- baited tents

Brandyce, St. Laurent

### C165

The deadly combination of conflict and climate change in Somalia: the effect on malaria transmission and how the risk of epidemics can be mitigated

Rory, Lightfoot

### C166

The effect of improved housing on indoor mosquito density and exposure to malaria in the rural community of Minkoameyos in the Centre region of

## Cameroon

RACHEL LAURE, NCHA FOR NGUELA

### C167

The importance of morphological identification of African anopheline mosquitoes (Diptera: Culicidae) towards malaria elimination

Erica, Erlank

### C168

The REACT randomised controlled trial to assess whether addition of complementary vector control strategies to long-lasting insecticidal mosquito nets provides additional protection against clinical malaria in areas with pyrethroid-resistant vectors in ru

Cedric, Pennetier

### C169

To assess whether improved housing reduces vector density inside houses when compared with LLIN alone

Musa, Jawara

### C170

Understanding the decision-making processes of indoor residual spray programs: a framework and comparative analysis from case studies in Ghana Mali Mozambique and Zambia

Molly, Robertson

### C171

Use of the Mobile Soak Pit to Extend the Reach and Increase the Efficiency of the Presidents Malaria Initiative Africa Indoor Residual Spraying Project

Peter, Chandonait

### C172

When are long lasting insecticidal nets too damaged for use or repair? Results from a survey among participants of a Benin community education study

Olivier, Briet

### C173

Etude de la resistance de Plasmodium falciparum a partir de l'ADN extrait des TDR collectes au Senegal et aux Comores

Papa Mze, Nasseridine

### C174

ANALYSIS OF GENETIC MUTATIONS ASSOCIATED WITH ANTI-MALARIAL DRUG RESISTANCE IN PLASMODIUM FALCIPARUM FROM NORTHERN NAMIBIA

Lucille, Dausab

### C175

Analysis of nuclear and organellar genomes of Plasmodium knowlesi in humans reveals ancient population structure and recent recombination among host-specific subpopulations

Ernest, Diez Benavente

### C176

Assessing durability of long-lasting insecticidal mosquito nets in Tanzania three years after distribution

Lena, Lorenz

### C177

Assessment of the Knowledge Attitude Use and Perspective of People about Insecticide Treated Net in Ogbomoso Nigeria

Adeolu, Oluremi



### C178

Dramatic changes in malaria population genetic complexity in Dielmo and Ndiop Senegal revealed using genomic surveillance

Amy, Bei

### C179

Erythrocyte Binding Antigen 175 (EBA-175) alleles dimorphism and human genetics influencing factors (hemoglobin and glucose 6 phosphate dehydrogenase) in P.falciparum malaria children in an hyperendemic area (Banfora; Burkina Faso)

Salif, SOMBIE

### C180

Genetic variants of RNASE3 (ECP) gene and susceptibility to severe malaria: a replication study in senegalese population

Gora, Diop

### C181

Heterogeneous malaria infection prevalence in Mananjary on the rainy South Eastern coast of Madagascar

Voahangy, Andrianaranjaka

### C182

HLA-A Alleles Differentially Associate with Severity to Plasmodium falciparum Malaria infection in Ibadan Nigeria

Subulade, Ademola

### C183

Influence of the sickle cell trait on Plasmodium falciparum transmission in asymptomatic children

Christelle, Ngou Maffo

### C184

Malaria resurgence in the highland of Madagascar

Milijaona, Randrianarivelosia

### C185

Malaria Stratification to Support the Malaria Elimination Strategy in Zambia

Angela, GAMA

### C186

Mother and Care Givers Malaria Control Measures and Attitudes Towards Childhood Immunisation in Ibadan Oyo State Nigeria

Akinboye D., O.

### C187

Paraquat mediated oxidative stress in Anopheles gambiae mosquitoes is regulated by an endoplasmic reticulum (ER) stress response

Brian, Tarimo

### C188

Population genetics of the Plasmodium parasite in the Kavango and Zambezi region as Namibia moves towards elimination

Munyaradzi, Tambo

### C189

Prevalence of polymorphisms in G6PD and HBB genes and their correlation with malaria outcome in Senegalese population

Fatou, THIAM

### C190

Reactive case detection for malaria elimination in

## Zanzibar system effectiveness and cost

Logan, Stuck

### C191

#### REASSESSMENT OF ENTOMOLOGICAL PARAMETERS OF MALARIA TRANSMISSION AFTER 10 YEARS IN BOUGOULA-HAMEAU SIKASSO (MALI)

Fatoumata I, BALLO

### C192

#### Role of Anopheles coluzzii and Anopheles gambiae ss in malaria transmission in rural area of Bouake Cote d'Ivoire

Dounin Danielle, ZOH

### C193

#### Senegal mapping of Plasmodium falciparum K13-Propeller Polymorphisms: correlations with malaria clinical outcomes

Mariama, Nicole Pouye

### C194

#### Sleep is leisure for the poor Understanding perceptions barriers and motivators to net care and repair in southern Tanzania

Zawadi, Mageni

### C195

#### The consequences of changing population access on net use patterns and physical degradation of nets after 22 months of ownership

Zawadi, Mageni

### C196

#### The impact of mass drug administration on submicroscopic malaria infection on island in Lake

## Victoria Kenya

Wataru, Kagaya

### C197

#### The MIRaGe project: Malaria Infectious Reservoir and Genomics in search of elusive malaria parasites in the dry season

Antoine, Claessens

### C198

#### Use of IgG antibody response to Anopheles gSG6-P1 salivary peptide as potential biomarker of malaria infection risk in infants from endemic area in Tori Bossito Benin

GBAGUIDI, Erasme

### C199

#### Whole genome sequencing to determine complexity of infection of Plasmodium falciparum infecting mosquitoes and symptomatic patients from Ghana

Cristina, Ariani

### C200

#### Efficacy of Sumishield® 50 WG against resistant Anopheles gambiae in an experimental hut trial in Côte d'Ivoire

Constant Edi

### C201

#### Key LLIN parameters provide little support of WHO LLIN performance recommendations

Rune Bosselmann

## Symposium Session

### S45

#### Pharmacoenhancers In Malaria Chemotherapy

**PC room: 10:30 -12:45**

**Chairs:** Dr Warren Andrew Andayi

**Speaker 1:** Warren A. Andayi, Dr, muranga university of technology, 74 muranga

**Speaker 2:**

**Speaker 3:**

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** To initiate new research ideas to enable incorporation of pharmacoenhancers in malaria chemotherapy.

### S46

#### From innovation to scale-up: Unitaids model to maximize the effectiveness of global health response

**Room 205: 10:30-12:45**

**Chairs:** Roll Back Malaria representative (TBC) and Alexandra Cameron

**Speaker 1:** Alexandra Cameron, Technical Manager - Malaria, Unitaids, Chemin de Blandonnet 10 BIBC III 8th Floor, 1214 Vernier, Switzerland

**Speaker 2:** David Maguire, Programme Director NgenIRS, IVCC, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA

**Speaker 3:** Professor Emmanuel Oladipo Otolorin, TIPTOP Senior Programmatic and Technical Advisor, Jhpiego Nigeria, Plot 971, Reuben Okoya Crescent, Abuja, Nigeria

**Speaker 4:** Dr. Kolawole Maxwell, West Africa Programmes Director, Malaria Consortium, 2 Buchanan Close, off Buchanan Crescent, off Aminu Kano Crescent, Wuse II, Abuja-FCT, Nigeria

**Speaker 5:**

**Purpose and Objective:** Unitaids maximizes the

effectiveness of the global health response by catalyzing equitable access to better health products. This symposium will share the key elements of Unitaids model that connect upstream innovation with the downstream response, enabling countries to access critical, innovative health products and partners to scale-up Unitaids initiatives. This symposium will provide a platform for cross-country sharing on how partnering with Unitaids can harness innovation, drive access and achieve sustainable scale-up and coverage of malaria interventions. Countries will learn about Unitaids model through specific malaria project examples that demonstrate approaches to overcome persisting barriers and challenges.

### S47

#### Monitoring plasmodium diversity for malaria elimination in Africa: Progress and updates from the Plasmodium diversity network Africa

**Room 201: 10:30-12:45**

**Chairs:** Prof. Abdoulaye Djimde and Milijaona Randrianariveolosia

**Speaker 1:** Prof. Abdoulaye Djimde, Department of Epidemiology and Parasitic Diseases, Faculty of Pharmacy, University of Science, Techniques and Technologies of Bamako, Mali.

**Speaker 2:** Alfred Ambua\_ngwa, Disease Control and Elimination, Medical Research Council Unit The Gambia, The Gambia

**Speaker 3:** Prof. Marielle Bouyou, Department of Parasitology Mycology, Faculty of Medicine, Université des Sciences de La Santé, Gabon

**Speaker 4:** Edwin Kamau, PhD MS (TECH MGT), Major, Medical Service Corps, Associate Director for Science, Chief, Malaria Culture Lab, Malaria Vaccine Branch - Military Malaria Research Program Walter Reed Army Institute of Research, Silver Spring, MD

**Speaker 5:**

**Purpose and Objective:** Unprecedented technological advances in genomics have resulted in generation of terabytes of genetic data. However, there is little translation of such data into knowledge for malaria control, elimination and eradication; and limited

involvement of African researchers. Similarly, there is an urgent need to make the recent development in laboratory sciences utilized for malaria control/elimination in Africa. The Plasmodium diversity African Network (PDNA) is a Pan-African lead network of African researchers from 15 institutions working to build the capacity of African researchers in genomics and bioinformatics for handling big-data which is currently generated through ongoing genomic studies. This symposium will present progress and updates on the activities and programmes which are being implemented by the PDNA.

### S48

#### Evaluating Malaria Programs in Changing Contexts: A review of methodological approaches and how future evaluations can adapt to address challenges

**Room 202: 10:30-12:45**

**Chairs:** Samatha Herrera and Yazoume Ye

**Speaker 1:** Yazoume, Ye, ICF, 530 Gaither Road, Rockville, USA

**Speaker 2:** Uwem Inyang, MD, MPH, MPI/USAID, Abuja, Nigeria

**Speaker 3:** Cisse Moustapha, MD, National Malaria Control Program, Dakar, Senegal

**Speaker 4:** Samantha Herrera, MPH, International Health and Development, Rockville, United States

**Speaker 5:**

**Purpose and Objective:** The epidemiology of malaria has changed substantially in the past decade due to large investments in malaria control. Transmission has declined in many countries, with several moving toward more moderate and low transmission. At the same time, there is an increased need for accountability and documentation of the impact of malaria programs and to take stock of lessons form program evaluations. Within this context of an evolving epidemiology, comes the need to adapt methodological approaches not only to assess the impact of interventions but also to generate data that will inform the targeting of interventions for maximum impact. This symposium focuses on current methodological approaches for evaluating malaria control programs, discusses those approaches' strengths and weaknesses and lessons learned, and reviews evaluation results to date. The keynote presentation will present new ideas

for evaluation approaches to better assess impact in low transmission settings.

### S49

#### Interrupting malaria transmission within and across country borders: Lessons from the Southern Africa Elimination 8 Initiative

**Tente A: 10:30-12:45**

**Chairs:** Professor Rajendra Maharaj and Dr Francisco Saute

**Speaker 1:** Dr Busiku Hamainza, National Malaria Elimination Centre, Chainama Hospital Grounds, Great East Road, Lusaka, Zambia

**Speaker 2:** Mr. Bongani Dlamini, Southern Africa Elimination 8 Initiative, Windhoek, Namibia

**Speaker 3:** Professor Davis Mumbengegwi, University of Namibia, Multidisciplinary Research Council, 340 Mandume Ndemufayo Ave, Pionierspark, Windhoek, Namibia

**Speaker 4:** Dr Francisco Saute, Manhica Health Research Center, Rua 12, Cambeve, Vila de Manhica, Maputo, Mozambique

**Speaker 5:** Dr Natasha Morris, Medical Research Council-South Africa, Office of Malaria Research, 4091, Overport, South Africa

**Purpose and Objective:** To introduce novel approaches for preventing malaria parasite introduction from high endemic settings to receptive elimination settings. - To report regional cross-border initiatives between countries sharing the same border with differing levels of endemicity. - To present the impact of interventions aimed at interrupting local malaria transmission in elimination settings.

### S50

#### Integrating phenotypic and genomic approaches to identify and combat impacts of insecticide resistance

**Tente B: 10:30 -12:45**

**Chairs:** Martin Donnelly and David Weetman

**Speaker 1:** Jackie Cook, Dr, London Sch Hygiene and

Tropical Medicine, Keppel St, London

**Speaker 2:** Catherine Moyes, Dr, University of Oxford,

**Speaker 3:** David Weetman, Dr, LSTM, Pembroke Place  
Liverpool

**Speaker 4:** Charles Wondji, Dr, LSTM/OCEAC, OCEAC,  
Yaounde, Cameroon

**Speaker 5:** Alistair Miles, Mr, University of Oxford, BDI  
Oxford

**Purpose and Objective:** To describe the evidence for the impacts of insecticide resistance on entomological and epidemiological indicators of malaria and how recent developments to integrate phenotypic and genomic methodologies are helping to identify and combat the impacts of insecticide resistance.

## S51

### Seasonal Malaria Chemoprevention, what's next?

**Oval Room: 14:30-16:15**

**Chairs:** Paul Milligan and Andre Tchouatieu

**Speaker 1:** Jean Louis Ndiaye, Efficacy of SMC in children older than 5 years in southern Senegal, UCAD - Senegal, Dakar Senegal

**Speaker 2:** Soulaymani Rachida, (2) Continuous strengthening of pharmacovigilance through SMC programmes: review of safety of SMC and way forward, CAPM Rabat - Morocco,

**Speaker 3:** Fiona Macintyre, (3) Alternative drug regimens for use in SMC, rationale, methodology and evidence generation plan, Medicines for malaria venture, Geneva - Switzerland

**Speaker 4:** David Chandramohan, A TRIAL OF SEASONAL MALARIA CHEMOPREVENTION PLUS AZITHROMYCIN IN AFRICAN CHILDREN, LSHTM - Department of Disease control, London - UK

**Speaker 5:**

**Purpose and Objective:** SMC has proven to be a successful and effective intervention when implemented with close monitoring. It has been widely adopted by eligible countries and is being expanded in its deployment to cover entire eligible areas in these countries. This symposium will focus on the future of this intervention and the potential

extensions that could maximize SMC's potential to prevent malaria morbidity and mortality in children.

## S52

### Controlled Human Malaria Infection Model in sub-Saharan Africa

**Room 205: 14:30 -16:15**

**Chairs:** Kevin Marsh, Benjamin Mordmueller

**Speaker 1:** Kim Lee Sim-Introduction of CHMI with PfSPZ Challenge and stability of PfSPZ Challenge and CHMI in non-immunes

**Speaker 2:** Salim Abdulla - Overview of CHMIs in Africa and CHMI with PfSPZ Challenge in Tanzania and Equatorial Guinea

**Speaker 3:** Akim Adenyika (or Peter Kremsner/Benjamin Mordmueller) - CHMI with PfSPZ Challenge in Gabon plus new plans for mosquito-based CHMI

**Speaker 4:** Melissa Kapulu - CHMI with PfSPZ Challenge in Kenya

**Speaker 5:** Robert Sauerwein (or Umberto) - CHMI with PfSPZ Challenge in the Gambia

**Speaker 6:** Claudia Daubenberger - Importance of PCR in CHMI studies in Africa

## S53

### Technology and Vector Control: How Real-time Data, Mobile tools, and Mapping can Improve Operations and Results

**Room 205: 14:30 -16:15**

**Chairs:** Ashley Thomas

**Speaker 1:** Ashley Thomas, Associate/M&E Team Lead, Abt Associates/The PMI AIRS Project, 4550 Montgomery Avenue, Suite 800N, Bethesda, MD 20814, USA

**Speaker 2:** Sarah Sagan, Project Manager, Dimagi, LLC, 585 Massachusetts Avenue, Suite 4, Cambridge, MA 02139, USA

**Speaker 3:** Chad Blevins, Senior Geospatial Analyst, GeoCenter, US Global Development Lab, USAID, 1100 Wilson Boulevard, Arlington, VA 22209, USA

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** Experts from a vector control implementer, a technology firm, and a mapping initiative will discuss the way that they have developed and used tools to predict and address challenges in vector control implementation in multiple geographic settings. These presentations will focus on the benefits gained from the incorporation of technological innovations, common pitfalls encountered in designing tools for these purposes, and lessons learned through iterative adaptations of these tools in multiple settings. These presentations will facilitate robust discussion around the role that technology can play in in planning, executing, and evaluating vector control campaigns in resource-limited settings.

**S54**

**One Merck for Malaria : The Integrated Malaria Program**

**Tente A: 14:30 -16:15**

**Chairs:** Beatrice Greco and Jutta Reinhard-Rupp

**Speaker 1:** Beatrice Greco, Head of R&D and Access, Merck Global Health Institute of Merck KGaA, Darmstadt, Germany, Route de la Verrerie 6, CH-1267, Coinsins, Switzerland

**Speaker 2:** Samuel Somuyiwa, Business Development Manager, International Sales Africa, Merck, Merck Performance Materials, Frankfurter Str. 250 64293 Darmstadt, Germany

**Speaker 3:** Isaac Quaye, Professor of Biochemistry School of Medicine, University of Namibia (UNAM), Private Bag 13301, Windhoek, Namibia

**Speaker 4:** Wellington A. Oyibo, ANDI Centre of Excellence for Malaria Diagnosis, College of Medicine, University of Lagos, Nigeria, University Road 101017 Akoka, Yaba, Lagos State, Nigéria

**Speaker 5:** Antoinette Tshetu, MD, MPH, PhD Malaria Specialist, Infectious Disease Researcher, Professor of Public Health, Kinshasa School of Public Health, Kinshasa, Democratic Republic of the Congo

**Purpose and Objective:** To create awareness on the Merck's engagement addressing major global health challenges. To provide the private sector perspective and contribution to support control and elimination agendas. To showcase the current efforts in the fight against malaria by

describing the One Merck for Malaria program, led by the Merck Global Health Institute, for new treatments, diagnostics, vector controls and digital health tools. To foster dialogue with key experts in the malaria field. To create the opportunity to advocate for key messages with stakeholders and engaging with local experts for potential public-private collaborations.

**S55**

**Effectiveness and efficiency of reactive focal interventions for malaria elimination: current evidence**

**Tente B: 14:30 -16:15**

**Chairs:** Jackie Cook, BSc, MD, London School of Hygiene and Tropical Medicine, London, United Kingdom

**Speaker 1:** Immo Kleinschmidt, PhD, Windhoek, Namibia

**Speaker 2:** David Bath, London School of Hygiene and Tropical Medicine, London, United Kingdom

**Speaker 3:** Davis Mumbengegwi, Professor, University of Namibia, Windhoek, Namibia

**Speaker 4:** Michelle Hsiang, PhD, UUT Southwestern Medical Centre, Texas, USA

**Speaker 5:** Roly Gosling, PhD, School of Medicine, University of California San Francisco, USA

**Purpose and Objective:** As malaria transmission reduces, heterogeneity of infection often increases within the population, with considerable clustering seen at the household and neighbourhood level. To utilise scarce resources more effectively, malaria control programmes are looking for strategies to better target malaria transmission. Performing reactive targeting of interventions such as mass drug administration (MDA), presumptive treatment, and indoor residual spraying (IRS) is likely to result in cost-savings for governments, whilst simultaneously reducing malaria transmission. However, there is currently little evidence available to assess the effects of targeting in terms of transmission reduction and costs. This symposium summarises the available evidence of the impact and cost-effectiveness of targeted interventions. The results will synthesise the evidence base to help to guide malaria control and elimination programmes in optimising resources, whilst ensuring that malaria is reduced effectively.

## S56

### Introduction to the Malaria Vaccine Implementation Programme (MVIP): Pilot Implementation and Evaluation of the RTS,S/AS01 Malaria Vaccine in Children in Ghana, Kenya, and Malawi

**Auditorium: 16:45-18:30**

**Chairs:** Mary J Hamel, M.D. and Jackson Sillah, M.D.

**Speaker 1:** Richard Mihigo, M.D., Medical Officer, Program Area Manager, Immunization and Vaccine Development, WHO, Regional Office for AFRO, Family and Reproductive Health Unit, Cite du Djoue, P.O.Box 06, Brazzaville, Congo

**Speaker 2:** Patricia Njuguna, M.D., Medical Officer, MVIP, Global Malaria Programme, WHO, Avenue Appia, 20, Geneva, Switzerland

**Speaker 3:** Scott Gordon, PhD, Director, Malaria Vaccine Implementation Programme, PATH, PATH, 2201 Westlake Ave, Seattle, WA 98121, USA

**Speaker 4:** Nicolas Praet, DVM, PhD, Senior Epidemiology Lead, Malaria, GSK biologicals, Avenue Fleming 20 1300 Wavre, Belgium

**Speaker 5:**

**Purpose and Objective:** The RTS,S/AS01 Malaria Vaccine has been shown to significantly reduce malaria, including severe malaria, when provided to children in a 4-dose schedule with the first dose administered at 5-17 months of age. The World Health Organization has recommended pilot implementation of the vaccine to measure the feasibility of delivering the 4-dose vaccine regimen, safety of the vaccine in the context of routine use, and vaccine impact. We will describe the major components of the Malaria Vaccine Implementation Programme (MVIP), present the methodologies planned to evaluate the pilot implementation of the RTS,S/AS01 vaccine, and describe the timeline for the MVIP and policy decision.

## S57

### Sanofi's Social and Behavior Change Communication (SBCC) initiatives and tools: Promoting & assessing a behavior change approaches for the fight against malaria

**Pc Room: 16:45-18:30**

**Chairs:** Rose Leke, Professor of Immunology and Parasitology - Cameroon

**Speaker 1:** Jean Louis Ndiaye – Professor in University of Thies - Senegal

**Speaker 2:** Wilfred Mbacham, Professor in The biotechnology Centre, The University of Yaoundé I & Malaria Consortium - Cameroon Coalition Against Malaria, Yaoundé, Cameroon

**Speaker 3:** Esther Tallah, Director of Malaria Consortium-Cameroon Coalition Against Malaria, Yaoundé, Cameroon

**Speaker 4:** Claude Moncorgé, Director of OPALS – France & Abdou Gafarou Gbadamassi, Doctor OPALS - Togo

**Speaker 5:** The Moski Toon a new malaria awareness tool for children surveyed by IPSOS : speaker to be confirmed

**Purpose and Objective:** In order to promote malaria prevention behaviors through schools, Sanofi and its partners have, for over a decade, designed and provided teachers and children with a variety of different information tools on malaria. This symposium aim to share the data and experiences of these malaria awareness programs and tools developed in partnership with sub-Saharan African stakeholders.

## S58

### Leaving no-one behind: achieving universal access to malaria interventions

**Tente A: 16:45-18:30**

**Chairs:** Dr Matshidiso Moeti and Erin Shutes

**Speaker 1:** Pedro Alonso is the Director of the World Health Organization's Global Malaria Programme.

**Speaker 2:** Andrea Bosman is the Coordinator of the Diagnostics, Treatment and Vaccines unit within the WHO Global Malaria Programme.

**Speaker 3:** Richard Cibulskis is coordinator of the Strategy, Evidence and Economics team in the Global Malaria Programme, WHO.

**Speaker 4:** Jackson SILLAH, Team leader at the WHO Regional Office for Africa.

**Speaker 5:**

**Purpose and Objective:** To present evidence on the

link between malaria programme coverage gaps and mortality in children under 5 years of age in Africa and the populations most affected by coverage gaps. Participants will also be informed of the most important bottlenecks in the delivery of programmes, promising strategies to overcome them and World Health Organization's (WHO's) call for action to alleviate coverage gaps.

## S59

### Drivers and diversity of residual malaria transmission: implications for national malaria programs

**Tente B: 16:45-18:30**

**Chairs:** Allison Tatarsky and Dr Florence Fouque

**Speaker 1:** Dr Florence Fouque, The Special Programme for Research and Training in Tropical Diseases (TDR), World Health Organization, Switzerland.

**Speaker 2:** Ms April Monroe, Johns Hopkins Center for Communication Programs, Baltimore, USA. Ms Monroe

**Speaker 3:** Dr Samuel Dadzie, Noguchi Memorial Institute for Medical Research, University of Ghana, Legon, Ghana.

**Speaker 4:** Dr Jeffrey Hii, Malaria Consortium, Asia Regional Office, Mahidol University, Thailand.

**Speaker 5:** Dr Nakul Chitnis, Department of Epidemiology and Public Health, Swiss Tropical and Public Health Institute, Basel, Switzerland.

**Purpose and Objective:** To understand and share learning on how vector and human behaviour contribute to residual transmission in malaria endemic settings. The session aims to provide socio-eco-biological evidence for decision-making and strengthening malaria elimination strategies across sub-Saharan Africa and the Greater Mekong Subregion (GMS).

## Oral Session

### Vaccine trials in sub-Saharan Africa (Presentation 233-240)

**Auditorium: 14:30-16:15**

**Chair:** Prof Kwadwo Koram

**Co chair:** Dr Alfred Tiono

### Placental Malaria Vaccine: preliminary results of the PRIMALVAC phase Ia/b clinical trial

**By:** Benoit Gamain

**Co-Author(s):**

### Safety and Immunogenicity of the malaria vaccine candidate BK-SE36 in young children living in Burkina Faso

**By:** Issa N Ouedraogo

**Co-Author(s):** Nirianne Palacpac, Odile Leroy, B Alfred Tiono, C Edith Bougouma, Toshi Horii, A Sam Coulibaly, Sophie Houard

### Long-term efficacy and safety of RTS,S/AS01 against malaria in infants and children living in Africa: an open 3-year extension of a phase III randomized study

**By:** Walter Otieno

**Co-Author(s):** Marc Gillet, Halidou Tinto, John Lusingu, Marc Lievens, Yolanda Guerra Mendoza, Lode Schuerman

### Antibody responses to RTS,S/AS01E vaccination in children within the phase 3 trial in relation to age, baseline malaria transmission intensity and malaria protection

**By:** Itziar Ubillos

**Co-Author(s):** Hector Sanz, Simon Kariuki, Marta Vidal, Sheetij Dutta, Claudia Daubenberger, Clarissa Valim, Alfons Jimenez, Ben Gyan, Selidji Agnandji, John Aponte, JOHN WAITUMBI, Carlota Dobano, Seth Owusu-Agyei, Aintzane Ayestaran, Joseph Campo, Maximilliam Mpina, Chenjerai Jairoce, Nana Aba Williams, Gemma Moncunill, Ruth Aguilar, Nuria Diez Padrisa

### Antibodies to baculovirus-derived Plasmodium falciparum merozoite surface protein correlate with protection against clinical malaria in Senegalese mesoendemic setting

**By:** Ronald Perraut

**Co-Author(s):**



### Safety and tolerability of a metabolically active non-replicating whole organism malaria vaccine in malaria-experienced adults in Burkina Faso

By: Matthew Laurens

**Co-Author(s):** Peter Billingsley, Stephen Hoffman, Thomas Richie, B Alfred Tiono, B Kim Lee Sim, Issa N Ouedraogo, Kirsten Lyke, Christopher Plowe, C Edith Bougouma, Eric James, Anita Manoj, Alphonse Ouedraogo, Jean Moise Kabore, Yonas Abebe, Sodiomon B. Sirima

### A Phase Ib randomized controlled trial to assess the safety and immunogenicity of GMZ2, a blood stage malaria vaccine candidate, formulated with CAF01 or Aluminium hydroxide

By: Jean-Claude Dejon Agobe

**Co-Author(s):** Selidji Agnandji, ayola adegnika, Benjamin Mordmuller, Bertrand Lell, Peter Kremsner, Ulysse Ateba Ngoa, Jean-Ronald EDOA

### Safety and immunogenicity of the Malaria Vaccine Candidate R21 adjuvanted with Matrix-M1 in West African adult volunteers, Burkina Faso

By: B Alfred Tiono

**Co-Author(s):**

### Chemoprevention (Presentation 249-256)

**Oval room: 16:45-18:30**

**Chair:** Dr Paul Milligan

**Co chair:** Pr Ibrahima Seck

### Baseline molecular data before scaling-up access to seasonal malaria chemoprevention in seven countries across the Sahel

By: Khalid Beshir

**Co-Author(s):**

### Real-time monitoring of SMC delivery in Northern Nigeria

By: Musa Kana

**Co-Author(s):** Sham Lal, Matthew Cairns, Akanmu Idowu,

Paul Snell, Ibrahim Maikore, Maxwell Kolawole, Harriet Kivumbi, Paul Milligan, Susana Scott, Diego Moroso, Godwin Ntadom, Mohammed Olaniyi, Aranxa Roca, Olusola Oresanya

### Monitoring the protective efficacy of seasonal malaria chemoprevention using case-control studies: methodology and results from 5 countries

By: Matthew Cairns

**Co-Author(s):**

### Lessons Learned from Sierra Leone s Intermittent Preventative Treatment for Infants (IPTi) Pilot Program in Kambia District

By: Maria Lahuerta

**Co-Author(s):** Miriam Rabkin, Laura Steinhardt, Brigette Gleason, Getachew Kassa, Michael Friedman, Roberta Sutton, Samuel Juana Smith, Michael John, Kristen Burnell, Mohamed Jalloh

### LARGE SCALE INTRODUCTION OF SEASONAL MALARIA CHEMOPREVENTION CAMPAIGN IN THE FAR NORTH AND NORTH REGIONS OF CAMEROON IN 2016

By: Randolph Ngwafor

**Co-Author(s):** Dorothy Achu

### Increasing Administrative Coverage and Effectiveness of Seasonal Malaria Chemoprevention (SMC) in Mali (2015-17)

By: Eric HUBBAERD

**Co-Author(s):** Patrice Coulibaly, Chrestien Yameni, Suzanne Van Hulle, Momar Mbodji, Lantorina Razafindralambo, J230Rose Monteil+J210

### In vivo prophylactic and curative efficacy of crude extracts of Nauclea latifolia on Plasmodium berghei infected swiss albino mice

By: KEHINDE AJAYI

**Co-Author(s):** FUMILOLA OMOYA

### Impact of micronutrient supplementation combined with seasonal malaria chemoprevention

### on anemia, malaria and cognitive development: a cluster-randomized study in Malian children

By: Sian Clarke

**Co-Author(s):** Natalie Roschnik, Hans Verhoef, Michael Boivin, Yvonne Griffiths, Yahia Dicko, Niele Hawa Diarra, Moussa Sacko, Renion Saye, Rebecca Jones

### Late beakers 2 (Presentation 345-352)

**ROOM 201: 14:30-16:15**

**Chair:** Prof Alioune Dieye

**Co chair:** Dr Faith Osier

### The cost-efficacy of screening outdoor kitchens in southern Zambia: a semi-field trial

By: Jennifer Stevenson

**Co-Author(s):** Limonty Simubali, Twig Mudenda, Amber Johnson, Neil Lobo

### Assessing the performance of KwaZulu-Natal, South Africa towards malaria elimination and its readiness for sub-national verification

By: Siphon Msimang

**Co-Author(s):**

### Unravelling the immune signature of Plasmodium falciparum transmission reducing immunity

By: William Stone

**Co-Author(s):**

### New Perspectives for Anti-Malaria vaccines: A Mini review

By: Vincent P.K. Titanji

**Co-Author(s):**

### Partnership for Increasing the Impact of Vector Control

By: Hilary Ranson

**Co-Author(s):**

### Dry season prevalence of subclinical malaria identified by ultrasensitive PCR in Myanmar and bordering areas of china and Bangladesh

By: Myaing Nyunt

**Co-Author(s):** Kay Han, Tim Hlaing, Fang Huang, Wasif Khan, Poe Aung, Zaw Thein, Si Thura, Win Oo, Hnin Khin, Myo Min, Matthew Adams, Kayvan Zainabadi, Christopher Plowe

### The silent reservoir of P. falciparum during the dry season

By: Silvia Portugal

**Co-Author(s):**

### Detection of malaria parasite infected mosquitoes using near infra-red spectroscopy

By: Pedro M EsperanÇa

**Co-Author(s):**

### Epidemiology 3 (Presentation 265-272)

**ROOM 201: 16:45-18:30**

**Chair:** Prof Jean-Pierre Van geertruyden

**Co chair:** Patrick Walker

### Achieving depth and breadth in spatial models of vector-borne diseases: An integrated framework for active survey and passive surveillance data

By: Luca Nelli

**Co-Author(s):**

### Use Of the Immuno-Epidemiological Biomarker Of Human Exposure To Anopheles Bites In The Monitoring of Malaria Transmission In (Pre) Elimination Areas

By: Huja Jah

**Co-Author(s):**

### Sub-optimal dosing of artemisinin-based combination therapy

By: Kasia Stepniewska

**Co-Author(s):** Philippe J Guerin, Abena Takyi

**Prevalence and associated risk factors of malaria in the first trimester of pregnancy: a pre-conceptional cohort study in Benin**

**By:** MANFRED ACCROMBESSI

**Co-Author(s):**

**Effectiveness of a long-lasting PBO treated insecticidal net and indoor residual spray interventions against malaria infection in area of high pyrethroid resistance in North West Tanzania: Three-year results of a community randomized controlled trial**

**By:** Natacha Protopopoff

**Co-Author(s):**

**A modelling framework to estimate the impact of interventions on mosquito fitness from standard entomological surveillance data**

**By:** Mafalda Viana

**Co-Author(s):**

**Pattern of all-causes and cause-specific mortality in an area with progressively declining malaria in Korogwe district, north-eastern Tanzania**

**By:** Daniel Challe

**Co-Author(s):** Mercy Chiduo, Celine Mandara, Omari Abdul, Mathias Kamugisha, Bruno Mmbando, Deus Ishengoma, Samwel Gesase, Filbert Francis, Martha Lemnge

**Integrated vector management 3 (Presentation 241-248)**

**ROOM 202: 14:30-16:15**

**Chair:** Abdoulaye Diabate

**Co chair:** Temitope Ojo

**Socio-demographic factors associated with Insecticide Treated Net use among under-five children in Nigeria**

**By:** Temitope Ojo

**Co-Author(s):** Adewumi Joseph, Toosin Orhorhamreru, Chinenye Afonne

**A Pre-Intervention Survey of the Perception of Mosquito Density in a Nigerian Teaching Hospital**

**By:** Ijeoma Ogbuehi

**Co-Author(s):** Hamilton Opurum, Amarachi Eke, Omotayo Ebong, Iyeopu Siminialayi, Chijioke Nwauche

**Optimization of mass-rearing methods for Anopheles arabiensis for sterile insect technique application**

**By:** Wadaka MAMAI

**Co-Author(s):**

**Malaria infection and clinical episodes in an area with pyretroid-resistant vectors in southern-west Burkina Faso**

**By:** Anthony Some

**Co-Author(s):** Issaka Zongo, Cedric Pennetier, Amal Dahounto, Serge Assi, Kounbobr Roch Dabire, Nicolas Moiroux

**Impact of sunlight exposure and larval instars on the residual efficacy of bio-larvicide Bacillus thuringiensis israelensis**

**By:** Barnabas ZOGO

**Co-Author(s):** Nicolas Moiroux, Ludovic ALOU, Cedric Pennetier, N'cho Bertin TCHIEKOU, Alphonsine Koffi, Amal Dahounto

**Ecology of reproduction of An. arabiensis in an urban area of Bobo-Dioulasso, Burkina Faso (West Africa): Monthly swarming and mating frequency and their relation to environmental factors**

**By:** Nanwintoum Severin Bimbile Somda

**Co-Author(s):** Hamidou Maiga, Antoine Sanon, Jeremy Bouyer, Florence Fournet, Jeremie Gilles, Serge Poda, Olivier Gnankine, Abdoulaye Diabate, Kounbobr Roch Dabire, Susan Rosemary Lees, Peguidwinde Simon Sawadogo

**Biological activity and mode of action of four aromatic plants extracts against *Anopheles gambiae* s.l. in Burkina Faso**

**By:** Dimitri W. Wangrawa

**Co-Author(s):** Wamdaogo M. Guelbeogo, Antoine Sanon, Athanase Badolo, Roger Nebie, Martin Kiendrebeogo, N'Fale Sagnon

**Treating cattle using new customized long lasting formulations of IVM: a promising approach to target residual transmission of malaria in rural Burkina Faso**

**By:** Karine Mouline

**Co-Author(s):**

**Vector biology 4 (Presentation 273-280)**

**ROOM 202: 16:45-18:30**

**Chair:** Prof Roch K. Dabiré

**Co chair:** Dr Ibrahima Dia

**Accelerating malaria elimination efforts in the Sudano-Sahelian region of Africa: elucidation of factors driving transmission and unravelling the molecular basis of insecticide resistance in the major malaria vectors**

**By:** Sulaiman Ibrahim

**Co-Author(s):**

**The effect of different typologies of rural houses on mosquito-house entry and indoor climate: an experimental study in rural Gambia**

**By:** Steven Lindsay

**Co-Author(s):**

**Evidence of multiple mechanisms providing carbamate and organophosphate resistance in field *An. gambiae* population from Atacora in Benin**

**By:** Yves Rock A. AIKPON

**Co-Author(s):**

**Entomological risk assessment of malaria transmission during the winter in Antananarivo and its surroundings, Central Highlands of Madagascar**

**By:** Fara Nantenaina Raharimalala

**Co-Author(s):** Thiery Nirina Nepomichene, Fano Jose Randrianambintsoa, Michael Luciano Tantely, Sebastien Boyer, Romain Girod, Sanjarizaha RANDRIAMAHERIJAON

**Dynamics of insecticide resistance in field population of *Anopheles arabiensis* in Dielmo, a Senegalese village under universal coverage of insecticide-treated nets**

**By:** Omar Thiaw

**Co-Author(s):** Charles Bouganali, Souleymane Doucoure, nafissatou Diagne, Ousmane Faye, Cheikh SOKHNA, Seynabou Sougoufara, Lassana Konate

**Divergences in blood-feeding, resting and breeding behaviors in *Anopheles gambiae* in variously urbanized settings in Cote d Ivoire**

**By:** Yves Rock A. AIKPON

**Co-Author(s):**

***An. gambiae* s.l susceptibility to insecticides and pattern of Kdr mutation in Ndiop, Senegal, a village under bed-nets coverage**

**By:** Souleymane Doucouré

**Co-Author(s):** Souhoufi Ali, Charles Bouganali, Cheikh SOKHNA, Fatou Kine Fall, Omar Thiaw

**Assessing male *Anopheles gambiae*, *Anopheles coluzzii* and their reciprocal hybrids swarming behaviour in contained semi-field**

**By:** NIGNAN Charles

**Co-Author(s):** Olivier Gnankine, Abdulaye Diabate, Kounbobr Roch Dabire, Hamidou Maiga, Abdoulaye Niang, Simon P. SAWADOGO

**Pathogenesis and severe malaria 2 (Presentation 257-264)**

**ROOM 205: 16:45-18:30**

**Chair:** Prof Kevin Marsh

**Co chair:** Samuel B. Anyona

**Magnetic resonance imaging of cerebral malaria patients reveals distinct pathogenetic processes in different parts of the brain**

**By:** Sam Wassmer

**Co-Author(s):**

**Is chronic malnutrition associated with an increase in malaria incidence? A cohort study in children aged under 5 years in the Upper River Region, the Gambia**

**By:** Anne Wilson

**Co-Author(s):** Margaret Pinder, John Bradley, Steven Lindsay, Kolawole Salami, Umberto Dalessandro

**The Effect of Malaria/HIV/TB Triple Infection on Malaria Parasitaemia among patients attending the Limbe Regional Hospital**

**By:** Mbi epse Ojong Alice Enekegbe

**Co-Author(s):** Emmanuel N Tufon, Samje Moses, Che Amadine Lem

**Polymorphisms in the Cyclo-oxygenase-2 Gene Protect against Repeated Episodes of Malaria in Children Resident in Plasmodium falciparum Endemic Region of western Kenya**

**By:** Samuel B. Anyona

**Co-Author(s):** Douglas J. Perkins, Benjamin J. McMahon, Christophe G. Lambert, Nicholas W. Hengartner, Collins Ouma, Prakasha Kempaiah, Evans Raballah

**PfEMP1 proteins that can bind non-immune IgM are common among Plasmodium falciparum parasites**

**By:** Maria del Pilar Quintana

**Co-Author(s):** Mary Lopez-Perez, Lars Hviid

**Impact of Noncommunicable Diseases on Severity of Plasmodium falciparum Malaria**

**By:** Katja Wyss

**Co-Author(s):** Andreas Wengdahl, Pontus Naucner, Mikael Ryden, Anna Farnert, Ulf Hammar, Jun-Hong Cheng, Mats Wahlgren, Kirsten Moll

**Dynamics of the clinical epidemiology of severe malaria in Mali**

**By:** Abdoulaye Kassoum Kone

**Co-Author(s):** Mody Sissoko, Aichata Diawara, Mark Travassos, Ali Thera, Andrea A. Berry, Bourama Tangara, Kirsten Lyke, Christopher Plowe, Boureima Guindo, Drissa Coulibaly, Ando B. Guindo, Philip L. Felgner, Karim Traore, Mahamadou Ali Thera, Matthew Laurens, Bourama Kane, Ogobara K Doumbo, Ramata Demebele

**Clinical risk factors for mortality in Ugandan children with severe malaria**

**By:** Ruth Namazzi

**Co-Author(s):**

## Poster Session

### D002

**Adult reference intervals for hematological and biochemical parameters at different malaria vaccine testing sites in Mali**

M'Bouyé, Doucouré

### D003

**Antibodies elicited during natural infection in a predominantly Plasmodium falciparum transmission area cross-react with sexual stage-specific antigen in P vivax**

Arthur, Vengesai

### D004

**Antibody Response to Malaria Vaccine Candidate Antigens in Cameroonian Children Coinfected with Malaria and Intestinal Parasites**

Ndiabamoh, Crespo'o Mbe-cho

### D005

Antibody responses to P falciparum blood stage antigens and incidence of clinical malaria in children living in endemic area of Burkina Faso

Oumarou, Ouédraogo

### D006

Bacterial superglue generates a full length circumsporozoite protein virus like particle vaccine capable of inducing high and durable antibody responses

Sungwa, Matondo

### D007

Baseline and Phase IV prospective cohort observational studies to assess safety and effectiveness of the RTSS/AS01 malaria vaccine in real life setting

Jean-Yves, Piréon

### D008

Challenges Encountered by Involving Children in a Malaria Vaccine Trial

Antonio Enrique, NGUA ROCA

### D009

Dominance of sialic acid independent invasion pathways in Plasmodium falciparum isolates from The Gambia

Fatoumata, bojang

### D010

Dynamics of malaria transmission intensity in countries in sub-Saharan Africa: an observational cross-sectional study

Nicolas, Praet

### D011

EFFECT OF CHANGES IN NEUTROPHILS AND MONOCYTES COUNTS ON PREPATENT PERIOD AND PfcSP ANTIBODY TITER FOLLOWING A CONTROLLED HUMAN MALARIA INFECTION OF YOUNG ADULT EQUATOGUINEANS

Maximilliam, Mpina

### D012

Enhanced Humoral Responses Induced against malaria asexual blood stage immunogens in mice after Complementary DNA primed-recombinant hybrid Q? phage boost

Abel, LISSOM

### D013

Exceptional tolerability of chloroquine when administered as chemoprophylaxis with aseptic live cryopreserved non-attenuated whole Plasmodium falciparum sporozoites (PfSPZ-CVac) in healthy Equatoguinean young adults

vicente, Urbano

### D014

FC?RIIA POLYMORPHISM AND ANTI-MALARIA SPECIFIC IgG AND IgG SUBCLASSES IN FULANI AND MOSSI POPULATIONS WITH DIFFERENT SUSCEPTIBILITY TO MALARIA IN BURKINA FASO

CHERIF Mariama, Kaba

### D015

Feasibility of direct venous inoculation of the radiation-attenuated Plasmodium falciparum whole sporozoite vaccine in children and infants in Siaya western Kenya

Laura, Steinhardt

### D016

Genetic Diversity and Antibody response to a Malaria vaccine candidate (EBA-175) in children in Ngali and Mfou in Cameroon

Azua Ekokobe, Wilfred

### D017

Immune response to the hepatitis B antigen in the RTSS/AS01 malaria vaccine and co-administration with pneumococcal conjugate and rotavirus vaccines in African children: a randomized controlled trial

Innocent, Valéa

### D018

Immunogenicity of SERA5 in children immunized with candidate vaccine BK-SE 36 in malaria endemic area of Burkina Faso

Nebie Issa, Ouedraogo

### D019

Impact of exposure to mosquito transmission-blocking antibodies on Plasmodium falciparum population genetic structure

Maurice Marcel, SANDEU

### D020

IMPORTANCE OF ANTI-MSP119 ANTIBODY (IgG) RESPONSE AGAINST MALARIA INFECTION IN PREGNANCY

Olusegun Matthew, Akanbi

### D021

Isolation and functional characterization of monoclonal antibodies from memory B cells of

malaria semi-immune Kenyan adults

Linda, Murungi

### D022

Malaria Transmission Blocking Vaccine: Human plasma from Pfs25-EPA/Alhydrogel formulation effectively blocks wild strains of P falciparum transmission in Burkina Faso

Dari Yannic Frédéric, Da

### D023

Pre-erythrocytic malaria vaccines as seasonal intervention tools: a model based assessment

Flavia, Camponovo

### D024

Role of a Tryptophan rich protein in Plasmodium liver stage development and its vaccine potential

DABBU, JAIJYAN

### D025

Safety and Efficacy of Radiation Attenuated Plasmodium falciparum Sporozoite (PfSPZ) Vaccine Administered by Direct Venous Inoculation to Healthy Infants 5 to 12 Months of Age in Western Kenya

Martina, Oneko

### D026

Safety and immunogenicity of 7 vaccination schedules of RTSS/AS01 candidate malaria vaccine in infants: a phase II open randomized controlled trial

Desiree, Witte

### D028

Safety Tolerability and Immunogenicity of PfSPZ Vaccine in Equatoguinean Children and Older Adults

vicente, Urbano

### D029

Safety tolerability immunogenicity and efficacy against Plasmodium falciparum (Pf) malaria in Malian adults of immunization with infectious cryopreserved Pf sporozoites administered under chloroquine chemoprophylaxis (PfSPZ-CVac)

Matthew, Laurens

### D030

The creation of an effective vaccine against Plasmodium falciparum malaria by genetic attenuation

Ashley, Vaughan

### D031

The modelled predicted cost-effectiveness of the RTSS/AS01E malaria vaccine on the childhood population of Malawi

Latif, Ndeketa

### D032

The role of ophan-genes in host parasite adaptation and identification of B-cell epitopes involved in naturally acquired immunity to malaria

Nyasa Raymond, Babila

### D033

Transmission-blocking and pre-erythrocytic vaccine antibodies demonstrate anti-malarial synergy

Ellie, Sherrard-Smith

### D034

Accounting for dynamics in population accessibility to health facilities to better estimate seasonal malaria chemo-prevention effectiveness: A modeling study

Andre Lin, Ouedraogo

### D035

Adherence to intermittent preventive treatment for malaria in Papua New Guinean infants (IPTi): a pharmacological study alongside a randomized controlled trial

Nicolas, Senn

### D036

Connaissances attitudes et pratiques des mères ou gardiennes d'enfants âgés de 3 à 120 mois sur la chimio prévention du paludisme saisonnier dans le district sanitaire de Bounkiling (Sénégal) en 2015

Sylvie, diop

### D037

Estimating malaria transmission from human to mosquito in seasonal malaria chemoprevention in the west region of Burkina Faso

R. Serge, Yerbanga

### D038

Evaluation of the impact of Seasonal Malaria Prevention Chemo on malaria morbidity in children aged 3 to 59 months Burkina Faso 2014-2015

Dieudonné, SOMA

### D039

Malaria chemoprevention is associated with lower levels of exhausted T cells in area of high seasonal



malaria transmission in Mali

Oumar, Attaher

**D040**

Perception des mères et gardiennes d enfants de la région de Sédhiou sur la Chimio-prévention saisonniere du paludisme en 2017 : Les absences et maladies des enfants ne sont elles pas des cas de refus déguisés ?

Amadou Yéri, Camara

**D041**

Stratégie de Collecte automatique des données CPS au Cameroun en 2017

Serge Marcial, Bataliack

**D042**

Traitement préventif intermittent du paludisme à la sulfadoxine-pyriméthamine : taux de couverture chez les femmes enceintes à l'Hôpital Mère et Enfant Nouakchott Mauritanie

Mohamed Salem, Ould Ahmedou Salem

**D043**

ACQUIRED Plasmodium falciparum-SPECIFIC ANTIBODY RESPONSES AS A CORRELATE OF EFFICACY AND RESISTANCE TO ARTEMISININ-BASED COMBINATION THERAPY (ACT) IN TREATMENT OF UNCOMPLICATED MALARIA IN KOMBEWA WESTERN KENYA

OYUGI, GEOFFREY

**D044**

AL efficacy in gabon

BAYODE ROMEO, ADEGBITE

**D045**

Antimalarial activity of Malaria Box Compounds against Plasmodium falciparum clinical isolates

Jersley, Chirawurah

**D046**

Antimalarial Potential of the Crude Extract and Fractions of Phyllanthus amarus in Plasmodium berghei-infected mice

Uchenna, Alozieuwa

**D047**

ARTESIANE\* supposé (Dafra Pharma) une voie prometteuse dans le traitement du paludisme grave à Plasmodium falciparum chez les enfants de 6-59 mois dans les zones à faibles ressources

TCHOMBOU HIGZOUNET, Bertin

**D048**

Artesunate plus Sulfadoxine-Pyrimethamine retain high efficacy against P falciparum and P vivax in the New Halfa and Khartoum North Sudan

Muzamil Mahdi Abdel, Hamid

**D049**

Assessment of efficacy of artesunate amodiaquine in District of Ifanadiana Madagascar

Oméga, RAOBELA

**D050**

Association between hemogram parameters and parasite clearance in uncomplicated P Falciparum malaria treated with artemisinin-based combinations

Frederic, Nikiema

### D051

Biopharmaceutical Evaluation of Three brands of Artemether Lumefantrine Tablets with different Fixed Dose- Size combination Ratio in Healthy Nigerian Volunteerse

Olubukola, Odeniran

### D052

Comparison of antimalarial drug efficacy in Africa using network meta-analysis

Solange Youdom, Whegang

### D053

Effect of Artemether-Lumefantrine on Haematological and Some Lipid Profile Parameters of Mice Infected with Plasmodium berghei

Afolabi, Owoloye

### D054

Effect of proper treatment of malaria on incidence of anaemia in children residing in rural Muea Cameroon

Samje, Moses

### D055

EFFECT OF REPEATED ARTEMISININ BASE TREATMENT ON MALARIA SEXUAL PARASITE DISTRIBUTION IN A POPULATION LIVING IN A MALARIA ENDEMIC AREA OF BURKINA FASO (WEST AFRICA)

Amidou, Diarra

### D056

Efficacité et tolérance de COARSUCAM\* (Sanofi-Aventis) dans le traitement du paludisme simple à Plasmodium falciparum des enfants de 6-59 mois

dans une zone de forte transmission du paludisme (Koyom Tchad)

TCHOMBOU HIGZOUNET, Bertin

### D057

Efficacy and safety of artemether lumefantrine for the treatment of uncomplicated falciparum malaria at sentinel sites in Mozambique 2015

Crizolgo, Salvador

### D058

Efficacy and safety of artesunate-amodiaquine for the treatment of uncomplicated Plasmodium falciparum malaria and profile of molecular markers for drug resistance in Bujumbura North district Burundi

NDAYIKUNDA, CLAUDETTE

### D059

Efficacy of Clindamycin plus quinine compared to artemether-lumefantrine in the treatment of children with uncomplicated falciparum malaria in western Kenya: an open-label randomized trial

Charles, Obonyo

### D060

ETUDE DE LA STABILITE DU COTRIMOXAZOLE 240mg/5mL SUSPENSION PRESENT DANS LE CIRCUIT FORMEL ET INFORMEL

Regis Severin, TANGA TANGA

### D061

Evaluation of microscopy parasite clearance time after treatment of uncomplicated malaria with Artemisinin-based Combinations Therapies (ACTs) in Mali

Amadou, BAMADIO

## D062

Genetic diversity of *Plasmodium falciparum* based on msp-1 block2 gene polymorphism analysis in isolates from Tsaratanana commune Ifanadina district southeast of Madagascar

Fanomezantsoa, Ralinoro

## D063

In vivo monitoring study of the sensitivity of *Plasmodium falciparum* to artemether-lumefantrine in Mali

Drissa, Coulibaly

## D064

Parasite clearance dynamics after uncomplicated malaria treatment by artesunate monotherapy in two transmission seasons in Mali

Sekou, Sissoko

## D065

Persistence of ring stage parasites after artemisinin and non-artemisinin combination treatment

Almahamoudou, Mahamar

## D066

*Plasmodium falciparum* Gametocyte Carriage before and after treatment with Artemisinin-based Combination Therapies

RAPHAEL, OKOTH

## D067

*Plasmodium* spp and streptococcus pyogenes search in asymptomatic pupils from two public primaries schools at yaoundé cameroon

Nya Paho Johann, Myrna

## D068

Population genetics analysis of *Plasmodium falciparum* in Madagascar

Stéphane, Rabearimanana

## D069

PYRONARIDINE ARTESUNATE DIHYDROARTEMISININ-PIPERAQUINE ARTESUNATE-AMODIAQUINE AND ARTEMETHER-LUMEFANTRINE EFFICACY ON MALARIA TREATMENT IN MALI

DEMBA, DEMBELE

## D070

Qualité des médicaments antipaludiques et caractéristiques des pharmacies en territoires périurbains de Kinshasa

Don Jethro, Mavungu

## D071

Safety and efficacy of a single low dose of primaquine combined with dihydroartemisinin-piperazine in malaria-infected asymptomatic individuals

Edgard, Dabira

## D072

Synthesis chemical and biological validation of artemisinin-based probes for artemisinin's derivatives antiparasitic mechanism of action study in *Plasmodium falciparum*

Abdoulaye, SISSOKO

## D073

*Zingiber officinale* Roscoe and *Echinops Kebericho* Mesfin showed antiplasmodial activities against

**Plasmodium berghei in a dose-dependent manner in Ethiopia**

Abdissa, Biruksew Hordofa

**D074**

**A novel field multiplex PCR tool to detect Plasmodium falciparum K13 mutations conferring artemisinin resistance**

Laurence, Ganee

**D075**

**A temporal analysis of P falciparum k13 ap2-mu and falcipain-2a gene diversity in Kilifi Kenya**

Kevin, Wamae

**D076**

**Access to Artemisinin-Combination Therapy and other Anti-Malarials: National Policy and private sector in Kinshasa Democratic Republic of Congo**

Mandoko, nkoli

**D077**

**Analysis of antimalarial resistance markers from dried blood spot samples obtained from children recruited into a drug efficacy trial in Kenya**

Isabella, Oyier

**D078**

**Artemisinin Iron Deficiency and Malaria**

Fatou, Joof

**D079**

**Assessment of Plasmodium falciparum-resistant genes to artemisinin and chloroquine in patients presenting with malaria in Lagos Nigeria**

Uche, Igbasi

**D080**

**Asymptomatic Plasmodium falciparum isolates in Ghana carry both chloroquine sensitive & sulphadoxine-pyrimethamine resistant genotypes with polymorphisms in Pfmdr1 & Pfk13**

Charles, Narh

**D081**

**Detection of Plasmodium falciparum K13 propeller A569G mutation after artesunate-amodiaquine treatment failure in Niger**

IBRAHIM, Maman Laminou

**D082**

**Do residual antimalarials in the blood of individuals sampled in the community predict the presence of resistant parasites?**

Joanna, Gallay

**D083**

**EVALUATION DE LA PREVALENCE DU MARQUEUR DE RESISTANCE PFCRT K76T SUR LES SOUCHES DE PLASMODIUM FALCIPARUM ISOLEES CHEZ DES PATIENTS ATTEINTS DE PALUDISME SIMPLE A DAKAR EN 2012**

Ndeye Aida, Gaye

**D084**

**Evolution of Pfmdr1 86Y and Pfcrt 76T mutant genotypes over 20 years (1995-2015) in Garoua and Yaounde sentinel sites Cameroon**

Peter Thelma Ngwa, Niba

**D085**

**Ex vivo susceptibility and genotyping of Plasmodium**

**falciparum isolates from Pikine (Senegal)**

Aminata, Mbaye

**D086**

**Ex vivo susceptibility to antimalarial partner drugs of arteminin derivatives of P falciparum isolates in urban and rural areas of Gabon**

Dominique Fatima, Voumbo Matoumona

**D087**

**Factors associated with the high prevalence of PfCRT K76T mutation in Plasmodium falciparum isolates in a rural community and an urban community of Ogun State Nigeria**

Olajoju, Soniran

**D088**

**GENE PROFILE PFMDR1 N86Y IN PLASMODIUM FALCIPARUM ISOLATES**

Louis Régis, DOSSOU-YOVO

**D089**

**High parasite density in children carrying VDNTT haplotype of Polymorphism Genetic Background of artemisinin-resistance of Plasmodium falciparum isolates in 2014 in Gabon**

Jacques Mari, Ndong Ngomo

**D090**

**Impact of addition of Seasonal Malaria Chemoprevention (SMC) on malaria prevalence and prevalence of molecular markers of resistance to SMC drugs**

SUKAI, CEESAY

**D091**

**IN VITRO SUSCEPTIBILITY OF PLASMODIUM FALCIPARUM TO MALARIA DRUGS IN KINSHASA/DRC**

Mandoko, nkoli

**D092**

**Increasing ex-vivo tolerance of Gambian Plasmodium falciparum isolates to Amodiaquine and Lumifantrine partners in artemisinin-based combination therapies**

Haddijatou, Mbye

**D093**

**Investigation of artemisinin sensitivity with alternative ex vivo/in vitro assays in Mali**

Karamoko, Niaré

**D094**

**K13-PROPELLER POLYMORPHISM IN PLASMODIUM FACIPARUM PARASITES FROM ASYMPTOMATIC CHILDREN FROM COTE D IVOIRE : PRELIMINARY DATA**

AKPA PATERNE, GNAGNE

**D095**

**Molecular analysis Plasmodium falciparum dihydrofolate reductase (dhfr) and dihydropteroate synthase (dhps) genes among adults living with HIV in Gabon: Preliminary data**

Vanessa Jeanne, Lengogo Koumba

**D096**

**Molecular Epidemiology of Plasmodium falciparum kelch13 Mutations in Senegal Determined by Using Targeted Amplicon Deep Sequencing**

YAYE DIE, NDIAYE

### D097

Molecular monitoring of Plasmodium falciparum resistance to sulfadoxine pyrimethamine in the Northern part of Zambia

SYDNEY, MWANZA

### D098

Molecular monitoring of resistance of Plasmodium falciparum to artemisinin Bobo-Dioulasso: evaluation of the frequency of alleles of the k13-propeller gene

BAZIE, THOMAS

### D099

Multi-locus Sulfadoxine-Pyrimethamine resistance among symptomatic patients from northern Ghana

Lucas, Amenga-Etego

### D100

Prevalence and copy number variation of genetic markers following Dihydroartemisinin-piperaquine for Treatment of uncomplicated Plasmodium falciparum Malaria in Mali

Souleymane, DAMA

### D101

Prevalence of Chloroquine and Sulphadoxine-pyrimethamine resistance markers a cross sectional study of three study sites in Zambia

Mulenga, Mwenda

### D102

Prevalence of molecular markers associated with resistance to Sulfadoxine-Pyrimethamine

and Amodiaquine before seasonal malaria chemoprevention implementation in Niger

Lamine, Mahaman moustapha

### D103

Recent trends of imported malaria and patient response to artemisinin combination treatments in Belgium between 2014-2017

Anna, Rosanas-Urgell

### D104

Selective impact of artesunate-amodiaquine and artemether-lumefantrine therapies on Pfcr1 K76T mutation in three malaria sentinel sites in Côte d'Ivoire

Abibatou, KONATE

### D105

Support Role of a molecular biology laboratory: example of the Molecular Epidemiology and Drug Resistance Unit (MEDRU)

ALIOU, TRAORE

### D106

The presence of Plasmodium falciparum Chloroquine resistant transporter (Pfcr1) drug-resistance alleles in some Northern Nigerian states and their possible causes

Ruqayyah, Muhammad

### D107

A primary cell culture system to study molecular interactions between trophoblasts and Plasmodium infected erythrocytes

Yash, Pandya

### D108

Antibody responses to the full length VAR2CSA and its DBL domains in Cameroonian children and teenagers

Fodjo Yetgang Airy, Barriere

### D109

Assessment and impact of the new IPTp implementation strategy on Maternal fetus and neonatal outcome in Ghana

Bernard, Torniyigah

### D110

Assessment of the Level of Use of Long Lasting Insecticide Net Among Pregnant Women attending Antenatal Clinic in a Nigerian Teaching Hospital

Ibrahim, Bello

### D111

BARRIERS TO INTERMITTENT PREVENTIVE TREATMENT OF MALARIA IN PREGNANCY IN MALARIA ENDEMIC AND EPIDEMIC COUNTIES IN KENYA

Margaret, Njenga

### D112

Characterizing global genetic diversity and copy number variation of VAR2CSA

Nicholas, Hathaway

### D113

Clinical development of a VAR2CSA-based placental malaria vaccine PAMVAC: Quantifying vaccine antigen-specific memory B & T cell activity in Beninese primigravidae

Komi, GBEDANDE

### D114

Clinical development of a VAR2CSA-based placental malaria vaccine PAMVAC: Quantifying vaccine antigen-specific memory B & T cell activity in Beninese primigravidae

Komi, GBEDANDE

### D115

Community-Based Health Workers in Burkina Faso: Are they ready to take on a larger role to prevent malaria in pregnancy?

Gladys, Tetteh

### D116

Comparison of Microscopy with rapid Diagnostic Tests in the Diagnosis of Malaria among Pregnant women in Lagos Southwest Nigeria

Adeola, Olukosi

### D117

Confirmed Malaria cases and uptake of Malaria Control Intervention Services among Ante Natal Care Attendees in Kaduna State Nigeria - 2011 to 2016

Adekanye, Adekanye

### D118

Contribution of Community-Based Health Workers (CBHWs) to Improving Prevention of Malaria in Pregnancy in Burkina Faso: Review of health worker perceptions from the baseline study

Gladys, Tetteh

### D119

Coverage of the optimal dose of intermittent preventive treatment with sulfadoxine-

pyrimethamine during pregnancy in the rural district of Houndé Burkina Faso

Mamoudou, CISSE

**D120**

Coverage Rates and Missed Opportunities for Intermittent Preventive Treatment with Sulphadoxine-Pyrimethamine at Antenatal Clinics

Nneka, Igboeli

**D121**

Determinants of Intermittent Preventive Treatment of Malaria among Women Attending Antenatal Clinics in Primary Health Care Centers in Ogbomoso Oyo State

ADEFISOYE, ADEWOLE

**D122**

Differential Diagnoses of First Pregnancy and Home management of Malaria in Communities with limited Primary Health Care services in Oyo State

Abolaji, Azeez

**D123**

Doing ethnography in two Ghanaian health districts: lessons for public health intervention studies in Ghana

Matilda, Aberese-Ako

**D124**

Effect of pharmacogenetics on plasma lumefantrine pharmacokinetics and malaria treatment outcome in pregnant women

Ritah, Mutagonda

**D125**

Epidemiology burden and effect of malaria in pregnancy: Proposal for a cohort study

Princess, Acheampong

**D126**

Evaluation de l'observance de l'efficacité du traitement préventif intermittent et détection de l'infection par qPCR chez la femme enceinte à Douala Cameroun

Ayina, Angele almira roseline

**D127**

Examining inequities in access to and use of Sulphadoxine-Pyrimethamine for Malaria Prophylaxis in Pregnancy in Nigeria

Chinyere, Mbachu

**D128**

Factors influencing the use of malaria prevention strategies by women in Senegal: a cross-sectional study

Mouhamed Abdou Salam, Mbengue

**D129**

HRP-2 BASED RDTs PERFORMANCE AMONG FEBRILE PREGNANT WOMEN IN AREA OF HIGH TRANSMISSION AREA

Marc Christian, Tahita

**D130**

Impact of placental malaria on adverse pregnancy outcomes in Sudanese women from Blue Nile state

Samia, Omer



### D131

Impacts of Malaria Preventive Education on the Control of Malaria Parasitaemia among Pregnant Women using Long Lasting Insecticide Nets in a Nigerian Teaching Hospital

Sonibare Omowonuola, Olubukola

### D132

Implementation and effectiveness of interventions for malaria and other parasitic infections in pregnancy control in Ghana

Gifty, Ampofo

### D133

IMPLICATION of CD19+CD24hiCD38hi REGULATORY B CELLS IN NEONATAL IMMUNE DYSFUNCTION AND RISK OF SEPSIS OF PREMATURE NEONATES IN A MALARIA ENDEMIC AREA

Darius, Sossou

### D134

Interpersonal socio-cultural environmental and community factors determining pregnant women s decision to control malaria infection in Ghana: An anthropological study

Virtue Fiawokome, De-Gaulle

### D135

Laboratory evaluation of Plasmodium falciparum resistance to sulfadoxine-pyrimethamine in pregnant women in a malaria endemic region of western Kenya

Clement, Likhovole

### D136

Malaria and helminth coinfection amongst Pregnant

women in South West Nigeria

Taiwo, Adekeye

### D137

Malaria in pregnancy as a determinant of antenatal booking and pregnancy outcome in Oyo State South West Nigeria

Olubunmi, Ayinde

### D138

Malaria in pregnancy programmes from neglect to priority: challenges and priorities in antimalarial drug development for African pregnant women

Montserrat, Blazquez-Domingo

### D139

Malaria In Pregnancy: An assessment of prevention strategies among women attending antenatal clinics in Nasarawa State 2013 - 2016

Ime, Okon

### D140

Experiences and perceptions of care seeking for febrile illness among caregivers, pregnant women and health providers in eight districts of Madagascar

Reed, Thorndahl

### D141

Improved Malaria Case Management of Under-Five Children at 77 MCSP-supported Health Facilities in Liberia

Reed, Thorndahl

### D142

Assessing capacity for delivering quality malaria

services in rural Liberia

Reed, Thorndahl

**D143**

Modification of the blood ionogram during plasmodial infection in pregnant women living in Libreville Gabon

ADEFISOYE, ADEWOLE

**D144**

Molecular Evaluation of Plasmodium falciparum resistance to Sulphadoxine Pyrimethamine (SP) in pregnant women under Intermittent Preventive Treatment along the slope of Mount Cameroon

Lenshina Mpeyako, Agbor

**D145**

Molecular Evaluation of Plasmodium falciparum Resistance to Sulphadoxine Pyrimethamine in Pregnant Women under Intermittent Preventive Treatment along the Slope of Mount Cameroon

Lenshina Mpeyako, Agbor

**D146**

PERIPHERAL CYTOKINE PROFILES DURING PREGNANCY IN WOMEN EXPOSED TO Plasmodium falciparum INFECTION

Tatiana Sandrine Yabo Yenabo, Hountohotegbe

**D147**

PERIPHERAL CYTOKINE PROFILES DURING PREGNANCY IN WOMEN EXPOSED TO Plasmodium falciparum INFECTION

Tatiana, HOUNTOHOTEGBE

**D148**

Persistence of VAR2CSA antibodies in two different malaria-transmission areas in Cameroon

Yukie, Lloyd

**D149**

PLACENTA AND CORD BLOOD MALARIA IN MOTHERS AND NEONATES ATTENDING FEDERAL MEDICAL CENTER OWERRI SOUTH EASTERN NIGERIA

Okoro, Oluchi

**D150**

Placental endothelin response is controlled by TLR4 in murine pregnancy malaria

Yash, Pandya

**D151**

Plasmodium falciparum infection in pregnant women receiving sulfadoxine-pyrimethamine preventive treatment in the Republic of Congo

Yvon, Mbouamboua

**D152**

Prevalence of Malaria and Anaemia among Antenatal Care Attendees in Gumel Local Government Jigawa State

Shafi'u, Dahiru Gumel

**D153**

Prevalence of malaria and anemia among pregnant women attending antenatal care in Niore du Sahel Mali West Africa

Drissa, Konate

#### D154

##### Prevalence of Plasmodium falciparum infection in Mozambican Pregnant Women

Gloria, Matambisso

#### D155

##### Quantification of memory B cells specific to the vaccine antigen in a group of vaccinated Beninese nulligravid women

Séyigbéna Prudence Déo-Gracias, BERRY

#### D156

##### RELATIONSHIPS BETWEEN PRENATAL MALARIA EXPOSURE INNATE IMMUNE RESPONSES AT BIRTH AND THE RISK OF MALARIA DURING THE FIRST YEAR OF LIFE

Hamtandi Magloire, NATAMA

#### D157

##### Socio-cultural (de)motivators to malaria prevention and management among pregnant women in sub Saharan Africa: A review

Matilda, Aberese-Ako

#### D158

##### Trend of Confirmed Malaria among Pregnant Women and Under Five Children and the Distribution of Long Insecticidal Treated Nets in Kano State Nigeria 2010-2015

Visa, Tyakaray

#### D159

##### Trend of Malaria incidence and mortality among pregnant mothers 2011-2015 in Bauchi State Nigeria

Garba, Mustapha

#### D160

##### Uptake of Intermittent preventive treatment and pregnancy outcomes: hospital and community survey in Chékwé district Southern Mozambique

Paulo, Arnaldo

#### D161

##### Zinc and copper levels in low birth weight deliveries in Medani Hospital Sudan

Elhassan Mohamed, Elhassan

#### D162

##### Zinc protoporphyrin to define iron status in pregnant women in Ouelessebouyou Mali

Almahamoudou, Mahamar

#### D163

##### Acquisition of antibodies to a PfEMP1variant implicated in cerebral malaria

Florence, McLean

#### D164

##### Age-dependent switch in innate and adaptive immune responses during P falciparum infection

Matthieu, Schoenhals

#### D165

##### Antibodies assessment during malaria subsequent episodes in children and adults living in malaria hyperendemic area of Burkina Faso

Fatimata, Thiombiano

#### D166

##### Antibodies assessment during malaria subsequent episodes in children and adults living in malaria

**hyperendemic area of Burkina Faso**

Fatimata, Thiombiano

**D167**

Antibody responses to blood stage antigens in children participating in the multicenter African phase 3 trial RTSS/AS01E vaccine trial

David, Dooso

**D168**

Antibody Responses to Plasmodium falciparum Antigens in HIV-infected Adults in Bondo Sub County hospital Western Kenya

Eliud, Odhiambo

**D169**

CD4+CD25+CD127-FOXP3+ ROLE IN NEONATAL IMMUNE DYSFUNCTION AND RISK OF SEPSIS OF PREMATURE INFANTS IN A MALARIA ENDEMIC AREA

Adébayo, Ladekpo

**D170**

Characterisation of the adaptive immune response to Plasmodium chabaudi

Natasha, Smith

**D171**

Characterization of the Humoral Immune Response in Naturally Acquired Immunity Against Plasmodium falciparum Malaria

Rolf, Fendel

**D172**

Dynamic development of the immune system in children during the phase III RTSS malaria vaccine

**trial in Tanzania and Mozambique**

Danika, Hill

**D173**

Effect of circulating antibody responses to known transmission blocking vaccine antigens on within-host gametocyte carriage

Estelle Géraldine, ESSANGUI SAME

**D174**

Evidence of IL 17 IP 10 and IL 10 involvement in multiple organ dysfunction and IL 17 pathway in acute renal failure associated to Plasmodium falciparum malaria

Sylviane, Pied

**D175**

Human complement did not alter inhibitory activity of Malian IgGs and human anti-Rh5 IgGs in a standardized growth-inhibition assay

Kazutoyo, Miura

**D176**

Humoral response in patients with different parasitic profiles in five provinces of Gabon Central Africa: cross-sectional study

Noé Patrick, M'bondoukwé

**D177**

Humoral responses to Plasmodium falciparum MSP3 and GLURP antigens in Congolese children

Kosso, ETOKABEKA MANDIGHA

**D178**

INFLUENCE OF MOSQUITO BITES ON ANTIBODY

## RESPONSES SPECIFIC TO MALARIA ANTIGENS

Ghislain, Aka

### D179

**KILchipv10: A protein micro-array chip for screening antibody responses to P falciparum antigens for studies of immunity to malaria**

James, Tuju

### D180

**Longitudinal analysis of the frequency and differentiation of CD4 T cell subsets in Malian adults during the malaria transmission season**

Kadidia Baba, Cisse

### D181

**Plasma level of sHLA-G is increased after vaccination with GMZ2 and is negatively correlated with vaccine immunogenicity**

Odilon Paterne, NOUATIN

### D182

**Prevalence of co-infection between gastrointestinal parasites and malaria and its implications in the immune response against malaria**

Inocencia, Augusto Cuamba

### D183

**Pro- and anti-inflammatory cytokines in children with malaria in Franceville Gabon**

Aline Gaelle, BOUOPDA

### D184

**Profile of Tumour Necrosis Factor Alpha Interferon Gamma and Interleukin-10 among patients with uncomplicated malaria in Lagos Nigeria**

Uche, Igbasi

### D185

**Proportions and function of circumsporozoite-specific B cells in vaccinated and naturally exposed individuals**

Racheal, Aye

### D186

**Quantity and functionality of IgG and malaria protection in beninese infants**

Rafiou, ADAMOUM

### D187

**Risk of sepsis in premature newborns in a malaria endemic area**

Sem, EZINMEGNON

### D188

**Safety immunogenicity and efficacy of ChAd63 MVA ME-TRAP in adults infants and children**

Katie, Ewer

### D189

**Serology using Luminex as a tool for malaria surveillance and control in Senegal**

Aida, Badiane

### D190

**Ugandan females have higher antibody levels to MSP119 a malaria candidate vaccine antigen**

Brenda, Okech

## Symposium Session

### S60

#### Progress in Malaria Transmission Blocking Vaccine Development

**Pc Room: 09h:00-10:45**

**Chairs:** Dr. Patrick Duffy and Prof. Issaka Sagara

**Speaker 1:** Prof Robert Sauerwein, MD, PhD, Preclinical development of Pfs48/45 vaccine candidates, Radboud University Medical Center, Route 268, M850.01.049, Geert Grooteplein 26-28, Nijmegen 6525 GA Netherlands

**Speaker 2:** Professor Patrick Duffy, MD, Clinical development of Pfs25 and Pfs230 vaccine candidates, Laboratory of Malaria Immunology and Vaccinology/NIAID/NIH, 5640 Fishers Lane, Twinbrook 1, Rm 1111, Rockville, MD 20852, USA

**Speaker 3:** Prof Issaka Sagara, MD, PhD, Field trials of Pfs25 and Pfs230 vaccine candidates, MRTC/USTTB, USTTB, BP 1805, Point G; Bamako, Mali

**Speaker 4:** Dr. Mamadou Coulibaly, Novel approaches to measure activity of transmission blocking vaccines in the field, MRTC/USTTB, USTTB Bamako; BP 1805, Point G; Bamako, Mali

**Speaker 5:** Dr. Ashley Birkett, The path forward for malaria transmission blocking vaccines, PATH's Malaria Vaccine Initiative, 2201 Westlake Ave (Suite 200), Seattle, WA 98121, USA

**Purpose and Objective:** Transmission-blocking vaccines (TBVs) are an essential tool for malaria elimination and eradication. Until recently, clinical development has been slow due to poor immunogenicity or reactogenicity of candidate products, as well as an uncertain regulatory path and limited resources. However, second generation products have shown good tolerability and immunogenicity, and are being tested in field trials. This symposium will describe progress in the development of candidate TBVs, report results from recent clinical trials, review approaches to measure TBV activity in mosquitoes, and invite the community to discuss regulatory and clinical paths to bring these potentially transformative interventions into use in Africa.

### S61

#### Delivering vector control solutions and impact in challenged public health markets

**Room 201: 09h:00-10:45**

**Chairs:** Marlize Coleman and Lizette Koekemoer

**Speaker 1:** Nick Hamon, Chief Executive Officer, IVCC, Pembroke Place, Liverpool, United Kingdom

**Speaker 2:** Frank Mosha, PAMVERC Test Facility Manager, Kilimanjaro Christian Medical University Centre, Moshi, Tanzania

**Speaker 3:** Dan Strickman, Senior Programme Officer, Bill & Melinda Gates Foundation, Seattle, WA, USA

**Speaker 4:** Robert Matiru, Director of Operations, Unitaid, Geneva, Switzerland

**Speaker 5:**

**Purpose and Objective:** IVCC's project portfolio contains both new and repurposed tools; the final toolbox of solutions leading to malaria eradication will likely be a combination of both product types, as well as others still in the proof of concept stage. The toolbox is slowly but surely starting to emerge; Syngenta's Actellic 300 CS as an LLIRS is having an impact in areas of high insecticide resistance throughout Africa through the Unitaid-funded NgenIRS program. Bayer's PolyZone is in use against a range of NTDs, Insecticide Quantification Kits (IQK) and Disease Data Management System (DDMS) are in use in Africa and India, BASF's Interceptor G2, the first dual active ingredient LLIN and Sumitomo's Sumishield which achieved a PQ listing in October 2017. Enabling initiatives such as GLP accredited African trials sites are gaining traction with the first accredited established this year at KCMUCo in Tanzania after a three year investment. Malaria eradication has three distinct vector control strategies to choose from; 1. Continue with current tools pyrethroid LLINS and four insecticide classes for IRS, which history guarantees us will ultimately lead to vector control failure and malaria resurgence; 2. Maintain the gains made since 2000 by replacing current active ingredients in LLINs and LLIRS with new or repurposed chemistries to manage resistance and improved performance; or 3. Accelerate to Zero by 2040 by making available an integrated toolbox of solutions that includes novel active ingredients and repurposed chemistry, insecticide resistance management

(IRM) strategies, Integrated Vector Management (IVM), improvements in application technology as well as tools to prevent residual transmission or manage populations such as ATSB, Gene Drives, etc. However, for the impatient optimists amongst us, there may be a fourth option - Accelerate to Zero by 2030.

## S62

### Environmental Compliance Concerns and Solutions that Arise from Malaria Control via Indoor Residual Spraying (IRS)

**Room 202: 09h:00-10:45**

**Chairs:** Peter J. Chandonait and Kristen George

**Speaker 1:** Dr. Yemane Yihdago, Chief of Party, AIRS Ghana, Abt Associates, Inc, Villa Dominica, House No. 59a, Dade St., Labone, Accra, Ghana

**Speaker 2:** Bukuru, Jean de Dieu, Managing Director, Cards from Africa, BP 4730, Kigali, Rwanda

**Speaker 3:** Tahina Masihelison, Environmental Compliance Officer, Abt Associates, Inc, Immeuble FITARATRA 1er Etage Droite Ankorondrano 101- ANTANANARIVO, Madagascar

**Speaker 4:** Mr. Assefa, Yohannes Ameha, Senior Environmental Health Expert, Ethiopian Ministry of Environment, Forest and Climate Change, P.O. Box 771/1250, Addis Ababa, Ethiopia

**Speaker 5:**

**Purpose and Objective:** The purpose of the seminar is to disseminate information on the environmental challenges that are part and parcel of this approach to malarial vector control, and present some successes in meeting these challenges.

## S63

### A cluster-randomized trial assessing impacts and cost-effectiveness of combining indoor residual spraying with long-lasting insecticide-treated nets for malaria control in central Mozambique

**Tente A: 09h:00-10:45**

**Chairs:** Baltazar Candrinho

**Speaker 1:** Carlos Chaccour, Assistant Research Professor,

ISGlobal, Spain

**Speaker 2:** Francisco Saute, Deputy director of Science, CISM, Mozambique

**Speaker 3:** Joe Wagman, Senior Epidemiologist, PATH, Washington DC

**Speaker 4:** Molly Robertson, Sr. Evidence Lead, NgenIRS, Malaria Control and Elimination Program, PATH, Washington DC

**Speaker 5:**

**Purpose and Objective:** This symposium aims to provide attendees with a comprehensive understanding of an ongoing trial assessing the impact and cost effectiveness of combining indoor residual spraying (IRS) with a non-pyrethroid, next generation IRS product and standard long-lasting insecticidal nets (LLIN) in an area with high malaria transmission and key methodological considerations related to the study. After this symposium attendees should be able to: a) Describe the benefits and challenges associated with conducting cluster randomized trials in rural, low-resource environments as well as the rationale for clustering villages and defining buffer zones. b) Describe the potential outcome measures of a trial assessing malaria transmission and practical methods for their determination in the field and at health facility level. c) Understand the preliminary epidemiological and entomological impact of combining IRS and LLINs in an area with high malaria burden. d) Describe the costs and methods used for determining the cost-effectiveness of the intervention as well as cost-effectiveness thresholds..

## S64

### Controlling vector-borne diseases through the built environment

**Tente B: 09h:00-10:45**

**Chairs:** Steve Lindsay and Graham Alabaster

**Speaker 1:** Graham Alabaster, PhD, United Nations Human Settlements Programme, Geneva Switzerland

**Speaker 2:** Steve Lindsay, PhD, Durham University, Science Site, Stockton Toad, Durham, United Kingdom

**Speaker 3:** Lorenz von Seidlein, MD, Oxford University, Bangkok, Thailand

**Speaker 4:**

**Speaker 5:**

**Purpose and Objective:** The symposium aims to: i) inform attendees about the policy environment supporting multi-sectoral responses against malaria including involving the built environment. ii) highlight innovative multidisciplinary research in preventing malaria through the built environment

**S65**

### Assessing the feasibility of malaria burden reduction and elimination in Senegal & The Gambia: Application of the Elimination Scenario Planning Tool

**oval Room: 11:15 -13:00**

**Chairs:** Professor Azra Ghani and Ms Kammerle Schneider

**Speaker 1:** Ms Kammerle Schneider, Deputy Director, MACEPA, PATH, 2201 Westlake Avenue, Seattle, WA 98121, USA

**Speaker 2:** Dr Hannah Slater, Junior Research Fellow, Imperial College London, Department of Infectious Disease Epidemiology, Imperial College London, Norfolk Place, London W2 1PG, UK

**Speaker 3:** Dr Moustapha Cisse, Coordonateur-Adjoint, Programme National de Lutte contre le Paludisme, Senegal, BP: 25 270 Dakar-Fann CP:12 524

**Speaker 4:** Dr Balla Kandeh, Director, National Malaria Control Programme, The Gambia, Ministry of Health & Social Welfare, The Quadrangle, Banjul, The Gambia

**Speaker 5:**

**Purpose and Objective:** The proposed symposium aims to act as a showcase of recent elimination scenario planning work undertaken in Senegal and The Gambia. The work demonstrates the benefits of collaborative relationships between the national programmes (PNLP and NMCP), implementing partners (MACEPA), disease modellers (Imperial College) and funders (The Global Fund)..

**S66**

### Progress and challenges in bringing Sanaria PfSPZ-CVac to Phase 3 clinical trials and licensure in Africa

**PC room: 14:30-16:15**

**Chairs:** Peter Kremsner and Peter Billingsley

**Speaker 1:** Robert Sauerwein, Professor, Radboud University Medical Centre, Nijmegen, Dept. Medical Microbiology, P.O. Box 9101 Nijmegen, The Netherlands

**Speaker 2:** Benjamin Mordmuller, Professor, Benjamin Mordmuller, Wilhelmstrasse 27, D-72074 Tubingen, Germany

**Speaker 3:** Beltran Ekua Ntutum, Doctor, Equatorial Guinea Malaria Vaccine Initiative, S/N Caracolas, Malabo, Bioko Norte, Equatorial Guinea

**Speaker 4:** Mahamadou Thera, Doctor, University of Bamako, ICER-Mali, Faculty of Medicine, P O Box 1805, Bamako, Mali

**Speaker 5:** Maxime Selidji Agnandji Todagbe, Director, Centre de Recherches Medicales de Lambarene, Albert Schweitzer Hospital, BP:118, Lambarene, Gabon

**Purpose and Objective:** PfSPZ-CVac (infectious sporozoites administered under drug prophylaxis) has proven to be highly efficacious. The purpose of this symposium is to present current state of the art for PfSPZ-CVac (infectious sporozoites administered under drug prophylaxis) in USA, Europe and Africa. Because PfSPZ-CVac offers unique safety and logistical challenges, a second objective will be to solicit feedback from the MIM attendants about how to progress with this approach.

**S67**

### Child bed net use following implementation of malaria lesson plans and bed net distribution in primary schools on Bioko Island, Equatorial Guinea

**Tente B: 11:15 -13:00**

**Chairs:** Kenneth Charles Murray, Julie N. de Carvalho, Victor Mba Micha Mvomo.

**Speaker 1:** Kenneth Charles Murray, MCDI, BIMCP, Av. Parques de Africa SN, Caracolas, Malabo, Bioko Island, Equatorial Guinea

**Speaker 2:** Julie N. de Carvalho, MCDI, BIMCP, Av. Parques de Africa SN, Caracolas, Malabo, Bioko Island, Equatorial Guinea

**Speaker 3:** Victor Mba Micha Mvomo, MCDI, BIMCP, Av. Parques de Africa SN, Caracolas, Malabo, Bioko Island, Equatorial Guinea



**Speaker 4:****Speaker 5:**

**Purpose and Objective:** Data in many countries have shown a rapid drop in bed net ownership after mass distributions. A 2014-2015 long lasting insecticidal net (LLIN) distribution on Bioko Island, Equatorial Guinea (EG) reached 88% of the population, surpassing the WHO target for community protection. However, a precipitous decline in LLIN ownership followed, resulting in top-up distributions being advised to maintain optimal LLIN ownership and use between mass distributions. The present evaluation was intended to assess the effectiveness of an LLIN top-up distribution that was carried out in primary schools on Bioko Island in 2017, together with the delivery of a malaria curriculum. Knowledge and behavior were both assessed, with behavior being considered the most important indicator of success. Intro Given that children ages 5-14 have been the age group most impacted by malaria on Bioko Island in recent years, primary schools were identified as a channel for delivering health messages and topping up LLINs. Teachers were believed to be the ideal protagonists to provide information to children in this age group, in light of their daily contact and relationship of trust with students. The hypothesis was that students would not only adopt malaria prevention techniques, but that they would also act as proponents of behavior change in their households and communities as a result of the health education and bed net distribution.

Methods Formative research was conducted with children, parents, and teachers to inform the curriculum design. Once a curriculum had been designed and received technical validation from the EG Ministry of Health and Social Welfare, the EG Ministry of Education and Sciences, and the EG Ministry of Information and Communication, cascade trainings were conducted with school superintendents and primary school teachers. The delivery of education content on malaria transmission, prevention, and treatment took place thereafter. To ensure that the curriculum was delivered, trained teachers were informed that students' knowledge of malaria would be assessed before and after. Over 35,000 LLINs were deployed to the schools after teachers had the opportunity to deliver lessons on malaria. Pre- and post-tests were administered to all trained teachers and a select number of students following the LLIN distribution. The test questions covered both knowledge and behavior. Results Students' affirmative answers to the pre and post-test question, "Did you sleep

under a bed net last night?" was evaluated. At baseline, 43.8% of students reported sleeping under a bed net, while only 43.3% reported doing so after they were given LLINs at school. The resulting data were found to be the same or slightly higher than the overall rate of LLIN use by all age groups on the island per the annual Bioko Island malaria indicator surveys from 2016 and 2017. Students' malaria knowledge did, however, increase after the school-based intervention. In particular, students were able to identify the "bed net with super powers" that could protect them from the "killer mosquito" per the teaching guide. Discussion No statistically significant change was seen in LLIN use before and after the school-based intervention, despite adequate implementation. This is thought to be due to the failure to involve parents; however, this assumption needs to be validated through qualitative research. Future LLIN distributions in schools will engage parents. Lessons learned included: 1) . absenteeism in schools was around 10%; 2) geospatial data on all Bioko Island communities allowed the enumeration of schools prior to distribution with a minimal field team; 3) formal collaboration between the Ministries of Health and Education was difficult, despite widespread support for the intervention.

**S68****The pathway to licensure and implementation of Sanaria PfSPZ Vaccine in Africa****PC room: 11:15-13:00****Chairs:** Ogobara Doumbo and Marcel Tanner**Speaker 1:** Mahamadou Sissoko, Senior Advisor, University of Science Techniques and Technologies of Bamako, Mali, Bamako, Mali**Speaker 2:** Martina Oneko, Clinician, KEMRI & Centers for Disease Control and Prevention , Kisumu, Kenya**Speaker 3:** Sodiomon Sirima, Head of Centre National de Recherche et de Formation sur le Paludisme, Centre National de Recherche et de Formation sur le Paludisme (CNRFP), Ouagadougou, Burkina Faso**Speaker 4:** Ali Mtoro, Doctor, Ifakara Health Institute , Bagamoyo Research and Training Centre, Bagamoyo, Coastal Region, Tanzania**Speaker 5:** Said Abdallah Jongo, Lead Clinician , Ifakara

Health Institute , Bagamoyo Research and Training Centre, Bagamoyo, Coastal Region, Tanzania

**Purpose and Objective:** We will update the malaria community on progress with Sanaria PfSPZ Vaccine, covering recent Phase 2 clinical trials in Africa, with an emphasis on the excellent safety and tolerability, plus the growing data on efficacy in diverse settings. We will describe our pathway to licensure of PfSPZ Vaccine, including testing the vaccine in vulnerable individuals and present current thinking about vaccine deployment with other malaria control approaches to demonstrate focal elimination. Presenters will be from Mali, Kenya, Burkina Faso, Equatorial Guinea, Tanzania and Gabon..

## S70

**Designing and implementing sustainable malaria case management and surveillance to strengthen the delivery of community and private health services: the importance of data to inform evidence-based planning.**

**Room 202: 11:15-13:00**

**Chairs:** Theodoor Visser and Katherine Battle

**Speaker 1:** Katherine Battle , 1. MAP Oxford to present on allocation analysis to target CHW allocation in Mozambique, drug shop prioritization in Tanzania and the malaria posts in E8 border areas, Malaria Atlas Project, Oxford University, La Ka Shing Centre for Heal

**Speaker 2:** Emilie Chambert, 2. Living Goods to present on its use of mobile technology in Kenya and Uganda to support CHWs with accurate malaria diagnosis and treatment; improve supervision and performance management of CHWs; increase patient compliance and healthy

**Speaker 3:** Richard Silumbe, 3. CHAI to present on its low cost RDT model, its experience rolling out surveillance systems in the retail private sector and use of data to prioritize supportive supervision in Tanzania and Nigeria, Clinton Health Access Initiative Tanz

**Speaker 4:** Jerobeam Hamunyela , 4. Namibia NVDCP to present on the use of data to inform strategy, training design, and implementation of the pilot implementation of CCMm , National Vector-borne Diseases Control Programme, Namibia, Ministry of Health and Social Serv

## Speaker 5:

**Purpose and Objective:** The purpose of this symposium is to share experiences and learnings from extending malaria case management and routine surveillance into the private sector and the community at large, to achieve complete case management coverage and help transform surveillance into a core malaria intervention. The proposed talks will highlight innovative, data-driven approaches to prioritize interventions, target populations and identify opportunities to accelerate progress against national malaria goals.

## S71

**Data sharing in malaria research, treatment and control: Case studies from sub-Saharan Africa**

**Tente A: 11:15-13:00**

**Chairs:** Prof Magatte Ndiaye and Prof Philippe Guerin

**Speaker 1:** Prof Magatte Ndiaye, Assistant Professor of Parasitology at the Faculty of Medicine, Cheikh Anta Diop Univeristy (UCAD)

**Speaker 2:** Prof Bernhards Ogotu, Certified Physician Investigator (CPI) of the Association of Clinical Research Professionals (ACRP), founding President of the East African Chapter of the Association of the Clinical Research Professionals (ACRP), and member of the K

**Speaker 3:** Prof Francine Ntoumi, Executive Director of the Congolese Foundation for Medical Research, Lecturer at the University Marien Ngouabi, and Research Group Leader at the University of Tubingen

**Speaker 4:** Prof Abdoulaye Djimdé, Associate Professor of Microbiology and Immunology and Chief of the Molecular Epidemiology and Drug Resistance Unit at the Malaria Research and Training Centre University of Bamako, Mali

## Speaker 5:

**Purpose and Objective:** Data sharing has become a fixture on the health and biomedical research landscape recently, with many funders and scientific journals requiring scholars to make their primary data available for secondary analyses by external researchers. Approaches to data sharing have led to a range of new research outputs and practices relating to malaria research, treatment and control, for example, individual patient

meta-analyses, which pool existing data resources to address new and different research questions and provide evidence for health decision-makers. Rational for the symposium: Although organisations have successfully produced data sharing outputs utilised in global health decision-making, researchers have devoted less time to capturing the broader effects of new data sharing approaches on malaria research, treatment and control. This symposium will explore some of these impacts within the context of case studies from sub-Saharan Africa.

## S72

### The First Clinical Trial in Equatorial Guinea: Lessons Learned in an Emerging Research Environment

**Tente B: 11:15-13:00**

**Chairs:** Carl Maas, PhD, Ally Olotu, PhD., MD and Peter Billingsley, PhD

**Speaker 1:** Carl Maas, PhD, Corporate Social Responsibility Manager, Marathon EG Production Ltd, Punta Europa, Malabo, North Bioko, Equatorial Guinea

**Speaker 2:** Ally Olotu, PhD., MD, Project Principal Investigator, Ifakara Health Institute (IHI), Plot 463, Kiko Avenue Mikocheni, Dar es Salaam, P.O. Box 78 373, Dar es Salaam, Tanzania

**Speaker 3:** Peter F. Billingsley, PhD, Vice President of International Projects and Strategy, Sanaria, 9800 Medical Center Drive, Suite A209, Rockville MD 20850, USA

**Speaker 4:** Salim Abdulla, PhD, MD, PhD in Clinical Epidemiology, Ifakara Health Institute, Plot 463, Kiko Avenue Mikocheni, Dar es Salaam, P.O. Box 78 373, Dar es Salaam, Tanzania

**Speaker 5:** Christopher Schwabe, PhD, CEO, Medical Care Development, 8401 Colesville Rd, Suite 425, Silver Spring, MD 20910 USA

**Purpose and Objective:** The symposium explores the strengths, weaknesses, opportunities, and threats that faced the EGMVI during its first trial in a round table discussion with speakers representing the private funders, the Government of Equatorial Guinea vis-à-vis the Ministry of Health and Social Welfare, the principal investigator, the trial sponsor, volunteer recruitment coordinator and the lead logistical support provider to outline the challenges and opportunities that emerge in such a private-public

partnership.

## Oral Session

### Immunology 2 (Presentation 328-336)

**ROOM 201: 14:30-16:15**

**Chair:** Prof. Tandkha Dieye

**Co chair:** Ousmane TRAORE

**Host immunity to malaria infection, anaemia and socio-economic impact in under-ten children, north region of Cameroon**

**By:** Nobelle Sakwe

**Co-Author(s):** Jude Bigoga, Julius Oben, Judith- Laure Ngondi

**THE POSSIBLE RELATIONSHIP BETWEEN ANEMIA and INTERLEUKIN-10(IL10),TUMOR NECROSIS FACTOR (TNF) RATIO IN CHILDREN WITH ACUTE, UNCOMPLICATED P. FALCIPARUM MALARIA INFECTION**

**By:** OKORO chinyere, I.

**Co-Author(s):** Okoro oluchi, Dunga kingsley, Onuoha Frank

**Impact of in utero exposure to Pregnancy Associated Malaria on immunity to Plasmodium falciparum vaccine candidate antigens in children of age group 4-13years**

**By:** mengalle britha

**Co-Author(s):**

**Antibody responses to RTS,S/AS01E vaccination in children within the phase 3 trial in relation to age, baseline malaria transmission intensity and malaria protection**

**By:** Itziar Ubillos

**Co-Author(s):** Hector Sanz, Simon Kariuki, Marta Vidal, Sheetij Dutta, Claudia Daubenberger, Clarissa Valim, Alfons Jimenez, Ben Gyan, Selidji Agnandji, John Aponte, JOHN WAITUMBI, Carlota Dobano, Seth Owusu-Agyei, Aintzane Ayestaran, Joseph Campo, Maximilliam Mpina, Chenjerai

Jairoce, Nana Aba Williams, Gemma Moncunill, Ruth Aguilar, Nuria Diez Padrisa

**Influence of Anopheles bite exposure on the human IgG antibody response to Plasmodium falciparum vaccine candidate antigens in children living in malaria endemic area**

**By:** Anne Poinignon

**Co-Author(s):** Andre SAGNA, Jean Biram Sarr, Lobna Gaayeb, Simon Senghor, Gilles Riveau, Emmanuel Hermann, Franck Remoue, Badara Samb, Lassana Konate

**Levels of immunoglobulin subclass IgG1 anti-DBL5 quantified at the third trimester of pregnancy predict placental infection at delivery in Nanoro, Burkina Faso**

**By:** Ousmane TRAORE

**Co-Author(s):** Hermann Sorgho

**Antibodies to baculovirus-derived Plasmodium falciparum merozoite surface protein correlate with protection against clinical malaria in Senegalese mesoendemic setting**

**By:** Ronald Perraut

**Co-Author(s):**

**Dynamics of the antibody response to Plasmodium falciparum in travellers successfully treated for malaria**

**By:** Victor Yman

**Co-Author(s):**

**Antibodies to baculovirus-derived Plasmodium falciparum merozoite surface protein correlate with protection against clinical malaria in Senegalese mesoendemic setting**

**By:** Ronald Perraut

**Co-Author(s):** Simon Draper, J1 Michael T White, Faith HA Osier, Anna Farnert, Muhammad Asghar

**Magnitude, avidity, type and function of IgG**

**responses to different CSP epitopes in African children vaccinated with RTS,S/AS0 in relation to malaria protection**

**By:** Carlota Dobano

**Co-Author(s):** Maximilliam Mpina, Gaoqian Feng, Aintzane Ayestaran, Joseph Campo, Ousmane Traore, Nana Aba Williams, Salim Abdulla, Gemma Moncunill, Ruth Aguilar, Nuria Diez Padrisa, Simon Kariuki, Augusto Nhabomba, David Dooso, Benjamin Mordmueller, Chenjerai Jairoce, Claudia Daubenberger, Selidji Agnandji, Ben Gyan, Itziar Ubillos, John J. Aponte, Liriye Kurtovic

**Study of cellular correlates of RTS,S/AS01E vaccine-induced immunity**

**By:** Gemma Moncunill

**Co-Author(s):**

**Antibodies to baculovirus-derived Plasmodium falciparum merozoite surface protein correlate with protection against clinical malaria in Senegalese mesoendemic setting**

**By:** Ronald Perraut

**Co-Author(s):** Stephen C. De Rosa, Maximilliam Mpina, Joseph Campo, Clarissa Valim, John J. Aponte, Kristen W. Cohen, Selidji Agnandji, M. Juliana McElrath, Aintzane Ayestaran, Hector Sanz, Chenjerai Jairoce, Nana Aba Williams, Daryl Morris, Claudia Daubenberger, Raphael Gottardo, Carlota Dobano, Benjamin Mordmueller, Greg Finak, Augusto Nhabomba, Nuria Diez Padrisa

**Bio ethics and Research capacity (Presentation 313-320)**

**ROOM 202: 11:15-13:00**

**Chair:** Prof Tumani Corrah

**Co chair:** Aissatou Toure

**Outreach Supervision Standard approach to assess health facilities performance in Antananarivo Madagascar for malaria diagnosis.**

**By:** MARIE ANGE RASON

**Co-Author(s):**

**Building research capacity for the study of antimalarial compounds through computational projects for postgraduate students**

By: Liliana Mammino

Co-Author(s):

**Comparability of data at wide spatial scales: Co-developing comparable and coherent baselines for mosquito monitoring across Africa**

By: Mathilda Collins

Co-Author(s): Jonathan Kayondo, Patric Epopa, Adrian Leach, Amadou Guindo, Frederic Tripet, Abdulaye Diabate, Evgeniy Meyke, Krystal Birungi, Sidy Doumbia, Guel Hyacinthe, Mark Benedict, Mamadou Coulibaly

**Computational study of antimalarial naphthylisoquinoline alkaloids: A capacity building at the University of Venda**

By: Kabuyi Mireille Bilonda

Co-Author(s): Liliana Mammino

**Ensuring conformity of consent: Developing appropriate messaging and an informed consent process for volunteer participants in vector field studies at a trans-African scale**

By: Krystal Birungi

Co-Author(s): Mathilda Collins

**Expanding support for ethics and regulatory capacities strengthening in sub-Saharan Africa through EU-AFRICA partnership**

By: Nuraan Fakier

Co-Author(s):

**Implementing Dynamic Consent in African research landscape: Fad or Trend?**

By: Muhammed Afolabi

Co-Author(s):

**A qualitative exploration of malaria operational research situation in Nigeria**

By: Ikeoluwapo Ajayi

Co-Author(s): Maduka Ughasoro, Sharafadeen Salami, Patrick Nguku, Akintayo Ogunwale, Oluwaseun Odeyinka, Obafemi Babalola, Ajumobi Olufemi, Taiwo Orimogunje, Al-Mukhtar Adamu

**Control and Elimination 4 (Presentation 281-288)**

ROOM 205: 09:00-10:45

Chair: Dr Badara Cisse

Co chair: Renaud Govoetchan

**Assessing the toxicity on survival and fecundity of Anopheles coluzzii when fed on ivermectin treated calves, goats and sheeps in the context of controlling residual transmission of malaria through a One-health approach**

By: Sie Hermann Pooda

Co-Author(s): Karine Mouline, Kounbobr Roch Dabire, Nicolas Moiroux, Issa Sidibe, Thierry Lefevre, Jean-Baptiste Rayaisse, R. Serge Yerbanga, Cedric Penetier

**Interceptor G2, a next generation LLIN based on a mixture of chlorfenapyr and pyrethroid: findings from efficacy trials in experimental huts in endemic countries across Africa and implications for malaria control policy**

By: Mark Rowland

Co-Author(s):

**Exploring the impact of house screening intervention on entomological indices and incidence of malaria in Arba Minch town, southwest Ethiopia: A randomized control trial**

By: Fekadu Massebo

Co-Author(s):

**Short term impact of universal coverage of IRS plus two rounds of MDA on malaria prevalence and incidence in Southern Mozambique**

**By:** Pedro Aide

**Co-Author(s):** Humberto Munguambe, Pedro Alonso, Wilson Simone, Francisco Saute, Beatriz Galatas, Alfredo Mayor, Lidia Nhamussua, Quique Bassat, N Regina Rabinovich

**Evidence of perennial malaria transmission under arid conditions and dry season refugia for anopheline larvae: case study at Kandi in northeastern Benin, West Africa**

**By:** Renaud Govoetchan

**Co-Author(s):** Akogbeto Martin

**Population and transmission dynamics of malaria vectors following scaling up of indoor residual spraying with Pirimiphos-methyl (ACTELLIC 300 CS) in areas targeted for malaria elimination in southern Zambia**

**By:** Kochelani Saili

**Co-Author(s):** Javan Chanda, Duncan Earle, Phiri Foustina, Joseph Keating, Christopher Lungu, Adam Bennett, Chadwick H. Sikaala, Rick Steketee, Mulenga Mwenda, Thomas P. Eisele, John M Miller

**Detection of pyrethroid and carbamate resistance in Anopheles funestus Giles along Lake Kariba in Southern Zambia**

**By:** Javan Chanda

**Co-Author(s):** Thomas P. Eisele, Mulenga Mwenda, Rick Steketee, Adam Bennett, Duncan Earle, Sandra Chishimba, Christopher Lungu, Mulakwa Kamuliwo, Kochelani Saili, Phiri Foustina, Joseph Keating, Chadwick H. Sikaala, John M Miller, Jennifer Stevenson

**Epidemiological stratification of Mozambique based on quantitative malaria transmission data to inform the 2017-2022 National Malaria Strategic Plan**

**By:** Baltazar Candrinho

**Co-Author(s):** Deepa Pindola, James Colborn, Rita Chico, Inessa Ba, Nyasatu Ntshalintshali, Mariana DaSilva

## Control and Elimination 5 (Presentation 305-312)

**ROOM 205: 11:15-13:00**

**Chair:** Prof. Brian Greenwood

**Co chair:** Olukayode Odufuwa

**The influence of socioeconomic on bed nets coverage and utilization on malaria control in Pwani region, Tanzania**

**By:** Olukayode Odufuwa

**Co-Author(s):**

**New insights into Anopheles mating behavior: both males and females of An. coluzzii and An. gambiae use visual markers to swarm & but each in its own way.**

**By:** Serge Poda

**Co-Author(s):** Kounbobr Roch Dabire, Olivier Gnankine, Olivier Roux, Abdulaye Diabate

**Acceptability of durable wall liners when used with Long lasting insecticidal nets (LLINS) for the prevention of malaria in Tanzania**

**By:** Peter Mangesho

**Co-Author(s):** Donald Shepard, Louisa Messenger, George Mtove, William N. Kisinza, Yara Halasa

**If they will buy a thumb-sized stump, we can find it for them : how the luxury timber trade perpetuates multidrug-resistant malaria in Cambodia**

**By:** Melanie Bannister-Tyrrell

**Co-Author(s):** Charlotte Gryseels, Po Ly, Dara Lim, Thavrin Boukheng, Sokha Suon, Koen Peeters Grietens, Sereiboth Noan, Shunmay Yeung

**Human behavior, one reason of residual malaria transmission**

**By:** Lea Pare Toe

**Co-Author(s):** Jean Birba, Marceline Finda, Abdulaye Diabate, Moussa Namountougou, Fredros Okumu

### Household utilisation of local knowledge in malaria prevention in the Okavango Delta, Botswana

By: Dirontsho Maphane

Co-Author(s): Oluwatoyin Kolawole, Moseki Motsholapheko, Barbara Ngwenya

### Feasibility of Malaria Diagnosis and Management in Burkina Faso, Nigeria, and Uganda: A Community-Based Observational Study

By: Ikeoluwapo Ajayi

Co-Author(s): B Alfred Tiono, Andrew Bayelku, Amidou Diarra, Jan Singlovic, Josephine Kyaligonza, Ayodele S. Jegede, Melba Gomes, Vanessa Kabarungi, Bidemi Oyindamola Yusuf, Armande K Sanou, Mohamadou Siribie, Joëlle Castellani, Zakaria Gansane, Jesca Nsungwa-Sabiiti, Frederick O Oshiname, Chinenye Afonne, Max Petzold, Florence Fouque, Sodiomon B Sirima, Luc Sermé, Catherine O Falade

### Malaria and Pregnancy 3 (Presentation 321-328)

TENTE A: 11:15-13:00

Chair: Dr Kassoum Kayentao

Co chair: Yabo Josiane Honkpehedji

Impact of the use, physical integrity and bio-efficacy of long lasting insecticidal net on the malaria infection during the first term of pregnancy - a cohort study in southern Benin

By: A. Djenontin

Co-Author(s):

Uptake of Intermittent Preventive Treatment for Malaria and Birth Outcomes in Selected Health Facilities in the Brong Ahafo Region Ghana, July 2017

By: SAMUEL DAPAA

Co-Author(s):

The prevalence of malaria in childhood febrile illnesses during maternal and newborns studies in

### Lambarene, Gabon

By: Yabo Josiane Honkpehedji

Co-Author(s): Maria YAZDANBAKHS, Eliane NGOUNE FEUGAP, Ayola ADEGNKA, Bertrand Lell, Peter KREMSNER, Yoanne MOUWENDA, Eunice BETOUKE-ONGWE, Fabrice MOUGENI, Jeannot Zinsou, Jean-Claude DEJON AGOBE

Prevalence of malaria, severity and treatment outcome in relation to day 7 lumefantrine plasma concentration in pregnant women

By: Ritah Mutagonda

Co-Author(s):

Complement activation, placental malaria infection, and birth weight in areas characterized by unstable malaria transmission in central Sudan

By: Elhassan Mohamed Elhassan

Co-Author(s):

Chronic Plasmodium falciparum parasitemia appears to be a common cause of placental malaria

By: Lars Hviid

Co-Author(s): Michael F Ofori, Eric Kyei-Baafour, Michael Ofori

Acceptability of the pregnant women s active participation in their antenatal care using point-of-care testing for malaria and anaemia in Ghana

By: Gifty Ampofo

Co-Author(s): Harry Tagbor, Imelda Bates

Prevention of malaria in pregnancy among pastoralists in a humanitarian setting: An exploratory study of ambulatory service delivery models for administering prophylaxis

By: Emmanuel Odjidja

Co-Author(s):