

Mosquito Microbiome Consortium Summer School, 2024

Background

Recently, mosquito microbiota has been linked to insecticide resistance in *Anopheles* mosquitoes which are major vectors of malaria. This further sparks our focus on the microbiota as a potential system for reducing the fitness of mosquitoes, disrupting the development and transmission of parasites and enhancing susceptibility to existing insecticides. To fully exploit these bacteria through an understanding of their impact on mosquito traits and validate the genetic pathways involved in the interactions, investigators require skills in (i) **bioinformatic analysis of microbiome data**, (ii) **microbiota manipulation** and (iii) **gene expression silencing**.

Purpose

The Mosquito Microbiome Consortium (<https://mosquito-microbiome.org/>) in collaboration with the Noguchi Memorial Institute for Medical Research, University of Ghana, Tropicales Infectious Diseases Research Center, Université d'Abomey-Calavi, Benin, Center for Global Health Research - Kenya Medical Research Institute, Kenya, and Université Claude Bernard Lyon 1, France is organizing a research summer school in mosquito microbiome wet lab skills and microbiome bioinformatic analyses.

This summer school combines lectures and practical hands-on methods for RNA-interference (RNAi) and bioinformatics for analysing microbiome data.

Target

The workshop is aimed at entomologists with at least a Master's degree, who are interested in learning how to:

- i. design double-stranded RNA (dsRNA) to target genes of interest,
- ii. silence genes in mosquitoes using RNAi,
- iii. analyze microbiome data (community structure).

Duration

2 weeks

Location

Noguchi Memorial Institute for Medical Research, University of Ghana, Accra.

Date

20th July – 3rd August 2024

Facilitators

Dr. Jewelna E.B. Akorli (Senior Research Fellow)
Noguchi Memorial Institute for Medical Research,
University of Ghana, Accra

Dr. Minard Guillaume (Associate Professor)
Laboratory of Microbial Ecology,
University of Lyon, France

Mr. Maxime Girard (PhD candidate)
Laboratory of Microbial Ecology,
University of Lyon, France

Miss Esinam Abila Akorli (Principal Research Assistant)
Noguchi Memorial Institute for Medical Research,
University of Ghana, Accra

How to apply

Prerequisites:

- Applicants must hold a least a Master's degree in a field relevant to the subject of the summer school.
- Being familiar with UNIX language and statistical analysis is an advantage but not mandatory.

Applying:

Interested person should apply completing the online application form(https://docs.google.com/forms/d/e/1FAIpQLSf1g4RL0ViQyulNal89fvEC-LPXTl6MauMpp4LJQf1Y30V6fA/viewform?usp=pp_url)

Please note: Applications must be supported by a recommendation from a senior researcher (e.g. supervisor, or head of department). A request will be sent to your nominated referee. Applicants must ensure that their referee provides their recommendation by the application deadline. Applications without a letter of recommendation will not be considered.

Application deadline: 22nd March 2024

Financial Assistance

Limited funds are available to cover travel, visa costs, accommodation, subsistence.