



First Quarter

Newsletter 009



Train a Woman, Save a Nation



ACoMVeC project launching & workshop P.2



International Women Day 2023 P.3



Kelley Ambrose, visited CRID P.4

Employee Milestone

New staff recruited at CRID

- Receptionist : **KARAWAH RACHEL NYEH**



Capacity Building

ACoMVeC project launching and workshop

Monday, February 13, 2023, as part of the activities of the African Consortium in Modelling for Effective Vector Control (ACoMVeC), the first workshop of the project was organised at the premises of the Centre for Research in Infectious Diseases (CRID), Yaoundé, Cameroon. The workshop ran from February 13th to 21st 2023. The aim of this event was to launch the project activities and



to strengthened the capacity of stakeholders on the potential of mathematical modeling to reduce malaria burden and influence policy. The participants included, the 16 ACoMVeC PhD students representing 8 sub-Saharan African partner organizations, representatives from the NMCP, PAMCA Cameroon, as well as other stakeholders.

INTERVIEWS

Prof Charles Wondji, CRID's Executive Director

« This will be a key change from what is done now »

This is a consortium put in place through a funding from the Bill and Melinda Gates Foundation where we have 7 African research institutions. So far decision has been taken randomly with less evidence. We would like to improve the situation by training at least 16 Ph.D students in mathematical modelling, to equip them, to support National Malaria Control Program (NMCPs) on the continent, to take the right evidence-based decisions.



Dr Ateba Joel, National Malaria Control Program's (NMCP) Permanent Secretary

« From now on, there will be a rationale behind all the decisions we make in the context of vector control »

This workshop is for us an opportunity to give to the country and even to other countries in Africa, high level experts to model, to give solutions in the fight against vector control in our continent. As a National Malaria Control Program, we need evidence and certainty to make strategic decisions.



Dr Goupeyou, PAMCA West Africa-Coordinator

« It is important to also include women because this struggle is complex »

Among one of the main objectives of Panafrican Mosquitoes Association (PAMCA), which is to support and strengthen the role of women in vector control. Because in order to be able to fight effectively against vector-borne diseases, it is important to also include women. It should be noted that according to certain United Nations sustainable development goals, gender equality and also reducing inequality in countries are at the heart of the current debate. It is important to include women because this struggle is complex. It must take into account various levels of diversities.



Collaboration

ANTIVeC Meeting

From 26th February to 01st March 2023, ANTI-VeC Network Meeting on Genetic and Symbiont-based Control Approaches for Vector Control took place in Kilifi, Kenya. The meeting brought together scientists working on genetic modification of vector insects, and the use of heritable endosymbionts to develop novel tools to prevent vector-borne disease.

Claudine Maffo, PhD student at CRID

During the meeting, Claudine Maffo presented on «Effect of *Asaia* spp on the fitness of *Anopheles coluzzii* for paratransgenic approaches». She has shown that *Asaia* bacteria provides high fitness to *Anopheles* mosquitoes confirming that it is a good candidate for paratransgenesis, a novel malaria vector control approach. This bacteria could be used for population replacement strategy proposed in the symbiont-based approach.



Fleuriane Djondji, PhD student at CRID

Fleuriane Djondji has been selected for an oral presentation of her Ph.D research work in the section «Genomic Structural Variations and Insecticide Resistance in Malaria Vectors». Her presentation was entitled: «Contrasting Patterns of *Asaia* association with Pyrethroid Resistance Escalation between the Malaria Vectors *Anopheles funestus* and *Anopheles gambiae*». It was an enriching experience both in the scientific field with the exploration of new research areas.



Calmes Bouaka, PhD student at CRID

Calmes Bouaka participated to the ANTI-VeC Network Meeting and shared his work on «Assessing the Tsetse Fly Microbiome Composition and the Potential Association of Some Bacteria Taxa with Trypanosome Establishment.» The study he presented highlighted significant differences in the bacterial diversity and composition among tsetse species, between teneral and non-teneral flies and more importantly between flies displaying or not displaying mature trypanosome infections, with some bacteria taxa, associated with trypanosome maturation in tsetse flies.



Dr Menze Benjamin in Uganda

CRID in Collaboration with Uganda Virus Research Institute (UVRI) has sponsored the construction of an experimental hut station close to Mayugue town in Uganda. In fact from 16th February to 9th March 2023, Dr Menze Benjamin,



Postdoctoral researcher at CRID was in Uganda to bring his experience how to build an experimental hut. This station will give the possibility to local researchers to assess how the insecticide resistance is impacting the effectiveness of vector control tools in Uganda.



Grants

Early Career Grants at CRID

CRID is pleased to announce the results of the Hamish Ogstom Foundation Early Career Grants applications. 7 proposals from 75 applications were selected. Each successful candidate will be awarded up to £5,000 to deliver a project to be completed by 28th February 2024. The funds will allow the design and implementation of specific health related interventions to improve public health. The award recipients were invited at CRID on March 23, 2023 to sign the contract agreement.

List of awardees:

NONO Vanessa NINKEH	SADO YOUSSEU Francine Berlange	NGUIFFO NGUETE Daniel	BUGHE RHODA NSEN
Pierre FONGHO SUH	MEWAMBA MEZAJOU ESTELLE	TEDJOU NOUBOUEM Armel	



Events

WORLD NTDs DAY 2023

Let's talk with Dr Tresor Melachio - Deputy Head of Parasitology and Microbiology Department at CRID



« Act Now before another world wide threat takes our energy like the last Covid pandemic »

Human are affected all over the world by many diseases amongst which some are known to be neglected. And they mostly affecting the poorest communities in the tropics. To once again raise awareness about this slaughter, today 31st January 2023, is dedicated to their commemoration, under the thematic « act now, act together, invest in Neglected Tropical Diseases (NTD's) ». Act Now before another world wide threat takes our energy like the last Covid pandemic. Acting together for a fast and accurate action. Invest, because yes, there are many people suffering from these diseases. The Centre for Research in Infectious Diseases (CRID) is joining the rest of the world to defeat NTD's. Let's beat NTD's together.

INTERNATIONAL WOMEN DAY 2023



The 2023 edition of International Women Day (IWD) celebration started on Saturday, March 4, 2023 at CRID, with a hiking exercise at Mount Eloumdem, Mendong, Yaoundé, Cameroon organised by CRID women to encourage women and girls to engage in sports activities as a vehicle for health promotion and prevention of Non Communicable Diseases

(NCDs). This vivacious moment continued on March 8, 2023, with a cultural event organized in honour of all CRID's women especially those at the heart of scientific research.

A round table discussion was equally organised during the March 8 celebration and we had the pleasure to welcome Dr Jessy Goupeyou-Youmsi, PAMCA Women in Vector Control Regional Coordinator for West Africa, for a talk on the theme of this year's event and the sharing of experience as a woman scientist. She was accompanied by Dr Kouamo Mersimine, Biochemist/Post-doc research fellow at CRID. Dr Emmanuel Elanga, Deputy Head of Entomology Department and Mr. Dum-Buo Nnamdi, social scientist at CRID.

Media engagement. Nathalie Amvogo, female researcher at CRID, represented women scientist during a special program hosted by Regard'Afrik. A television channel covering the whole African continent. CRID joined the rest of the world to celebrate the 38th edition of International Women's Day under the theme: «For an inclusive digital world: innovation and technologies for gender equality ».

Open day. On March 10, we received 16 high school students from Mindik High School, Yaoundé, Cameroon at our premises. They were all ladies from scientific classes, and they were introduced to CRID insectary and laboratories.

YOUTH DAY 2023

We celebrate living together

Yaoundé, February 10, 2023. CRID and OCEAC organised joint sport activities at the Rain Forest International School, Yaoundé, Cameroon.



A football match opposing men of both institutions and a handball game for women were the main sport activities of the day. This event took place from 14h35 - 18h35. Apart from being researchers, we celebrate living together. It was a happy youth day to all.



Statistics

46
Women

70
Men

34
Scientists

29
Administration

35
Students

18
Technicians

Visits and internship

Dr. Justin Komguez Nono shared his experiences with CRID

On Tuesday, January 17th 2022, the Centre for Research in Infectious Diseases (CRID) received Dr. Justin Komguez Nono, Head of Unit of Immunology and Helminth Infections



(IBHI) and Head of Laboratory of Molecular Biology and Biotechnology at the Centre for Research in Health and Major Diseases, Institute of Medical Research and Medicinal Plant Studies (IMPM). He gave a 30 minutes talk on "Influence of schistosomiasis on host vaccine response" and presented techniques that can be helpful in increasing the efficiency of malaria vaccines. This visit highlights the importance of collaboration

for the improvement of sciences and research in Africa in general and Cameroon in particular. There are many reasons to think about new partnerships for development.

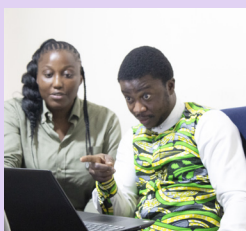
Kelley Ambrose, visited CRID

On Wednesday, March 22nd, 2023, Kelley Ambrose, Lead programme Manager for Vectorlink visited CRID to discuss on ongoing activities. She was accompanied by Dr Fondjo Etienne, CoP vectorlink Cameroon. They were received by Prof Charles Wondji, CRID's Executive Director and a



team of researchers. It was an honour receiving them for an hour in our premises and to guide them through our laboratory and insectarium.

Kouokam Ngounoue Sandrine Flore's intership ended



Kouokam Sandrine is a master's student in Sociology, with speciality in Ecosystems, Health and Society, at the Institute for Research in Health Sciences (IRSS) in Burkina Faso.

«I did a three-month internship at the Center for Research in Infectious Diseases (CRID); as part of the «Gene drive» project supported by the Wellcome Trust Foundation in collaboration with IRSS. During my internship, I carried out date collection and analysis related to the identification of potential key decision makers regarding the «Gene drive», and assessed their knowledge about this emerging biotechnology in vector control. The data collected as well as the experience acquired will allow me to complete the writing of my master's dissertation on the knowledge of potential key decision-makers in Cameroon on «Gene dive» as a complementary tool for vector control. I am very happy because

CRID has set up an appropriate environment to conduct my study. Thanks for all CRID.»

Scientific Publications

Yvan Fotso-Toguem & Al; Genetic Diversity of Cytochrome P450s CYP6M2 and CYP6P4 Associated with Pyrethroid Resistance in the Major Malaria Vectors *Anopheles coluzzii* and *Anopheles gambiae* from Yaoundé, Cameroon. published on December, 23, 2022 in Genes. <https://doi.org/10.3390/genes14010052>.

Kara Fikrig, Noah Rose, Nathan Burkett Cadena, Basile Kamgang, Paul T. Leisnham, Jamie Mangan, Alongkot Ponlawat, Sarah E. Rothman, Tanise Stenn, Carolyn S. McBride & Laura C. Harrington; *Aedes albopictus* host odor preference does not drive observed variation in feeding patterns across field populations, published on January, 04, 2023 in Nature. <https://rdcu.be/c9DND>,

Pierre Fongho Suh & Al; Impact of insecticide resistance on malaria vector competence: a literature review, published on January 17, 2023 in BMC. <https://pubmed.ncbi.nlm.nih.gov/36650503/>

Magellan Tchouakui & Al; Detection of a reduced susceptibility to chlorfenapyr in the malaria vector *Anopheles gambiae* contrasts with full susceptibility in *Anopheles funestus* across Africa, published

on February, 09, 2023, in Nature. <https://www.nature.com/articles/s41598-023-29605-w>

Leon M. J. Mugenzi & Al; The duplicated P450s CYP6P9a/b drive carbamates and pyrethroids cross-resistance in the major African malaria vector *Anopheles funestus*, published on March 27, 2023, in PLoS Genes. <https://journals.plos.org/plosgenetics/article?id=10.1371/journal.pgen.1010678>,

Daniel Nguifo Nguete & Al; Plasmodium malariae contributes to high levels of malaria transmission in a forest-savannah transition area in Cameroon, published on Jan 25, 2023, in PMC - PubMed. <https://pubmed.ncbi.nlm.nih.gov/36698132/>,

Fleuriane Metissa Djondji Kamga & Al; Contrasting Patterns of Asaia Association with Pyrethroid Resistance Escalation between the Malaria Vectors *Anopheles funestus* and *Anopheles gambiae*, published on March 2, 2023 in MDPI. <https://pubmed.ncbi.nlm.nih.gov/36985217/>

Partners and funders

