



CRID

Fourth Quarter

Newsletter₀₀₈

October – December 2022



Professor Charles Wondji, LSTM's 125th Anniversary Campaign launch, House of Commons

“If we are bold enough to believe and invest, more will be achieved to really break the cycle of poor health and poverty on the African continent.”



Employee Milestone

New staff recruited at CRID

■ Finance Officers

- » Gyen Munakwa Romario-
- » Nkongho Ayuk

■ Post-Docs

- » Ngambia Freitas François Sougal
- » Yimga Michelle
- » Kuipou William

■ Ph.D students

- » Metsadong Manuela
- » Dongmo Franck Junior
- Master Students
- » Fotso Berbert
- » Ndick Samuel
- » Tchuisseu Danielle

■ Estates Officer

- » Nzoupet Lionel
- Driver
- » Biakolo Benjamin



Capacity Building

Defense (Ph.D and Masters)

From now on we will call her Dr Kouamo Mersimine !

Yaoundé, November 28th, 2022, after 5 years of hard work and effort, Kouamo Mangoua Mersimine now a former student of the Faculty of Sciences, University of Yaoundé I (UYI), Cameroon, defended her PhD thesis on the topic: "Genomic and functional characterization of the role of glutathione s-transferases epsilon in resistance to insecticides in *Anopheles funestus* s.s., one major malaria vector"; supervised by Pr Fekam Boyom (UYI), Pr Boudjeko Thaddée (UYI) and Pr Wondji Charles (LSTM). Mersimine Kouamo's study was part of Wellcome Trust project.



Congratulations Dr Ngambia Freitas !

On this Monday, November 28, 2022, it is with distinction that the student Ngambia Freitas François Sougal defended his doctoral thesis in Animal Biology and Physiology at the University of Yaoundé I. His study is entitled: "Growth trial of Tsetse fly resistance as a vector control method against African trypanosomiasis (HAT and Nagana)".



Dr Tedjou Armel defended his Ph.D thesis

On December 08th, 2022, it was Tedjou Armel's turn to brave this scientific process. He presented the fruits of his doctoral research work on the topic:



"Analysis of the entomological risk of emergence of massive epidemics of arboviruses (Dengue, Chikungunya and Zika) in Cameroon". After his presentation, the jury unanimously awarded him a doctorate degree in Parasitology and Ecology with distinction. Dr Tedjou's thesis was part of Wellcome Trust project

Thierry Tchawa did it ...

Yaoundé, December 20th, 2022, Tchawa Seya Thierry, Lab technician at Centre for Research in Infectious Diseases (CRID), successfully defended his Master's of Public Health dissertation with distinction at the School of Health Sciences, Catholic University of Central Africa, Cameroon; on the topic: "Study of the dynamics of malaria transmission and insecticides resistance profile of *Anopheles moucheti* in Nyabessang, south region, Cameroon". This study supervised by Dr M. Kouamo was part of PAMCA project.



Chani Julie obtains her master's degree in public health

December 20th, 2022, its half-past 12:00 PM, Chani Mougoue Julie, a student of the 13th batch of students

at the School of Health Sciences / Catholic University of Central Africa, receives the floor from the jury presented her master dissertation in partial fulfillment to the award of a Master's degree in Public Health, she presented her work on the topic "The dynamics of malaria transmission and insecticide resistance profile in *Anopheles Nili* in Elende." This work was carried out under the supervision of Dr. Tchouakui Magellan Ph.D in animal biology and physiology working at CRID. Chani Julie's master dissertation is related to PAMCA project.



Public engagement

Stakeholder engagement meeting held at Okola

It happened on November 9th, 2022. The purpose of this meeting was to raise awareness about Mosquito-Borne Diseases specifically Malaria, its preventive measures, the current challenges in the control of the disease as well as to set the stage for baseline data collection for the project entitled: Impact of metabolic resistance to pyrethroids on the vectorial competence of the major African malaria vector *Anopheles Funestus*. This meeting brought together key stakeholders in the district including the Sub-divisional Inspector of Basic Education and staff at the Inspectorate, school directors or head teachers and the District Medical Officer (DMO) of Okola, Centre region, Cameroon. A total of 19 schools were represented. This field mission was manned by a team comprising of Prof Ndo Cyrille, Principal Investigator, Head of Parasitology and Microbiology department at CRID and team lead; Dr Pierre Fongho Suh Post-Doc; Nnamdi Dum-Buo, Social Scientist; Djiemo Ornella, Master Student all from CRID.



Events

LSTM 125 campaign launch

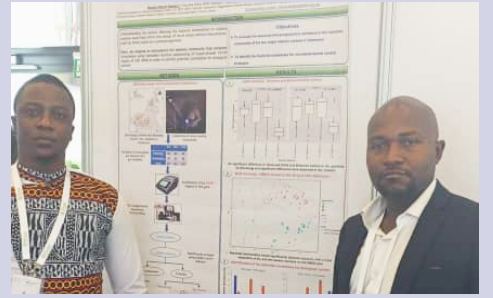


It happened on October 25, 2022. CRID Executive Director, Professor Charles Wondji, LSTM Vector Biologist, based in Cameroon, gave a talk about his own career journey, from Early career Researcher at LSTM, to pre-eminent academician at the Centre for Research in Infectious Diseases (CRID), in Cameroon. "If we are bold enough to believe and to invest, more will be achieved to really break the cycle of poor health and poverty on the African continent. There could and should be a better future for those paying the massive burden of tropical diseases. Together we can make a difference", Professor Charles Wondji said. The 125 Fundraising Campaign aim was to leverage strategic investment in the research leaders of the future, over a ten-year period, by investing in partnerships and people, globally.

CPHIA 2022

CRID represented

Dr. Marcel Sandeu, post-doc scientist fellow, Nnamdi Dum-Buo, Social scientist and William Tadam Tadam, Communication Officer at CRID attended the second International Conference on Public Health in Africa (CPHIA) from 13th-15th December 2022



at the Kigali Convention Centre, Rwanda. The conference theme was "Preparedness for Future Pandemics and Post-Pandemic Recovery: Africa at a Crossroads". The main objective of this meeting was to offer a unique platform for African leaders, researchers, policymakers, and stakeholders to engage in science, research, technology and public health policy while ushering in a new era of strengthened scientific collaboration and innovation across the continent. Dr Marcel Sandeu participated by presenting a scientific poster entitled "Seasonal variation of microbiota composition in Anopheles gambiae and Anopheles coluzzii in two different eco-geographical localities in Cameroon".

CPHIA communication team also held a media workshop for journalists attending the conference on key steps in reporting health. The aim of it was to give them tips on how to write scientific stories for layman. As CRID's Communication officer, William Tadam Tadam attended the workshop.

Nnamdi Dum-Buo, Social Scientist at CRID attended the Youth Pre-conference on the margins of the 2nd International Conference on Public Health in Africa (CPHIA) 2022, organised by Africa CDC in collaboration with GIZ Africa Union and the Mastercard Foundation. During this event with others youth leaders they discussed the challenges of youth engagement in public health security in Africa.



In Christmas mood !

December 23, 2022, a jolly day for Cridians

Seasons goes and come, but the spirit of celebration hails forever. In several parts of the world, Christmas celebration is now a tradition. This December 23rd, 2022, 48 hours before the commemoration of the birth of the Christ, is a jolly day at CRID. Staffs, researchers and support staff were all present at the event to commemorate the Christmas season and rejoicing in the Christmas spirit. Several activities were on the agenda, ranging from a football match, handball game, video games, billard, etc. This morning from 9:45 AM to 10:15 AM we had a handball match at our premises between Staffs and researchers. From 10:00 AM to 12:00 PM, we had a football match at Rainforest International school stadium with staff playing (yellow jersey) against researcher's (red jersey). From then to 4:00 PM place has been made to entertainment in CRID premises.

Visits and Internship

Sandrine Flore Ngounoue for a 2 months internship at CRID

Sandrine Flore Ngounoue is a master student at the African Center of Excellence in Biotechnology and Innovation for the Elimination of Vector-borne Diseases (CEA/ITECH-MTV), Burkina Faso. She is currently a research student at Research Institute of Health Sciences (IRSS) Burkina faso, working on the Wellcome Trust Gene Drive Social Science Work Package. This is a collaborative project between the IRSS and CRID to assess stakeholder engagement for gene drive as an innovative tool for malaria elimination in Africa. Based on this collaboration, Flore is currently in Cameroon as an intern to collaborate with CRID's social science team to collect preliminary data on stakeholders' perception on gene drive and to identify or map out stakeholders who could be involved in gene drive discussions in Cameroon from a decision-making perspective as well as collect data to answer her research questions for her dissertation. Flore N, arrived Cameroon on December 18, 2022 and will be part of our team until February 25, 2023 before receding to Burkina Faso.



Annual Statistics

49
Women

68
Men

26
Scientists

32
Administration

40
Students

19
Technicians

Debora C, Kajeguka skilled at CRID during 6 weeks



Debora Charles Kajeguka, is a Post-doc researcher working in the field of Microbiology; and precisely on Arboviral research. Her home institution in Tanzania is Kilimanjaro Christian Medical University College. She had an internship from October 4 to November 18, 2022. Her period of internship consisting of training on laboratory technique on how to use *Aedes* Salivary Biomarker to assess the risk of Arboviral Transmission. During her stay, Debora C, Kajeguka was under the supervision of Dr Emmanuel Elanga.

"My internship at CRID was very good" said Debora. According to her, the rewarding points during of her internship include "good coaching and mentorship from Dr. Emmanuel Elanga and good cooperation during lab activities from staff and post-graduate students". In addition, she added that, after this internship the next step will be to collaborate in future opportunities like grant writing and probably students or staff exchange for knowledge and skills enhancement in both parties. Do you wish to come back for any other reason? "Yes" she answered. CRID will be honoured to receive you again.



Scientific Publications

Leon M. J. Mugenzi & al; Escalating pyrethroid resistance in two major malaria vectors *Anopheles funestus* and *Anopheles gambiae* (s.l.) in Atatam, Southern Ghana; Published on 25 October 2022, in *BMC Infectious Diseases*.

This study shows the multiple and high intensity of resistance observed in both malaria vectors highlights the need to implement resistance management strategies and the introduction of new insecticide chemistries. <https://doi.org/10.1186/s12879-022-07795-4>.

Cyrille Ndo & al; IgG antibody responses to *Anopheles gambiae* gSG6-P1 salivary peptide are induced in human populations exposed to secondary malaria vectors in forest areas in Cameroon; Published on November 10, 2022 in *PLOS ONE*.

The authors showed that the gSG6-P1 serologic biomarker is capable to detect human exposure to *An. moucheti* and *An. paludis*, two dominant species believe to be malaria vectors in the forest areas in Africa. <https://doi.org/10.1371/journal.pone.0276991>.

Aurelie P. Yougang & al; Spatial distribution and insecticide resistance profile of *Aedes aegypti* and *Aedes albopictus* in Douala, the most important city of Cameroon; Published on December 13, 2022 in *PLoS ONE*.

This study revealed that *A. aegypti* and *A. albopictus* are present in city of Douala with *A. aegypti* as the most abundant. Both *Aedes* species are resistance to all insecticides tested and three kdr mutations have been detected in *A. aegypti* samples. <https://doi.org/10.1371/journal.pone.0278779>.

Kengne Fokam AC & al; Exposition of Intermediate Hosts of Schistosomes to Niclosamide (Bayluscide WP 70) Revealed Significant Variations in Mortality Rates: Implications for Vector Control; Published on October, 8 2022 in *Int J Environ Res Public Health*.

This study revealed an important variability in the susceptibility to

Niclosamide for the six snail samples tested. Adult snails appeared to be more susceptible than eggs, and specific concentrations at which Niclosamide is effective against both egg and adult snail stages were identified. <https://doi.org/10.3390/ijerph191912873>.

Carmène Sandra Ngadjeu & al; Knowledge, practices and perceptions of communities during a malaria larviciding randomized trial in the city of Yaoundé, Cameroon, Published on November 3, 2022 in *PMID*. <https://doi.org/10.1371/journal.pone.0276500>.

Fotso-Toguem Y & 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. *Genes*. 2023; 14(1):52. <https://doi.org/10.3390/genes14010052>.

Nancy B Tahmo & al; An epidemiological synthesis of emerging and re-emerging zoonotic disease threats in Cameroon, 2000-2022: a systematic review.

This systematic review bridges some existing gaps in the understanding of the landscape of zoonoses and exposes critical gaps in the surveillance and reporting of zoonotic diseases in Cameroon; published on December, 17 2022, in *IJID Regions*. <https://doi.org/10.1016/j.ijregi.2022.12.001>.

Carmène Sandra Ngadjeu & al; Knowledge, practices and perceptions of communities during a malaria larviciding randomized trial in the city of Yaoundé, Cameroon.

The study indicated the acceptance of larviciding program by the population. This positive environment could favour the implementation of future antilarval control activities in the city of Yaoundé; published on November 3, 2022, in *PLoS ONE*. <https://doi.org/10.1371/journal.pone.0276500>.



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