

COMMUNICATION

Effective Communication Workshop for Women p.2

8TH MARCH

An occasion to celebrate women p.2

FACT CHECKING

Not all mosquitoes transmit malaria p.3

STORY TELLING

The Mango malaria myth p.4



NEWSLETTER



A publication of the Centre for Research in Infectious Diseases, first quarter, N°013.

OUR VISION

**Social Media:
A powerful tool
to enhance your
scientific career**



Prof. Charles Wondji

In today's digital age, social media has become an integral part of our daily lives, transforming the way we communicate, share information, and connect with one another. While the impact of social media on personal and social spheres has been widely discussed, its potential as a powerful tool for enhancing the careers of scientists is often overlooked. As the scientific community continues to evolve, the ability to effectively communicate research findings, engage with peers, and build a professional network has become increasingly crucial. Social media platforms offer scientists a unique opportunity to amplify their voices and make their work more accessible to a broader audience.

One of the primary benefits of utilizing social media in the scientific realm is the ability to share research findings and insights in a timely and engaging manner. Rather than relying solely on traditional methods of publication in academic journals, which can be time-consuming and often limited in their reach, scientists can leverage platforms like X, LinkedIn, and Instagram to disseminate their work to a global audience. By actively engaging on social media, scientists can connect with their peers, collaborate on projects, and stay up-to-date with the latest developments in their field.

By curating a strong online presence, scientists can establish themselves as leaders in their respective fields, showcasing their expertise and attracting the attention of potential employers, funding agencies, and collaborators. In an increasingly competitive academic landscape, where securing research funding and securing prestigious positions can be a challenge, a robust social media presence can give scientists a competitive edge.

By actively engaging with their online communities, scientists can demonstrate their impact, showcase their research, and build a reputation that can open doors to new opportunities.

Dr. David Walton impressed by CRID's research facility P.2

■ This interaction between the United States Global Malaria Coordinator and CRID's Executive Director underlines the collaborative nature of the global fight against malaria. It highlights CRID's commitment to make a significant impact on malaria control efforts through cutting-edge research, partnerships, and knowledge sharing.



Dr. David Walton receiving a gift from Prof Charles Wondji

DEFENSES

Nkemngo Francis successfully earns a Ph.D degree

■ Dr. Nkemngo Francis's research was entitled: «Genetic determinants of *Plasmodium falciparum* and *P. malariae* drug resistance circulation in humans and the Anopheles vectors driving malaria in Cameroon.» p.4

EVENT

CRID actively participated in the malaria ministerial conference

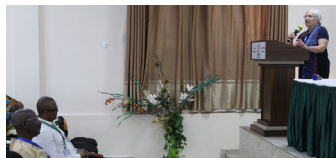
■ The meeting focused on the urgent need of tackling malaria in countries most severely affected by the disease. CRID actively participated by setting up an exhibition stand. p.3



VISITS

Honored to receive a researcher from Harvard

On March 8, 2024, CRID had the privilege of hosting Prof. Dyann Wirth from Harvard University.



Prof. Charles Wondji, CRID Executive Director, was honored to welcome Prof. Dyann Wirth from Harvard University and Prof. Abdoulaye Djimde, an associate professor of Microbiology and Immunology in Mali, both renowned malaria scientists.

During a brief session in the amphitheatre, where the researchers shared their expertise and insights with the CRID community. This session served as an invaluable opportunity for knowledge exchange and collaboration. Following the presentation, Prof. Wirth and Prof. Djimde were given a tour of CRID's laboratories and insectaries. They had the opportunity to witness

first-hand the cutting-edge research facilities and observe the ongoing work conducted by CRID scientists in the field of malaria research. This visit reaffirmed CRID's commitment to fostering collaborations with leading experts in the field, as we strive to make significant contributions to the fight against malaria.

Dr. David Walton astonished by CRID's facilities

March 8, 2024. CRID was honored to receive Dr. David Walton, from USAID.



Dr. Walton was welcomed by Prof. Charles Wondji, the Executive Director of CRID, for a productive discussion on CRID's efforts as a leading centre for research on infectious diseases, particularly in the fight against malaria. The meeting provided an opportunity to exchange valuable insights and expertise on malaria research and control strategies. Dr. Walton and Prof. Wondji discussed the

innovative initiatives undertaken by CRID to advance our understanding of malaria and develop effective interventions to combat the disease. This interaction between the United States Global Malaria Coordinator and CRID's Executive Director underlines the collaborative nature of the global fight against malaria. It highlights CRID's commitment to making a significant impact on malaria control efforts through cutting-edge research, partnerships, and knowledge sharing. We extend our gratitude to Dr. Walton for visiting CRID and for his valuable contribution to the discussion on gender balance. Such a honoring visit strengthens our collaboration and our resolve to continue working tirelessly towards reducing the burden of malaria and improving the health and well-being of communities affected by this devastating disease.



On February 7, 2024, a group of members of parliament visited CRID. The parliamentarians were Hon. Njume Peter, Hon. Ngoko Marie Louise, and Hon. Ndjip Bienvenu. They were accompanied by a team from Impact Santé Afrique (ISA), led by the Executive Director, Mrs. Olivia Ngou. After a short introduction at CRID's amphitheater, the visitors were taken around the different laboratories and insect-rearing facilities at CRID. They were very impressed by CRID's infrastructure and the research being done there to fight diseases spread by insects in Cameroon and Africa. The members of parliament left feeling positive about what they had seen. They promised to support CRID in various ways and were excited about CRID's incredible work. After this moment at CRID, the parliamentarians promise they will look for the occasion to invite Prof. Charles Wondji for a speech at the June's parliamentary session at the Cameroon national Assembly. This visit was a good sign for the future of CRID in 2024 and beyond.

CRID received a distinguished visit from a delegation of parliamentarians

CRID had the privilege of hosting a delegation from the Parliamentary Caucus for Health Financing in Cameroon.

8TH MARCH

International Women's Day- 2024

CRID received 185 visitors from local community during its open day

Prior to the 39th edition of International Women's Day celebrated on March 8th every year, CRID organized an open day. On March 6th, 2024, we were delighted to welcome adult visitors from universities, organizations, research centres and secondary school students from four schools, including: "Africa First Bilingual Complex", "Groupe les Cocotiers", "Rain Forest International School", and "Saint Germain". A



total of about 185 persons visited CRID that day. The event began in the amphitheatre with a briefing on CRID and its activities, which sparked the curiosity of the students. Divided into several groups, they were then taken to exhibition stands where CRID researchers explained the process of collecting, breeding, and conducting genetic and genomic studies on vectors and pathogens. The researchers discussed various techniques such as gene amplifications, cloning, sequencing, and more.

Their visit ended after Insectarium and laboratory visit. It lasted for about 4 hours. It was a very wonderful experience for most of the visitors. We are happy to inspired all generations of African scientists.

An occasion to celebrate women contribution at CRID

March 7th, 2024, few hours before the celebration of the International Women's Day, several activities were organized by women from CRID.



In light of the theme «Invest in women: accelerate progress» this

year's celebration, CRID actively highlighted the critical role women scientists play in achieving its vision and mission. On that day, the activities included a debate, dance performances, a mimetic game, a talk show, a live music performance, and screening of a short film showcasing CRID women at work. All this was done with the aim of engaging and inspiring staffs, fostering dialogue, support, and entertainment, infused with passion and emotion between members of the personnel. The event was a testament to the leadership's strong believe in the capabilities of women scientists and their commitment to maintaining focus on our collective goals. It was a memorable occasion to recognize the achievements and contributions of women, and inspiring everyone present to continue advancing towards a brighter future.

EMPLOYEES MILESTONE

Departure

- NZUEMI Aurianne : Master student

New

- TCHAMO Adèle : Finance Officer

- KAMEGNE Alvine : Laboratory Technician

- BUH Joycelyne: Finance Officer

- NTYAME Angeline: Finance Officer

- MBAKOP Renaise: Post doc

- KANTE Satrien: Post doc
- MELLA Ghislaine: Master student

- NKODA Armelle Carine: Master student

STATISTICS

51 Women

73 Men

41 Students

38 Administration

18 Technicians

27 Scientists

COMMENT

Investing in women in science can accelerate progress for several key reasons

Women represent a large and largely untapped pool of scientific talent.

By actively investing in women's participation and advancement in science, we can access a broader range of perspectives, skills, and ideas to drive innovation. Improving problem-solving and decision-making: Research shows that diverse teams, including greater gender diversity, tend to be more effective at problem-solving and making higher-quality decisions. This is because diverse groups bring different backgrounds, experiences, and ways of thinking that complement each other. Enhancing scientific excellence: When women are given equal

opportunities and support in science, they can thrive and make significant contributions. Numerous studies have shown that increased gender diversity in science teams and leadership is associated with higher research quality and impact.



Modeling pathways for young women: as seeing successful women scientists and role models can inspire young girls and women to pursue careers in STEM (Science, Technology, Engineering and Math) fields. This can help break down stereotypes, boost confidence, and demonstrate the real possibilities for women to excel in science.

Addressing gender biases and inequities: Intentional investment in women in science can help address persistent gender biases and inequities that have historically limited women's participation and advancement. This creates a more inclusive and equitable ecosystem for all. By investing in the education, training, mentorship, and career advancement of women in science, we can tap into this vast well of untapped potential. This, in turn, can accelerate scientific progress, foster greater innovation, and create a more diverse and representative scientific community that better reflects the populations it serves.

EVENTS

ACoMVeC Unit organized a 2 day seminar



From March 19 to March 22, 2024, the Mathematical Modelling Unit at CRID organized a seminar, where researchers in the field of mathematical modelling specially presented their findings from various research projects. The seminar spanned two days and was attended by approximately 15 participants, most of them were Ph.D. students from the ACoMVeC Unit at CRID. The seminar had informative discussions and presentations.

CRID actively participated in the malaria ministerial conference



On March 6th, 2024, an important Malaria Ministerial Conference took place in Yaoundé conference Centre.

The meeting focused on the urgent need of tackling malaria in countries most severely affected by the disease. CRID actively participated by setting up an exhibition stand. The presence of CRID at the conference provided a valuable opportunity to showcase its expertise and contributions in the fight against malaria. The exhibition stand attracted considerable attention, allowing CRID to engage with key stakeholders, share knowledge and experiences, and forge collaborations in the ongoing battle against malaria.

By joining the Malaria ministerial conference, CRID reaffirmed its commitment to supporting the efforts of the ministries of health and working towards effective solutions to alleviate the burden of malaria in these high-risk countries. Together, we can make a meaningful impact in the global fight against malaria. Convened by the World Health Organization (WHO) and its partners, this conference brought together 11 ministries of health from Africa's «High burden to high impact» countries. Ministers of Health and senior government officials from Burkina Faso, Cameroon, the Democratic Republic of the Congo, Ghana, Mali, Mozambique, Niger, Nigeria, Sudan, Uganda, and the United Republic of Tanzania gathered to address the pressing challenges posed by malaria in their respective nations.

COMMUNICATION

Effective Communication Workshop for Women

CRID hosted a communication workshop for early-career women researchers in vector-borne diseases, organized with PAMCA. The event aimed to equip participants with skills to enhance collaboration and impact.



On February 13th, CRID hosted a workshop on «Effective Communication: Techniques and tips for Young Women Researchers.» The workshop, organized in collaboration with Pan-African Mosquito Control Association (PAMCA) and PAMCA Women in Vector Control, aimed to equip early-career women in the field of vector-borne diseases in Cameroon with concrete and adapted communication skills to enhance collaboration and increase their impact. The workshop, which took place from

9 am to 2 pm, was organized by Dr Jessy Goupeyou-Youmsi, Regional Coordinator for Women in Vector Control at PAMCA, and co-organized by Dr Billy Tene-Fossog, Research Scientist at CRID. The workshop was facilitated by Mr Junior Matock, an independent communications consultant. The event was organized in honor of both the Cameroonian Youth Day and the International Day of Women and Girls in Science, underscoring the importance of supporting young women researchers in the field of vector-borne diseases.

FACT CHECKING

Not all mosquitoes transmit malaria

Most people get malaria when bitten by an infective mosquito carrying the malaria parasite. Only female Anopheles mosquitoes can spread malaria from one person to another. For the Anopheles mosquito to become infective, they must bite, or take a blood meal, from a person already infected with the malaria parasites. About one week later, that same mosquito will bite the next person and subsequently inject the parasites via its saliva. And the cycle of infection continues. In rare occasions, malaria can spread through, blood transfusions,



organ transplant, sharing needles or syringes contaminated with malaria-infected blood, or congenitally, meaning from a mother to her unborn infant before or during delivery. Ways malaria does not spread. Malaria is not contagious. People can't spread malaria to other people like a cold or the flu. You can't get malaria by sitting next to a person with malaria, close physical contact, or even sexual contact.

Source: <https://www.cdc.gov/malaria/causes/>



RIDDLE

I am a method of fighting against mosquitoes that transmit malaria. I involve the use of mosquito nets, insecticide spraying, and other means. Who am I?

(Answer: Vector control against malaria)

DEFENSES

Contribution to the surveillance of insecticide resistance in Ezenlassi

Miss **Auriane Badiane Nzeumi**, a Master's student at the



Centre for Research in Infectious Diseases (CRID), successfully defended her Master's research work at the University of Yaoundé I.

It was on February 21, 2024. Her research project was titled «Study of insecticide resistance in *Anopheles* mosquitoes and its impact on malaria transmission in Ezenlassi, Centre region, Cameroon.» Through her rigorous study, Auriane contributed valuable insights that will support efforts to better understand and address the challenges of insecticide resistance in the fight against malaria in the region.

The research was supervised by Prof. Abraham Fomena from the University of Yaoundé I and Ass. Prof. Cyrille Ndo from the University of Douala, who is also a Wellcome Trust fellow.

Miss Nzeumi's work represents a significant contribution to the surveillance of insecticide resistance among major malaria vectors in the Centre region of Cameroon and its impact on insecticide treated bed nets. Her research also provided evidence on the impact of genetic markers associated with insecticide resistance on vector competence. The defense was chaired by Prof. Flobert Njiokou from the University of Yaoundé I and evaluated by Ass. Prof. Leukeufack Folefack from the University of Yaoundé I. Congratulations Miss Nzeumi Auriane Badiane!

Nkemngo Francis successfully earns a Ph.D degree

A new chapter began for Dr. Nkemngo Francis, who on January 31, 2024, earned a Ph.D degree at the Faculty of Science, University of Buea, Cameroon.



Dr. Nkemngo Francis's research was entitled: «Genetic determinants of *Plasmodium falciparum* and *P. malariae* drug resistance circulation in humans and the *Anopheles* vectors driving malaria in Cameroon.» He defended with distinction. As an early career scientist,

Francis was chosen from a pool of applicants in 2019 to embark on a Wellcome-Trust Funded PhD research project on malaria at CRID. This four-year PhD research project at CRID was supported by a dedicated supervision team from the University of Buea, including Prof. Charles Wondji, Prof. Samuel Wanji, Prof. Flobert Njiokou, and Dr. Jerome Fru-Cho. Dr. Nkemngo Francis expressed sincere gratitude to CRID's team and the University of Buea for providing the opportunity for capacity-building, mentorship, and training support throughout this memorable four-year journey. Congratulations to Dr Nkemngo Francis, and best wishes for your future endeavors!

Dr. Calmes Bouaka on successfully defending his doctoral thesis



Calmes Bouaka, a former Ph.D student at CRID, presented the results of his doctoral research on the topic: «Genetic diversity of the tsetse fly microbiome:«

lications in new strategies to control trypanosomiasis.»

Congratulations to Dr. Calmes Bouaka on successfully defending his doctoral thesis at the University of Yaoundé I in Cameroon! His study is a remarkable achievement, and the research he conducted on the genetic diversity of the tsetse fly microbiome and its implications for new strategies to control trypanosomiasis is incredibly important work. It's wonderful to see that his thesis was co-directed by Professor Charles S. Wondji from the Liverpool School of Tropical Medicine and Professor Jude Bigoga from the University of Yaoundé I. This collaboration between researchers from different institutions is crucial for advancing scientific knowledge and addressing critical health challenges. Earning a Ph.D with distinction is a testament to Dr. Bouaka's hard work, dedication, and intellectual capabilities. His research findings have the potential to contribute significantly to the development of new and improved methods for controlling trypanosomiasis, a debilitating disease that continues to pose a major threat to human and animal health in sub-Saharan Africa. We wish Dr. Bouaka all the best in his future endeavors and look forward to seeing the impact of his work on the field of tropical disease research and control. Congratulations once again on this well-deserved accomplishment!

STORY TELLING

The Mango Malaria Myth PART I

The warm, humid air was thick with the sweet fragrance of ripening mangoes in the village of Elende, just outside Yaoundé, the capital of Cameroon. The yellow and orange fruits could tell the mango season was in full swing. For many villagers, this was a joyous time - an abundance of the delicious tropical fruit was reason for celebration.

But as Dr. Tchouakui, a Senior researcher at the Centre for Research on Infectious Diseases (CRID) in Yaoundé, sat under a mango tree to catch his breath, he overheard a concerning conversation.

An elderly woman warning her two young grandsons, «Be careful, mangoes will give you malaria!» The boys immediately stopped gathering fallen fruit and hurried back to the kitchen. Dr. Tchouakui sighed, recognizing this as a familiar refrain he had heard time and time again during mango seasons. It seemed many in the community of Elende took the false belief that eating mangoes would lead to contracting mosquito-borne disease for granted. «That's not how malaria works,» Dr. Tchouakui tried to explain to the woman. «Malaria is spread by infected mosquitoes, not mangoes.» But the woman refused to listen, instead she began to shout at the doctor. Her outburst drew a crowd of concerned villagers, who also voiced their support for the «mango malaria» myth. As the situation was getting critical, Dr. Tchouakui was brought before the chief of Elende.



To be continued ...

SCIENTIFICS PUBLICATIONS

1- **Caroline Fouet, Fred A. Ashu, Marilene M. Ambadiang, Williams Tchappa, Charles S. Wondji & Colince Kamdem. Clothianidin-resistant *Anopheles gambiae* adult mosquitoes from Yaoundé, Cameroon, display reduced susceptibility to SumiShield® 50WG, a neonicotinoid formulation for indoor residual spraying.** Published on 25 January 2024, in BMC Infectious Diseases.

2- **Amen N. Fadel, Sulaiman S. Ibrahim, Maurice M. Sandeu, Claudine Grâce Maffo Tatsinkou, Benjamin D. Menze, Helen Irving, Jack Hearn, Sanjay C. Nagi, Gareth D. Weedall. Exploring the molecular mechanisms of increased intensity of pyrethroid resistance in Central African population of a major malaria vector *Anopheles coluzzii*.** Published on 26 February 2024, in Wiley onlinelibrary.

3- **Jacques Dollon Mbama Ntahi, Espoir Divin Malda Bali, Abel Lissom, Romaric Akoton, Jean Claude Djontu, Georges Missontsa, Freisnel Hermeland Mouzinga, Marcel Tapsou Baina, Luc Djogbenou, Cyrille Ndo, Charles Wondji, Ayola Akim Adegnika, Arsène Lenga, Steffen Borrmann & Francine Ntoui. Contribution of *Anopheles***

***gambiae* sensu lato mosquitoes to malaria transmission during the dry season in Djoumouna and Ntola villages in the Republic of the Congo.** Published on 02 March 2024, in Parasites & Vectors/ Biomedcentral.

4- **Marilene Ambadiang, Caroline Fouet, Fred Ashu, Calmes Bouaka, Véronique Penlap-Beng & Colince Kamdem. *Anopheles gambiae* larvae's ability to grow and emerge in water containing lethal concentrations of clothianidin, acetamiprid, or imidacloprid is consistent with cross-resistance to neonicotinoids.** Published on 01 March 2024, in Parasites & Vectors/ Biomedcentral.

5- **Fred A. Ashu, Caroline Fouet, Marilene M. Ambadiang, Véronique Penlap-Beng & Colince Kamdem. Adult mosquitoes of the sibling species *Anopheles gambiae* and *Anopheles coluzzii* exhibit contrasting patterns of susceptibility to four neonicotinoid insecticides along an urban-to-rural gradient in Yaoundé, Cameroon.** Published on 02 March 2024, in Malaria Journal / Biomedcentral.

PARTNERS AND FUNDERS

