

Innovating the next generation of effective malaria tools

In August 2019, the WHO's Strategic Advisory Group on Malaria Eradication reaffirmed that eradicating malaria would save millions of lives and billions of dollars. However, they caution that the tools we have are not sufficient. To meet this challenge, the WHO calls for greater investment in research and development (R&D) for new, innovative approaches to fight malaria.



The Vestergaard-Noguchi Vector Labs in Accra, Ghana

Unfortunately, less than 1 percent of R&D health funding goes to developing new tools to combat malaria. Of that funding, only 6 percent goes towards developing vector control products. Vestergaard decided to step up to the plate to help fill this gap. The [Vestergaard-Noguchi Memorial Institute of Medical Research](#) (NMIMR) Vector Labs at the [University of Ghana](#) was created in 2011 as a way to malaria elimination through R&D.

As Chief Research Assistant at the Vector Labs, I oversee insectary, bioassay, and molecular

lab facilities. The lab is a public-private partnership with NMIMR, Ghana's leading biomedical research institute. We conduct research on the efficacy of our current vector control tools, as well as next-generation tools that will help us get back on track in the fight against malaria. It is our hope that this groundbreaking public-private partnership will serve as a model for others around the world working to combat this deadly disease.

Insecticides play a critical role in the effort to control malaria vectors and stop malaria transmission. They're used both in long-lasting insecticide-treated nets (LLINs) and indoor residual spraying (IRS). When mosquitoes develop insecticide-resistance, we need to study how and why, and investigate what can be done to improve the essential tools (bed nets) that we've been relying on to protect people from malaria.

Malaria Elimination through R&D



Based on the location of the Vestergaard-Noguchi Vector Labs, we are able to serve as a resource for training, knowledge sharing, capacity building, and collaboration.

The Vector Labs are well-equipped to take on this crucial work. Our insectary has a high production capacity of more than 1 million mosquitoes per year. This is thanks to the hard work and dedication of our insectary team, who make sure we have mosquitoes available for experiments year-round. Our bioassay lab conducts testing on all types of LLIN samples and other treated materials, as well as new vector control tools. Additionally, our molecular biology lab is equipped to study various mosquito species. Vestergaard built these labs in

Ghana because we believe it is important to conduct this type of research in the regions most affected by malaria. Based on the location of where we work, we can serve as a resource for training, knowledge sharing, capacity building, and collaboration.

As the WHO and other organisations call for accelerating R&D efforts and investments in malaria eradication, Vestergaard is working to develop new, innovative tools. Among these is a non-pyrethroid LLIN that is urgently needed to address the growing threat of insecticide resistance, prevent malaria and save lives.