



African Genetic  
Biocontrol  
Consortium

# GenBioNews

African Genetic Biocontrol News

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B U I L D | I N F O R M | E X P A N D

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PROGRESS REPORT 2021

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World Health  
Organization

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The United Nations General  
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## GEN BIO FOURTH WEBINAR 04

Governance and Decision-Making  
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Africa.





## **WOMEN AND GIRLS IN SCIENCE: AGENTS OF CHANGE**

Recognizing the role of women and girls in science, not only as beneficiaries, but also as agents of change, including in view of accelerating progress towards the achievement of SDG 6 (Clean Water and Sanitation), the 7th International Day of Women and Girls in Science Assembly will focus on the following topic: "Equity, Diversity, and Inclusion: Water Unites Us". #February11 is celebrated globally in different ways, big and small. Your action will add to the collective voices on Equality in Science.



## MALARIA PROGRESS REPORT:

# AFRICAN UNION MALARIA PROGRESS REPORT 2021



The time for African leaders to act is now! It is imperative for Africa to lead from the front if we are to achieve our goal of eliminating malaria by **2030.**

worst-case scenario of malaria cases and deaths. Some of these interventions such as indoor residual spraying, insecticide treated nets and seasonal malaria chemo prevention took place as planned. In addition, there has been an increased emphasis on the decentralization of services to well-trained community health workers and accelerating delivery of anti-malarials to avoid stock-outs.

It is imperative for the African Heads of State to take decisive action and stay committed towards ending malaria. As such, malaria should be kept high on national development agendas, mobilize additional resources, empower communities to act, strengthen data and evidence-based governance, accelerate the deployment of new malaria commodities and interventions, and actively engage youth leaders. Further, it is important to encourage a rapid deployment of new tools and technology to address the challenge of insecticide and drug resistance.

The time for African leaders to act is now! It is imperative for Africa to lead from the front if we are to achieve our goal of eliminating malaria by 2030.

The African Union Malaria Progress Report 2021 was presented on 5th February, 2022 during the African Union Summit provided and insight on the status of malaria on the African continent. Highlights from the report indicate activities undertaken, challenges encountered, best practices realized by African Union member states to provide malaria control services, and ensure there is progress towards the realization of eliminating malaria in Africa by 2030.

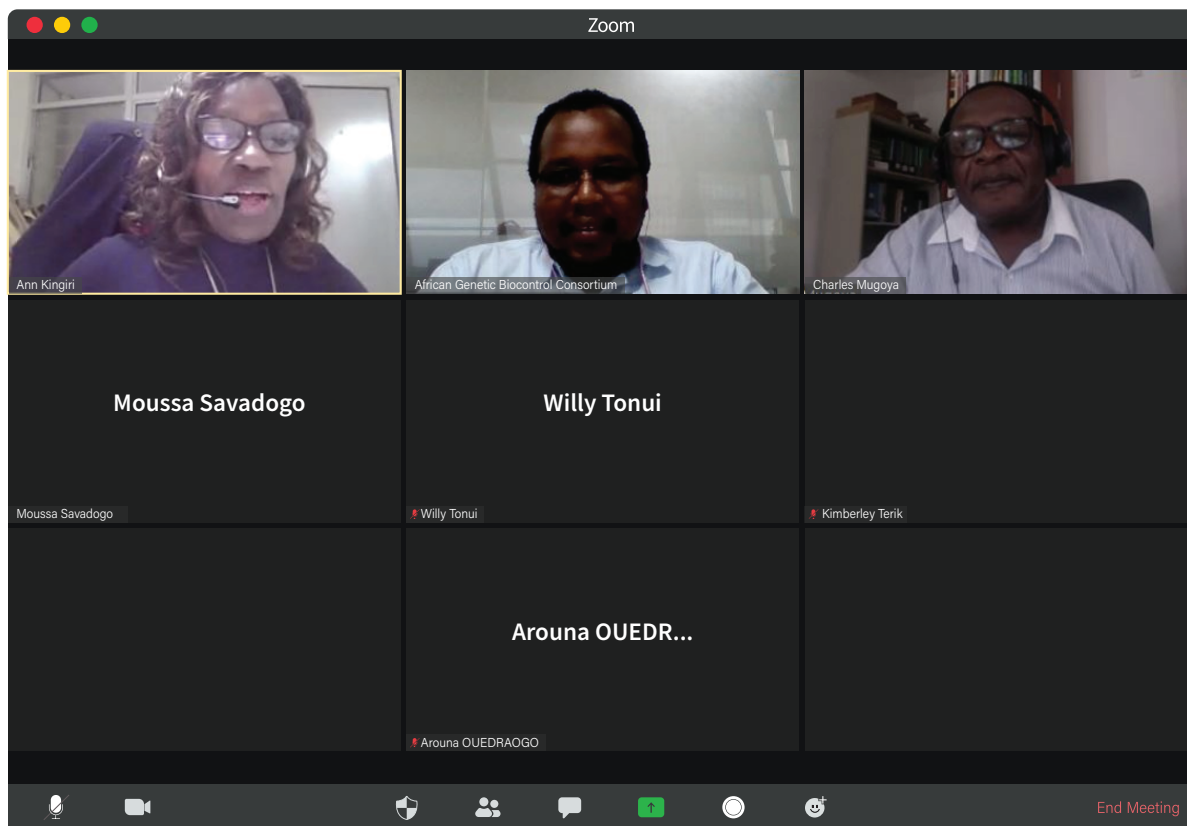
However, the African Union did not achieve the goal of reducing malaria cases and mortality by 40% by 2020, which is a crucial milestone towards the elimination

of malaria in Africa by 2030. According to the World Health Organization's (WHO) World Malaria Report released in 2021, 611,802 Africans who died as a result of malaria, which accounts for 98% of malaria deaths globally.

The COVID-19 pandemic introduced a new challenge towards the fight against malaria. This is evidenced by the strain put on healthcare systems, especially on many economies in the African continent. For instance, the pandemic led to 47,000 more malaria deaths in Africa in 2020. Nevertheless, the efforts put forth in sustaining malaria interventions averted a

## AFRICAN GENETIC BIOCONTROL CONSORTIUM FOURTH WEBINAR:

# GOVERNANCE AND DECISION-MAKING FOR GENETIC BIOCONTROL TECHNOLOGY IN AFRICA.



The current advanced knowledge in biology has generated new technologies and tools with great potential to tackle malaria right at the roots,...

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On 24<sup>th</sup> February 2021, the African Genetic Biocontrol Consortium successfully hosted its fourth webinar titled “Governance and decision-making for genetic biocontrol technology in Africa.” The panelists during this webinar included:

- Moussa Savadogo – AUDA-NEPAD, Burkina Faso.
- Charles Mugoya – Target Malaria.

### The objectives of this webinar were:

- To provide an overview of governance, and decision-making processes for genetic biocontrol technology in Africa: Recommendations from the AUDA-NEPAD.
- To highlight anticipated decision making process for genetic biocontrol products.
- To discuss gaps in Regulatory frameworks: Case studies from African Countries.



The opening remarks were given by Ann Kingiri (Director at the African Centre for Technology Studies, ACTS) who welcomed the attendees to the webinar by the African Genetic Biocontrol Consortium. She then welcomed the speakers and gave an overview of the program. She finalized by giving the housekeeping rules and then proceeded to introduce the first speaker.

The speaker of this webinar was Moussa Savadogo who made a presentation on “Governance and Decision making for Genetic Biocontrol Technologies: Recommendations from AUDA-NEPAD on GM and Gene Drive modified mosquitos for malaria vector control in Africa.” The scope of his discussion focused on genetic biocontrol agents such as Genetically Modified Mosquitoes (GMM) and Gene Drive Modified Mosquitoes (GDMM) fall under the definition of Living Modified Organisms (LMOs).

He first gave a background of AUDA-NEPAD, whereby the organization was established at the 2018 AU summit as part of larger institutional and financial reforms championed by then-African Union Chair, Paul Kagame. AUDA officially adopted its mandate and launched at the 2019 AU summit in Niamey, Niger, May 2019. AUDA-NEPAD’s mission is to foster the development of the continent through effective and integrated planning, coordination, and implementation of agenda 2063 with member states, regional economic communities and Pan-African institutions by leveraging partnerships and technical cooperation. Moussa also introduced the Consortium by saying that it was established as an agreement among member organizations committed to contribute and expand Africa’s self-determination through research, development, and use of genetic biocontrol approaches to control and eliminate malaria and other vector-borne diseases

in Africa. Member organizations are regionally represented non-governmental professional or similar organizations representing various disciplines who are interested in genetic biocontrol technologies.

Biological control uses biocontrol agents are natural enemies of the pest species, e.g., living predators or pathogens. Moussa introduced his talk at this point by saying focus will be on AUDA-NEPAD’s views and efforts on the use of genetic modification including Gene Drive technology to control mosquito vectors for malaria elimination. African countries have actively participated in the CBD negotiations leading to the adoption of the Cartagena Protocol on Biosafety (CPB). In 2016, African Union High level Panel on Emerging Technologies (APET) identified Gene Drive technology as a top priority, based on its potential to innovate vector control and accelerate the elimination of malaria in the continent. The unacceptable burden of malaria on the continent as an accelerator for AUDA-NEPAD’s commitment to gene drive as a potential genetic biocontrol tool for malaria elimination. In June 2020, AUDA-NEPAD published a position paper on “Strengthening AU Member States’ Regulatory Capacities for Responsible Research Towards Elimination of Malaria in Africa.” The end goal of AUDA-NEPAD efforts is to enable African countries to deploy gene drive mosquitoes as genetic biocontrol tool as part of their malaria control toolbox, to accelerate the elimination of malaria in countries, regions and the continent. As such, some of the in-country key enablers include functional regulatory systems for biosafety (environment) and health, strong political will, to secure support from the highest government officials, enhanced health research capacities, acceptance of the genetic based tool, by both the research community and the general public, and regional and multilateral cooperation.

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**The end goal of AUDA-NEPAD efforts is to enable African countries to deploy gene drive mosquitoes as genetic biocontrol tool as part of their malaria control toolbox, to accelerate the elimination of malaria in countries, regions and the continent.**

Country	Enablers	Achievements
Burkina Faso	<ul style="list-style-type: none"> <li>• Functional regulatory system (biosafety)</li> <li>• Strong political will (expressed)</li> <li>• Research capacity at IRSS Bobo-Dioulasso</li> <li>• Long partnership with Target Malaria</li> </ul>	<ul style="list-style-type: none"> <li>• Constant support to the regulatory agency</li> <li>• IBC constituted and being capacitated</li> <li>• Good progress on R&amp;D on gene drive</li> <li>• National IVM platform established</li> </ul>
Mali	<ul style="list-style-type: none"> <li>• Functional regulatory system (biosafety)</li> <li>• Political will</li> <li>• Research capacity</li> <li>• Long partnership with Target Malaria</li> </ul>	<ul style="list-style-type: none"> <li>• Constant support to biosafety committee</li> <li>• IBC constituted and being capacitated</li> <li>• Progress on R&amp;D</li> </ul>
Uganda	<ul style="list-style-type: none"> <li>• Research capacity</li> <li>• Long partnership with Target Malaria</li> </ul>	<ul style="list-style-type: none"> <li>• IBC constituted and being capacitated</li> <li>• Application expected to start research</li> </ul>
Ghana	<ul style="list-style-type: none"> <li>• Functional regulatory system (biosafety)</li> </ul>	<ul style="list-style-type: none"> <li>• Request received from NBA</li> <li>• Plans underway for capacity building</li> </ul>
Nigeria	<ul style="list-style-type: none"> <li>• Functional regulatory system (biosafety)</li> <li>• Request received from NBMA</li> </ul>	<ul style="list-style-type: none"> <li>• Requested received from NBMA Partnership with technology developer needed – Plans underway</li> </ul>
Sao Tome and Principe	<ul style="list-style-type: none"> <li>• Expressed political will</li> <li>• Partnership with University of California</li> </ul>	<ul style="list-style-type: none"> <li>• Request received from Min Health for regulatory capacity building</li> <li>• Plans underway</li> </ul>

Moussa made final remarks as per AUDA-NEPAD position on emerging technologies. As per her mandate, AUDA-NEPAD seeks to harness knowledge to deliver the Africa We Want, as outlined in the African Union's Agenda 2063. AUDA-NEPAD recognizes science, technology, and innovation as the engine of its delivery mechanism to realize the Africa We Want. The current advanced knowledge in biology has generated new technologies and tools with great potential to tackle malaria right at the roots, i.e. the mosquito species that spread the malaria parasites and disease among the populations. AUDA-NEPAD reaffirms her commitment to supporting AU Member States in building regulatory systems that are required to safely explore the usage of innovative tools for the elimination of

malaria and other arthropod-borne diseases. Saving lives to sustainably augment the continent's capacities to address its socio-economic development needs remains a non-negotiable priority goal to the Agency. While striving to assist build sound regulatory frameworks, AUDA-NEPAD respects Member States' sovereign decisions regarding emerging technologies including gene drives for malaria vector control.

An engaging and organic discussion followed that incorporated all the panelists. The link to this discussion can be accessed below under the title "Governance and decision-making for genetic biocontrol technology in Africa."

Link: <https://www.genbioconsortium.africa/events/>

**In  
2016**



**African Union High level Panel on Emerging Technologies (APET) identified Gene Drive technology as a top priority, based on its potential to innovate vector control and accelerate the elimination of malaria in the continent.**





## INTERNATIONAL WOMENS DAY:

# AFRICAN GENETIC BIOCONTROL CONSORTIUM OBSERVED THE INTERNATIONAL DAY OF WOMEN AND GIRLS IN SCIENCE

On 11 February 2022, the African Genetic Biocontrol Consortium observed the International Day of Women and Girls in Science. The purpose of observing this day is to achieve full and equal access to participation in science for women and girls. It is noteworthy that science and gender equality are crucial for the realization of internationally agreed developmental goals such as the Sustainable Development Goals (SDGs). In the last few decades, there has been a great drive from the global community to inspire and engage more women to be involved in the science discipline. For this reason, the United Nations General Assembly declared 11 February as the International Day of Women and Girls in Science in 2015. Did you know that women receive smaller grants compared to their male counterparts and also represent 33.3% of all the researchers? In addition, female researchers have shorter and less well-paid careers. Further, their work is significantly underrepresented in high impact journals. Although, women have made tremendous progress in bridging the gap and becoming more involved in science, technology, engineering, and mathematics (STEM), there is still need for more effort towards this initiative.



Image Source: freepik.com

During this year's 7<sup>th</sup> International Day of Women and Girls in Science, the focus was on "Equity, Diversity, and Inclusion: Water United Us" towards the achievement of SDG 6 – Clean Water and Sanitation. Within the Consortium, the Pan-African Mosquito Control Association (PAMCA), has the Women in Vector Control (WIVC) program whose mandate is to strengthen the role women in the control of vector-borne diseases. In recognition of this day, PAMCA gathered the accounts of a number of women under the WIVC program to give their experiences in commemoration of this day.

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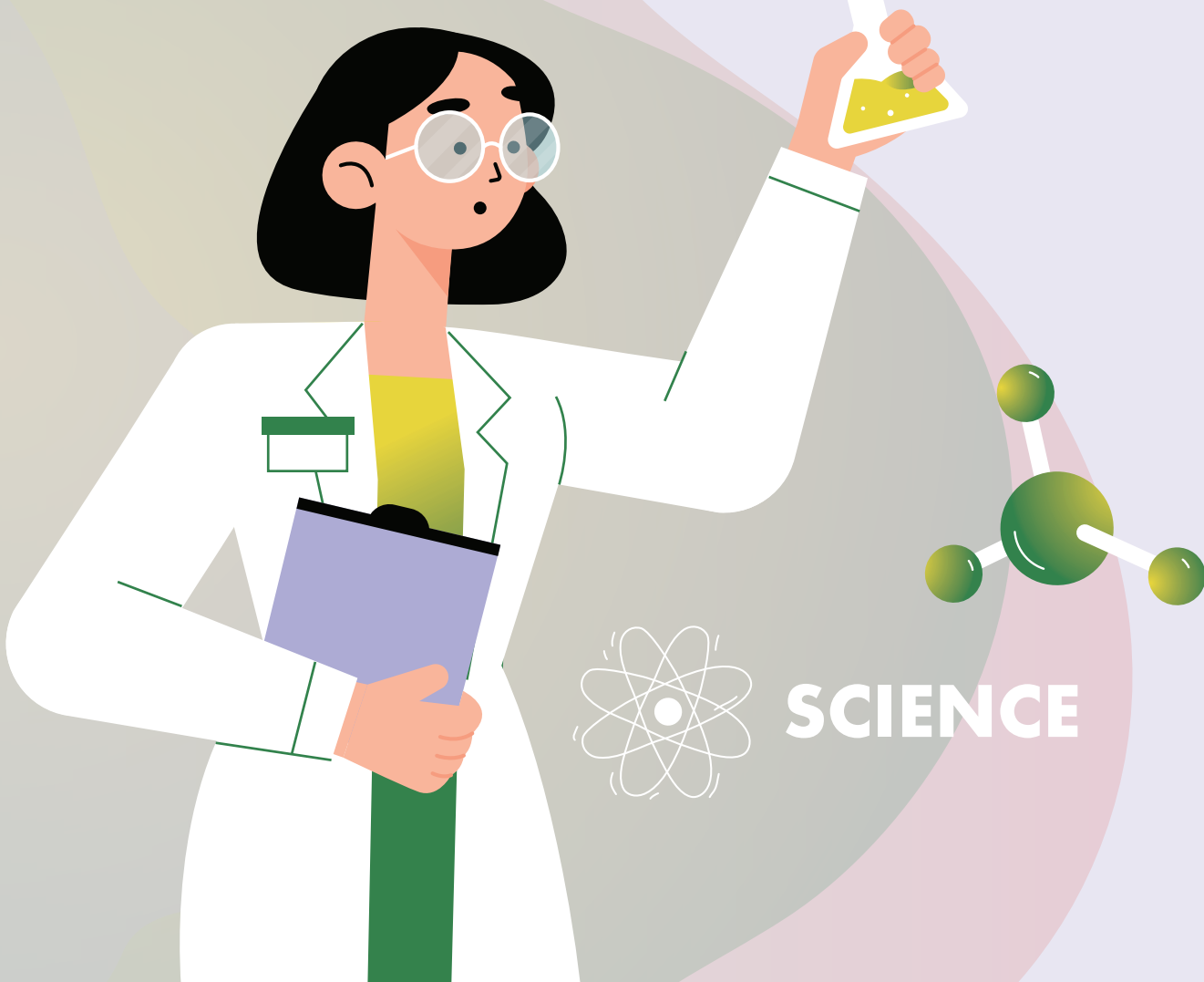
# GENBIO-AFRICA CELEBRATES

**International Day of Women and Girls in Science**

*Theme: "Equity, Diversity and inclusion: Water Unites Us"*

**11.02.2022**

Build | Inform | Expand







# WOMEN & GIRLS IN SCIENCE

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**Amelie Wamba Ndongmo Regine**  
Gene Drive Project Coordinator, PAMCA

### ABOUT AMELIE

Amelie is a motivated and emerging researcher in the field of medical entomology and molecular biology in the process of completing her PhD in Biochemistry. Amelie is passionate about STEM and how scientific research can improve living and health conditions globally especially in sub-Saharan Africa. Amelie is also a youth ambassador and Mandela Washington Fellow with great interest in youth engagement and women empowerment. As a youth leader, Amelie aspires to be a role model by contributing to changing the narrative about women in STEM in our communities, pushing the boundaries that are limiting women in their ambitions, challenging women to harness their full potential and work-life balance. Amelie chose STEM because it provides openings to jobs that allow communities around the world to enjoy safety, health, and quality of life as they know it.

## WOMEN & GIRLS IN SCIENCE

INTERNATIONAL DAY  
11th February 2022



Amelie therefore together with the scientific community, encourages young girls and women to enroll in STEM. As a community, providing young girls and women with equal opportunities to pursue and thrive in STEM careers could help narrow the gender pay gap, enhance women's economic security, ensure a diverse and talented STEM workforce and prevent biases in these fields and the products and services they produce. Let's support women and encourage them to pursue STEM careers through mentorship, training and the creation of safe spaces that encourage their participation at work and discourage sexual harassment/bullying in academic institutions and workplaces. Female community champions are also necessary as role models to encourage some of our communities to promote the education of the girl child.

<https://www.pamca.org>





## WOMEN & GIRLS IN SCIENCE

INTERNATIONAL DAY  
11th February 2022



**Dr Stella Kepha,**

Senior Research Scientist,  
Kenya Medical Research Institute (KEMRI).

### Challenges for women in science

According to the World Bank, in low-income countries 63% of female primary school students complete primary school, compared to 67% of male primary school students. Secondary school completion rates for girls stands at 36% of girls compared to 44% of boys.

Growing up in rural Kenya, I observed women and girls playing a key role in the family. Girls attend to house chores, prepare family meals and care for the young ones, affecting their ability to go to school and perform well compared to their male siblings. Girls are often subjected to early marriage and consequently many drop out of school, never to obtain the lifechanging benefits of education that their male peers often get prioritised for. For those girls that are fortunate to progress in school, many do not take up courses in science as they are deemed to be 'more difficult' and requiring more time investment.

Girls' education goes beyond physically getting girls to attend school. Schools should also be a safe and enabling environment, allowing girls to have the opportunity to complete all levels of education, acquiring the necessary knowledge and skills to compete in the labor market; gain socio-emotional and life skills required to navigate and adapt to a changing world and make decisions about their own lives. Encouraging and

supporting the girl-child to pursue science courses will affect the community positively.

The lack of women in scientific leadership positions is also affecting not only society as a whole currently and how it does or does not address the needs of female populations, but also the horizon of the up-coming generation. This is because oftentimes, children look up to role models in their communities and people they can identify with, when thinking about their aspirations and potential careers.

The need for more opportunities and grants for women in science:

Grant schemes should be tailored to women at different stages of their life, especially women who have had career breaks to take care of families. More mentorship schemes for women in science that target and encourage women to be in science should be developed. I am a beneficiary of such a mentorship scheme, which provided a platform for my career in science.

In the recent past, women have made great strides in various field of science even though there is still gender inequality in who occupies leadership positions. On this international day of Women and girls in Science, I call on all of us to commit to mentor girls and women in science, and create schemes that support their career progression.



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