



Jaramogi Oginga Odinga University of Science and Technology  
P.O. Box 210 - 40601 Bondo – Kenya

### JOB DESCRIPTION

<b>Post</b>	Laboratory Technologist
<b>Contract</b>	Fixed Term
<b>Reference Number</b>	JOOUST/LabTech/MosKenya/2024
<b>Reports to</b>	Project PI
<b>Role Purpose</b>	This is a 9-month renewable laboratory technologist position to work on a project exploring the ecology and vector competence of <i>Anopheles</i> and <i>Aedes</i> mosquitoes in Kenya with respect to climate change variabilities.
<b>Scope background</b>	<p>Climate change continues to disrupt lives and livelihoods. Warmer temperatures and altered rainfall patterns are projected to contribute to the expansion of mosquito populations into new habitats and increase in vector borne diseases including malaria, dengue, and chikungunya. The situation in Africa is exacerbated by the recent reports of the spread of the invasive <i>Anopheles stephensi</i> adapted to urban settings that can thrive together with the less studied <i>Aedes</i> mosquitoes. To address these challenges, our project aims to study the distribution, ecology, and disease transmission capabilities of both <i>Anopheles</i> and <i>Aedes</i> mosquitoes under changing environmental conditions. Additionally, the project seeks to raise awareness among school children about climate change and mosquito-borne diseases through educational videos.</p> <p>We are seeking to appoint a Laboratory Technologist to support the work of the team investigating vector competence of <i>Anopheles</i> and <i>Aedes</i> mosquitoes circulating in Kenya, in the light of climate change. The project, funded by the Medical Research Foundation (<a href="https://www.medicalresearchfoundation.org.uk/grants/impact-of-climate-change-on-health-research">https://www.medicalresearchfoundation.org.uk/grants/impact-of-climate-change-on-health-research</a>) is a collaboration between Dr. Shehu Awandu of Jaramogi Oginga Odinga University of Science and Technology (JOOUST) (<a href="https://profiles.jooust.ac.ke/profile/index/481">https://profiles.jooust.ac.ke/profile/index/481</a>), Dr. Emilie Pondeville of the University of MRC - University of Glasgow Centre for Virus Research (CVR, UK, <a href="https://www.gla.ac.uk/research/az/cvr/aboutus/people/researchgroups/pondevillegroup/">https://www.gla.ac.uk/research/az/cvr/aboutus/people/researchgroups/pondevillegroup/</a>) as well as partners from the Kenya Medical Research Institute (KEMRI). The work includes extensive mosquitoes sampling of <i>Anopheles</i> and <i>Aedes</i> mosquitoes in both urban and rural settings of Kenya. The work involves mosquito rearing, experimentation, development and implementation of standard operation procedures, maintenance of samples and ensuring the insectary and the laboratory operate effectively. The role is both field and practical laboratory based, and the post holder will be expected to contribute to successful performance of experiments.</p> <p>The position will be based in the laboratory of Dr. Shehu Awandu in Bondo, as well as KEMRI, Kisumu with frequent travel to remote locations in Kenya for vector sampling. Candidates must hold a bachelor's degree in biology or related fields and should be well versed in mosquito identification, mosquito sampling, mosquito rearing, membrane feeding assays and conducting molecular assays. Previous experience working with insect vectors and/or in malaria endemic countries is an added advantage. Candidate will perform laboratory tests and other procedures in accordance with the approved operating procedures.</p>

### JOB DESCRIPTION

	<b>KEY RESPONSIBILITIES</b>	<b>KEY ACTIONS</b> These set out how the key responsibilities will be achieved
1.	Apply entomological, molecular and virology skills in the field and laboratory to study the impact of climate change on mosquito vectors	Assist in detailed entomological surveys for mosquitoes' adults, larvae and pupae and collect environmental data
		Assist in experimental mosquito infections and vector competence assays on Anopheles and Aedes mosquitoes
		Mosquito husbandry (identification, rearing, colony establishment, maintenance, and experimentation)
		Assess the effect of sugar feeding on broad antiviral action in mosquitoes
		Responsible for providing procurement updates, stock checking and ensuring health and safety compliance
		Sample processing, storage, data recording, data entry, and archiving of technical reports
		Adherence to Standard Operating Procedures and internationally acceptable quality control and quality assurance standards in the lab and insectary.
		Adherence to strict Professional code of conduct and Research Ethics
		Ensure the insectary and laboratory equipment are disinfected, cleaned and data recorded
		Prepare reagents and chemical and in accordance with SOPs
		Monitoring temperature and record on temperature logs
Performing mosquito dissections for oocysts development and sporozoites assays		
2	<b>Provide support and training to students and technical staff within the group</b>	Create training materials, train and demonstrate practical procedures to students on attachment and new staff
		Support student on attachment working in the project with their projects and analyses of their data

### FURTHER RESPONSIBILITIES

	<b>KEY RESPONSIBILITIES</b>	<b>KEY ACTIONS</b> These set out how the key responsibilities will be achieved
1.	<b>General</b>	Contribute to peer-reviewed research publications
		Contribute to the development of risk assessments', SOPs, QA/QC and other research related health& safety documentation adhering to local and legal requirements
		Perform any other duties as may be assigned by the PIs that are commensurate with grade and nature of the role

### PERSON SPECIFICATION

<b>POST</b>	Laboratory Technologist
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<b>COMPETENCY CRITERIA</b>	<b>ESSENTIAL/DESIRABLE</b>	<b>WHERE MEASURED</b>
<b>Qualifications &amp; Training</b>		
Bachelor of Science in Biological	Essential	Application

Sciences, Molecular Biology, Zoology, Biochemistry, Biomedical Sciences or related fields		
<b>Skills and Experience</b>		
Significant experience working on malaria/arbovirus transmission, molecular biology, parasitology/ entomology or lab assays	Essential	Application/Interview
Experience or knowledge in mosquito husbandry and colony maintenance	Essential	Application/Interview
Experience in field entomological collections (adults/larval)	Essential	Application/Interview
Experience in mosquito membrane feeding assays	Essential	Application/Interview
Experience in mosquito dissections	Essential	Application/Interview
Assay development troubleshooting	Essential	Application/Interview
Experience of training in lab practices	Essential	Application/Interview
Experience working with climate chambers	Desirable	Application/Interview
Excellent verbal and written communication skills with the ability to communicate at all levels	Essential	Interview
Excellent organizational skills	Essential	Interview
Ability to thrive as part of a team and contribute to a positive working environment	Essential	Application/Interview
A problem-solving attitude	Essential	Interview
Ability to use initiative and work independently with minimal supervision	Essential	Interview
<b>Location</b>		
Based in Bondo and KEMRI Kisumu, Kenya but with frequent travel to remote field sites for field sampling and laboratory assays.		

### Terms and conditions of service

The successful candidate will be offered a contract of 9 months renewable.

The candidate will be expected to start the job immediately.

### How to apply

Candidates who satisfy the requirements stated above should forward their applications via **email with subject: Application for Laboratory Technologist REF: JOUST/LabTech/MosKenya/2024** including up to date curriculum vitae, educational and professional qualifications, detailed work experience, present post and salary if available, applicants telephone number and email address.

Enclose copies of certified certificate and testimonials and provide names and details of 3 referees (including postal and email addresses, and daytime telephone numbers) who are knowledgeable about the applicants competence and area of specialization via email to reach the undermentioned email addresses [dvcpaf@jooust.ac.ke](mailto:dvcpaf@jooust.ac.ke) with copies to [sawandu@jooust.ac.ke](mailto:sawandu@jooust.ac.ke) by 1<sup>st</sup> August 2024.

Only shortlisted candidates will be contacted.