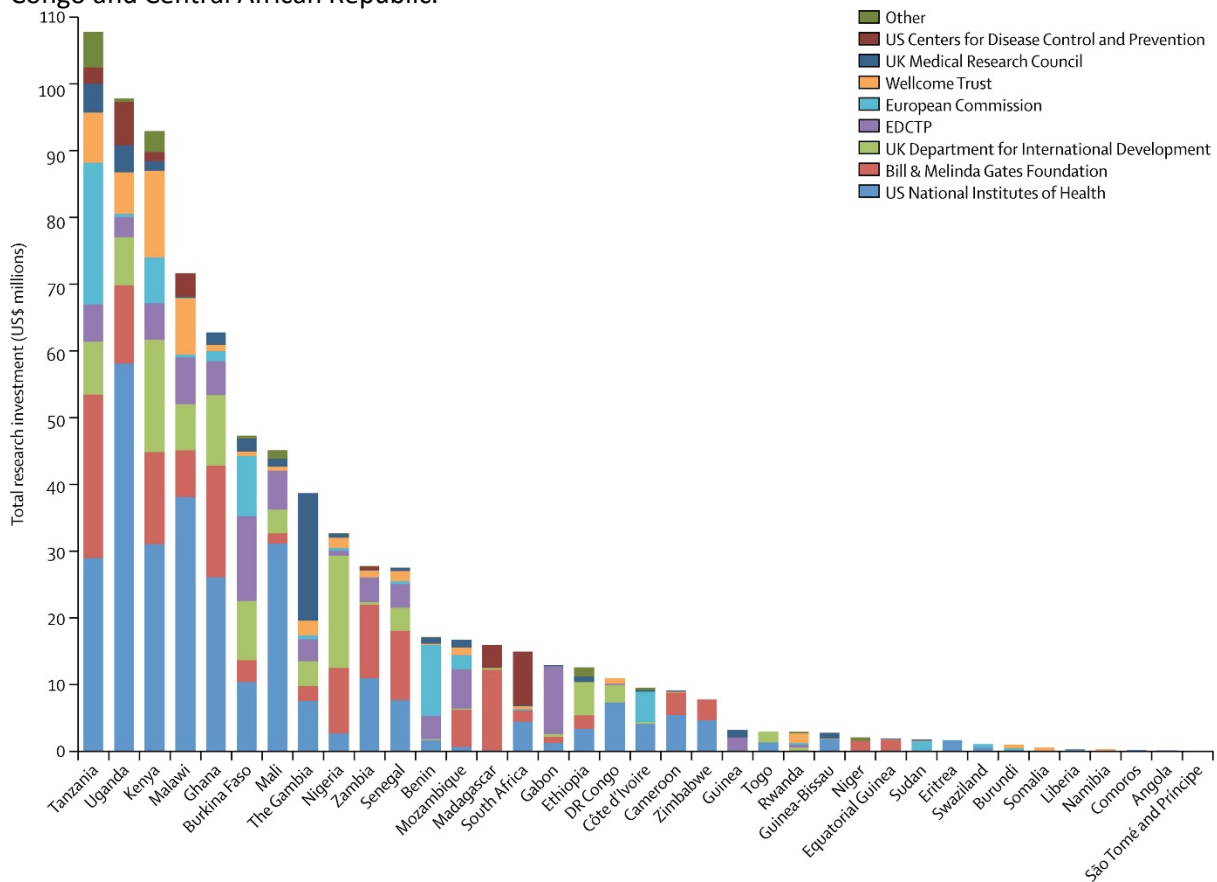


Selected Recent Publications

[Global funding trends for malaria research in sub-Saharan Africa: a systematic analysis](#) - Published: 28 June 2017 in The Lancet Global Health

This is a useful report which describes the geography of public and philanthropic research funding for malaria in sub-Saharan Africa and highlights some gaps in high burden countries such as Chad, Congo and Central African Republic.



[Meeting Report: International workshop on insecticide resistance in vectors of arboviruses, December 2016, Rio de Janeiro, Brazil](#) Corbel et al. *Parasites & Vectors*

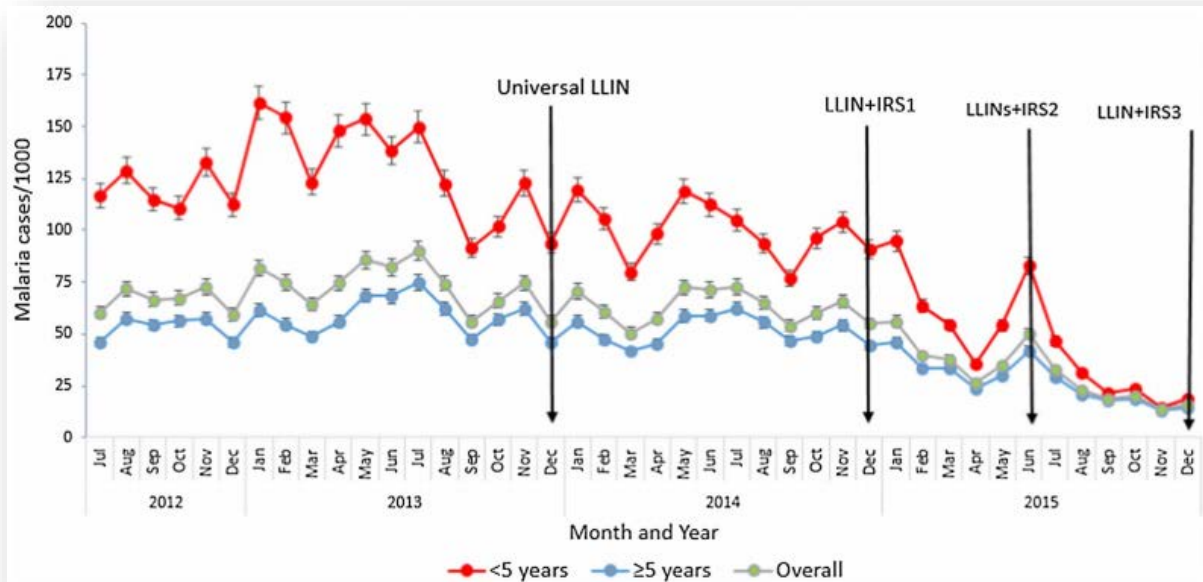
Vincent Corbel ✉, Dina M. Fonseca, David Weetman, João Pinto, Nicole L. Achee, Fabrice Chandre, Mamadou B. Coulibaly, Isabelle Dusfour, John Grieco, Waraporn Juntarajumnong, Audrey Lenhart, Ademir J. Martins, Catherine Moyes, Lee Ching Ng, Kamaraju Raghavendra, Hassan Vatandoost, John Vontas, Pie Muller, Shinji Kasai, Florence Fouque, Raman Velayudhan, Claire Durot and Jean-Philippe David ✉

Parasites & Vectors 2017 10:278 | DOI: 10.1186/s13071-017-2224-3 | © The Author(s). 2017

Received: 23 March 2017 | Accepted: 26 May 2017 | Published: 2 June 2017

This report summarizes the main outputs of the first international workshop on Insecticide resistance in vectors of arboviruses held in Rio de Janeiro, Brazil, 5–8 December 2016. The primary aims of this workshop were to identify strategies for the development and implementation of standardized insecticide resistance management

[Rapid reduction of malaria following introduction of vector control interventions in Tororo District, Uganda: a descriptive study](#) Oguttu et al. Malar J (2017)



An observational, retrospective analysis of aggregated routine surveillance data of malaria reported in HMIS from 2012 to 2015.

Results: Following universal LLINs coverage, the annual mean monthly malaria incidence fell from 95 cases in 2013 to 76 cases per 1000 in 2014 with no significant monthly reduction. Among children <5 years, the malaria incidence reduced from 130 to 100 cases per 1000 when LLINs were used alone in 2014, but declined to 45 per 1000 in 2015 when IRS was combined with LLINs. Among individuals aged ≥5 years, mean monthly malaria incidence reduced from 59 to 52 cases per 1000 when LLINs were used alone in 2014, but reduced significantly to 25 per 1000 in 2015.

[The US President’s Malaria Initiative and under-5 child mortality in sub-Saharan Africa: A difference-in-differences analysis](#) In PLOS Medicine Published: June 13, 2017

“The study provides evidence that introduction of PMI was associated with significant reductions in child mortality in SSA, primarily through increased access to malaria prevention technologies. The main findings indicate that PMI was associated with a 16% decline in annual risk of all cause under-5 mortality.” This article is the feature in the NY Times article in the news column below...” [U.S. Malaria Donations Saved Almost 2 Million African Children.](#)”

[Improved efficacy of an arthropod toxin expressing fungus against insecticide-resistant malaria-vector mosquitoes](#)

Sci Rep. 2017; Published online 13 June 2017; Etienne Bilgo, Brian Lovett, Weiguo Fang, Niraj Bende, Glenn F. King, Abdoulaye Diabate, and Raymond J. St. Leger

[The *Anopheles gambiae* 2La chromosome inversion is associated with susceptibility to *Plasmodium falciparum* in Africa](#) 23 June 2017 in Elife

Abstract

Chromosome inversions suppress genetic recombination and establish co-adapted gene complexes, or supergenes. The 2La inversion is a widespread polymorphism in the *Anopheles gambiae* species complex, the major African mosquito vectors of human malaria. Here we show that alleles of the 2La inversion are associated with natural malaria infection levels in wild-captured vectors from West and East Africa. **Mosquitoes carrying the more-susceptible allele (2L+^a) are also behaviorally less likely to be found inside houses.** Vector control tools that target indoor-resting mosquitoes, such as bednets and insecticides, are currently the cornerstone of malaria control in Africa. Populations with high levels of the 2L+^a allele may form reservoirs of persistent outdoor malaria transmission requiring novel measures for surveillance and control. **The 2La inversion is a major and previously unappreciated component of the natural malaria transmission system in Africa, influencing both malaria susceptibility and vector behavior.**

[Malaria control by commodities without practical malariology](#)

J. Kevin Baird BMC Public Health Published online 21 Jun 2017

“The know-how of practical malariology is not part of that ongoing commodities-based strategy. This article examines contemporary malaria control in the broad strokes of a strategy mitigating the consequences of infection contrasted to that of the abandoned practical malariology strategy of prevention. The inherent risks and limitations of over-reliance upon commodities in striving to control malaria may prompt consideration of a strategic posture inclusive of the proven methods of practical malariology.”

[Impact of a malaria intervention package in schools on *Plasmodium* infection, anaemia and cognitive function in schoolchildren in Mali: a pragmatic cluster-randomised trial.](#) *BMJ Global Health.* PUBLIC RELEASE: 28-JUN-2017

Editorial: This study has implications for innovative approaches to educate and deliver new tools through schools, addresses how we can treat an infectious reservoir population, and highlight the impact of asymptomatic malaria infection on cognitive performance in schoolchildren.

Conclusion: Malaria control in African schools dramatically cuts infection and reduces risk of anemia and improves ability of Malian schoolchildren to pay attention in class. Intervention schools received two interventions sequentially: (1) teacher-led participatory malaria prevention education, combined with distribution of long-lasting insecticidal nets (LLINs), followed 7 months later at the end of the transmission season by (2) mass delivery of artesunate and sulfadoxine-pyrimethamine administered by teachers, termed intermittent parasite clearance in schools (IPCs).

WHO Publications

The WHO updated their guidance document describing the revised evaluation process following the transition from the WHOPES to the WHO Prequalification Team (PQT), including a description of the role

The evaluation process for vector control products

JUNE 2017

INFORMATION NOTE

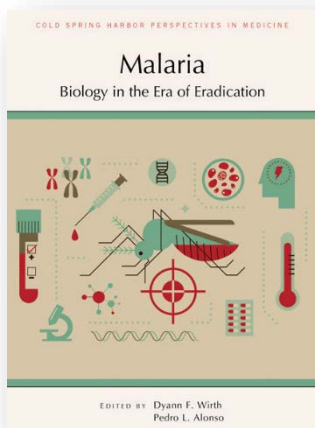
of the Vector Control Advisory Group (VCAG) as part of this process. It outlines the two pathways and their associated components, and is meant to guide interactions between product developers/manufacturers and WHO. ([Click here to access the document](#))

Useful websites and resources

BBC Video -- [How can changing the built environment reduce cases?](#)

As more mosquitoes become resistant to insecticides and malaria parasites become resistant to drugs scientists are looking to alternative ways to tackle malaria. Researchers from the London School of Hygiene and Tropical Medicine are trying to understand more about what in the rural and urban environments can reduce the rate of malaria transmission.

This video from the BBC explores the importance of designing our environment to reduce human contact with mosquitoes and bring down malaria cases.



([Click on the book cover image to access the reference](#))

Written and edited by experts in the field, this collection from *Cold Spring Harbor Perspectives in Medicine* explores recent developments in our understanding of malaria biology and their potential to influence malaria elimination/eradication strategies. The authors describe recent developments in their respective research areas and suggest both how these insights could guide intervention strategy and where critical knowledge gaps remain.

Recent and upcoming events of note

Upcoming Discovery Channel documentary—[Deadlier Than Sharks: A Documentary Spotlights the Mosquito](#)

Featuring interviews from Bill Gates to Bart Knols, this should be entertaining and influential in educating the public.



Presentations from Madrid Meeting: *'Bringing innovation to the frontline: new tools to advance the global response to vector-borne diseases'*

By clicking on [VC meeting - Presentations shared with participants](#) you can access most of the presentations given at the conference. They include presentations by Dirk Engels (Session 2), Raman Velayudhan (Session 4), Jan Kolaczinski (Session 5) and Nicole Achee (Session 9). I thought you might be interested in some of the email addresses below as well. (Credit JE)

Note that the Keystone Symposium on Demand Malaria Channel has an archive of malaria related [“SciTalks”](#) worth checking out

In the news

[U.S. Malaria Donations Saved Almost 2 Million African Children](#)

NY Times Global Health by DONALD G. McNEIL Jr. JUNE 26, 2017

[Fight against malaria: Mutant fungus genetically engineered with spider and scorpion venom could be a lifesaver](#) *Newsweek*

Researchers at the University of Maryland are employing innovative techniques in their efforts to eradicate malaria. Their approach involves injecting spider and scorpion venom into already toxic fungi in order to kill the malaria vector. By targeting the vector using this technique, scientists may be able to kill larger populations of disease-carrying and insecticide-resistant mosquitoes. The venom acts as a neurotoxin, and the fungus acts as the catalyst to transfer the toxin into the mosquito. The effects of this method were clear: First, the mosquito stopped feeding. Then, the neurotoxin killed the vector. While there are concerns about using venom in wild settings, the Environmental Protection Agency (EPA) has approved this method and has noted that neither the venom nor the fungus pose a threat to birds, mammals, or other insects.

[The High-Tech Device That’s Like a Bouncer for Mosquitoes](#)

New York Times, features the Gates Foundation

Not all mosquitoes carry diseases—some are simply a nuisance. When it comes to vector control, insect traps and other similar mechanisms trap and kill all mosquitoes indiscriminately. This makes identifying the species known to carry diseases from among hundreds of dead vectors quite difficult. However, new traps created by Microsoft have the capacity to scan each mosquito that enters the system. If the wings match the wings of a disease-carrying species, the system traps the mosquito in its own cell. This system correctly identifies disease-carrying vectors 90 percent of the time, thus making catching and identifying specific mosquito species much easier. The system is currently expensive, with each system costing several thousand dollars. However, scientists hope to drive the price down to a few hundred dollars to allow for worldwide distribution.

[Africa’s first humanitarian drone testing corridor launched in Malawi by Government and UNICEF](#) (credit SM)

29 June 2017 – The Government of Malawi and UNICEF today launched an air corridor to test potential humanitarian use of unmanned aerial vehicles (UAVs), also known as drones. The corridor is the first in Africa and one of the first globally with a focus on humanitarian and development use.

NEWS RELEASES

Friday, April 21, 2017

NIH Funds Seven International Centers of Excellence for Malaria Research

The awards fund three new and four existing centers that work in 14 countries in Africa, Asia and Latin America.

As discussed when we met with the Lee Hall and team, the ICEMR platforms hold potential to support evidence generation and product launch activity.

The recipients of the ICEMR awards announced are as follows:

- **Amazonian Center of Excellence in Malaria Research**
Principal Investigator: Joseph Vinetz, M.D.
Lead Institution: University of California, San Diego
- **Multidisciplinary Research for Malaria Control and Prevention in West Africa***
Principal Investigator: Seydou Doumbia, M.D., Ph. D.
Lead Institution: University of Sciences, Techniques & Technologies of Bamako, Bamako, Mali
- **Malaria Transmission and the Impact of Control Efforts in Southern and Central Africa**
Principal Investigator: William Moss, M.D.
Lead Institution: Johns Hopkins Bloomberg School of Public Health, Baltimore
- **Program for Resistance, Immunology, Surveillance & Modeling of Malaria in Uganda (PRISM)**
Principal Investigator: Grant Dorsey, M.D.
Lead Institution: University of California, San Francisco
- **Environmental Modifications in sub-Saharan Africa: Changing Epidemiology, Transmission and Pathogenesis of *Plasmodium falciparum* and *P. vivax* Malaria***
Principal Investigator: Guiyun Yan, Ph.D.
Lead Institution: University of California, Irvine
- **Southeast Asia Malaria Research Center**
Principal Investigator: Liwang Cui, Ph.D.
Lead Institution: Pennsylvania State University, University Park
- **Myanmar Regional Center of Excellence for Malaria Research***
Principal Investigators: Christopher Plowe, M.D., M.P.H., and Myaing Myaing Nyunt, M.D., M.P.H., Ph.D.
Lead Institution: University of Maryland School of Medicine, Baltimore



Quote

In the study of malaria problems and in the formulation of control programmes, action based on generalizations is likely to be followed by the most disastrous consequences. It has been well said that the most hazardous of human tendencies is the drawing of general conclusions from limited experience, and in no instance it is more applicable than in the planning of malaria control measures.

Sir Gordon Covell (1948) Lectures on Malaria (4th edition)