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UMCI BIMONTHLY NEWLETTER

UNIVERSITY OF CALIFORNIA

MALARIA INITIATIVE CALIFÓRNIA



AWARENESS CAMPAIGN REACHES 20 THOUSAND PEOPLE AND MORE THAN 250 LOCATIONS IN THE COUNTRY

In 2024 alone, UCMI's awareness and community engagement reached more than 20 thousand people across the country. This is due to the large investment that the program has been making in community engagement and awareness actions. The UCMI engagement team has been moving from community to community, reinforcing with community members the importance of adopting new strategies to control Malaria. This is a WHO recommendation since the challenges to current methods are increasing.

In this context, UCMI has worked in STP over the last five years to assess whether the Genetically Modified Mosquitoes could be an effective strategy to be implemented in the country. The result of this work consists of the proposal that UCMI presented to the Government in March 2024 for the release of modified mosquitoes on Príncipe Island.

UCMI has been working to raise awareness through educational programs, so that people can understand not only how modified mosquitoes work, but also the benefits they can bring to their lives. Information sessions and open debates have been essential to ensure that all voices are heard and concerns are addressed in a transparent manner.

Community engagement has included the involvement of community leaders, families, local authorities and national partners such as CNE. Therefore, this number marks what we can achieve by uniting science, education and communities towards a common goal: malaria-free São Tomé and Príncipe.











NATIONAL AND INTERNATIONAL AUTHORITIES VISIT UCMI LABORATORY IN SÃO TOMÉ AND PRÍNCIPE

Throughout the months of May and June, the UCMI laboratory, located at the University of São Tomé and Príncipe (USTP), received important visits from national and international authorities, such as the President of the Regional Government of Príncipe, the German Ambassador to Gabon and, the American Spaces Director at the US Embassy for Angola and STP.

During the visits, the authorities were able to get a closer look at the laboratory's modern facilities, where studies are carried out such as: investigations into the resistance of natural mosquitoes to insecticides, host preferences, parasite infection levels and their life cycle, and microinjection training for technicians.

As the UCMI laboratory continues to attract attention and recognition to São Tomé and Príncipe, it is expected that more resources will be channeled into implementing innovative solutions that benefit populations vulnerable to malaria and improving public health in the country.







UCMI PARTICIPATES IN IMPORTANT MEETINGS WITH THE MINISTER OF HEALTH, CNE AND THE WORLD HEALTH ORGANIZATION



UCMI held a series of crucial meetings over the last few months, to present the project's status in the country. The highlight of the agenda was the meeting with the Minister of Health and Women's Rights, Dr. Angela Costa, where measures to strengthen the partnership between the project and the ministry were discussed, in addition to presenting the future strategies envisaged by UCMI for the combating malaria in the country.



Furthermore, UCMI met with the WHO representative in the country, Dr. Françoise Bigirimana, and WHO staff involved in the malaria elimination program in STP, Dr. Pelagio Morrunie and Dr. Evgeny Zheleznyakov, to present the point of status of Project activities. During the meeting, the application of the Guide for Genetically Modified Mosquitoes for Disease Control, a guiding document issued by the WHO for the implementation of modified mosquitoes, was also discussed.



In another crucial meeting, UCMI also met with the new PNEP Coordinator Dr. Didiena Vilhete, which in addition to reinforcing the partnership between the National Malaria Elimination Program (PNEP) and the UCMI initiative, also served to ensure that joint actions may be in line with the strategic plan to eliminate malaria in São Tomé and Príncipe.

In an effort to share information about innovative techniques to control malaria, training on genetically modified mosquitoes was provided to members of the Fire Department and the National Police. The training, carried out at the Água Grande and Lemos fire stations and at the district commands of Lobata and Caué, aimed to train these professionals to understand the use of this promising technology in controlling the disease.

During the training, given by technicians from the UCMI project, participants learned about the principles behind modified mosquitoes, their role in interrupting the malaria transmission chain and the potential positive impacts for communities and the country. The sessions included information on how the modified mosquitoes will be developed and the UCMI release plan, as well as the monitoring and mitigation plan.

UCMI PROJECT CARRIES OUT COMMUNITY CLEANING ACTIONS IN ANSELMO ANDRADE, PRAIA LAGARTO AND PRAIA NAZARÉ

In continuation of the various community cleaning actions, which the UCMI project has been carrying out across the country to eliminate outbreaks of mosquitoes that transmit malaria, community cleanup activites were conducted in the localities of Anselmo Andrade, Praia Lagarto and Praia Nazaré. Clean up involves removal of stagnant waters and breeding sites for mosquitoes that transmit malaria. The action not only visually transformed the local environment, but also reinforced awareness of the importance of regular cleaning for public health, encouraging practices that promote a safer and healthier environment for everyone.



FIREFIGHTERS AND DISTRICT COMMANDS OPEN THE DOORS TO THE UCMI PROJECT





ADVANCES OF THE UCMI PROJECT TOWARDS THE USE OF MODIFIED MOSQUITOES TO COMBAT MALARIA

In 2019, the UCMI Project received authorization from the Government of São Tomé and Príncipe to carry out three activities: Scientific research; Engagement and awareness; Training and Capacity Building.

Since then, UCMI activities have been implemented with the aim of providing important and necessary information so that the government can make an informed decision about the use of the modified mosquito in STP to combat Malaria.

In March 2024, UCMI presented a proposal to the government for the release of genetically modified mosquitoes on Príncipe Island. The proposal contains the results of the studies that UCMI carried out, a monitoring plan and a mitigation plan.

The UCMI is waiting for the STP government to analyze the proposal and take a decision on it, or issue recommendations on the same to the UCMI. The modified mosquitoes can only be used in STP after the government approves the proposal presented by UCMI.



SCHOOLS RECEIVE AWARENESS RAISING ACTIVITIES ON THE FIGHT AGAINST MALARIA

The schools of Porto Real and Escola Secundária do Padrão were the target of awareness activities about the fight against malaria in the country. This educational initiative, in partnership with the Ministry of Education and district health departments, aims not only to inform, but also to engage young people in the fight against the disease.

During the awareness sessions, UCMI outreach workers explained how modified mosquitoes are created to interrupt the transmission cycle of the malaria parasite. Students had the opportunity to learn about the potential benefits of this innovative technology, which promises to significantly reduce malaria cases in STP.

The students responded positively to the initiative, showing interest and asking questions about the functioning and safety of the modified mosquitoes.

UCMI PROMOTES COMMUNITY DEBATES ABOUT THE BENEFITS OF GENETICALLY MODIFIED MOSQUITOES

Throughout May and June, UCMI has been promoting community debates on the use of genetically modified mosquitoes as an innovative strategy to combat malaria. The debates have included the participation of community leaders, health technicians and residents of the localities of Praia Abade, Bairro de Liberdade and Praia Lagarto, to discuss the benefits, clarify doubts and concerns surrounding the project, in addition to providing detailed information about how the modified mosquitoes can help reduce malaria

transmission. During these meetings, issues related to safety, efficacy and long-term sustainability were addressed in an open and transparent manner.

In the future, it is expected that more voices will join the conversation, enriching the dialogue and promoting a collaborative approach to malaria control in São Tomé and Príncipe.





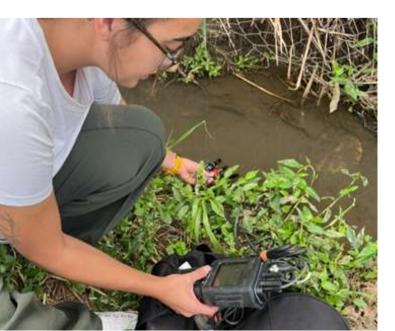


UCMI ADVANCES CRUCIAL RESEARCH IN MOLECULAR BIOLOGY AND VECTOR CONTROL AT USTP

As a complement to the work started on the island of Príncipe in January, the field team carried out new collections of resting mosquitoes in May and June in the locations of Praia das Burras, Azeitona, Alojamento and Santo Antônio Ximalô. The objective is to complement the study that aims to identify the resting behavior of mosquitoes and their preference for a blood meal.

During this period, the team received a visit from Dr. Anna Cohuet from the Development Research Institute (IRD) in France. The visit allowed the team to be trained to carry out new vector competence studies, which are essential to understand the dynamics of disease transmission in the country. Since then, the UCMI team has been carrying out the study with the mosquito population on the island of São Tomé to understand the susceptibility of Anopheles coluzzii to the malaria parasite. This study is part of the broad research that the project has been developing to understand the bioecology and genetics of the vector in the country.

Training is being conducted in the laboratory with the new state of the art microinjection equipment that arrived in February. Technicians are learning how to use the equipment and conduct microinjections of mosquito eggs. These skills are essential for the future development of biotechnologies in STP by local technicians and scientists.





Furthermore, stability studies of mosquito breeding sites in Bairro Verde, Água Grande, returned in the dry season. The field team has daily monitored the development of 33 mosquito breeding sites in the locality, evaluating physicochemical characteristics in order to identify possible influence on the choice of female mosquitoes for oviposition. This study allows us to understand productivity and whether there is complete development of the mosquito life cycle in different types of breeding sites. The same study will be repeated in the rainy season to identify the influence of the climate season on the presence of mosquito vectors in the locality.

Additionally, the UCMI team has been working daily on improving study techniques with mosquito vectors by carrying out dissections to remove intact structures that allow us to understand different aspects of the mosquito's life. These practices, carried out consistently, allow the team to improve their skills with all the research carried out in the country.



UCMI has intensified efforts to train teachers. agricultural and future health workers technicians on the use genetically modified mosquitoes as an innovative tool in the fight against malaria. This educational initiative, in collaboration with District Councils, aims to prepare tomorrow's leaders and professionals to effectively confront the persistent threat of malaria.

The training programs included employees in the health area and the health secretariat of the district council Caué, employees of the company CECAB. directors, those responsible for kindergartens and education, delegates, representatives of the council, the district command Cantagalo, and students from the nursing course at ISCS - Victor Sá Machado. Participants were

scientific educated on the principles behind modified mosquitoes, their role in reducing vector-transmitting population, and the procedures safe and effective implementation \circ f this technology.





UCMI AGENTS PARTICIPATE IN TRAINING WITH PNEP

UCMI's team of engagement agents had the opportunity to participate in a crucial training on Strategic Plan for Elimination of Malaria in São Tomé Príncipe, carried out in collaboration with the National Malaria Elimination Program (PNEP) and taught by João Alcântara, Program Technician.

During the session, agents received valuable insights into

the plan's goals and strategies, as well as practical guidance to strengthen community awareness and mobilization skills.

The training not only strengthened the team's commitment to the cause, but also equipped them with the knowledge needed to play an effective role in implementing malaria control measures in the country.











