



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

Post	Post-Doctoral Research Associate
Contract	Fixed Term
Reference Number	JOOUST/PDRA/MosKenya/2024
Reports to	Project PI
Grade	12
Role Purpose	This is a three-year post-doctoral research associate position to study the ecology and vector competence of <i>Anopheles</i> and <i>Aedes</i> mosquitoes in Kenya with respect to climate change variabilities.
Scope background	<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 in Kenya. 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 post-doctoral research fellow to support the work of the team investigating the ecology and 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 (https://www.medicalresearchfoundation.org.uk/grants/impact-of-climate-change-on-health-research) is a collaboration between Dr. Shehu Awandu based at Jaramogi Oginga Odinga University of Science and Technology (JOOUST, Kenya), Dr. Emillie Pondeville based at the MRC - University of Glasgow Centre for Virus Research (CVR, UK) as well as partners from the Kenya Medical Research Institute (KEMRI). The work will include extensive <i>Anopheles</i> and <i>Aedes</i> mosquito sampling in both urban and rural settings of Kenya. The work will also involve mosquito rearing, vector competence assays, 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, data analysis and dissemination.</p> <p>The position will be based in Kenya in the laboratory of Dr Shehu Awandu (Bondo western Kenya, (https://profiles.jooust.ac.ke/profile/index/481)). In addition, the PDRA will be expected to spend 8 months (flights and accommodation paid) in the lab of Dr Emillie Pondeville at the MRC - University of Glasgow Centre for Virus Research (https://www.gla.ac.uk/research/az/cvr/aboutus/people/researchgroups/pondevillegroup/) during the 2nd year of the project to conduct the arboviral vector competence studies for knowledge transfer to Kenya. Candidates must hold a Ph.D. in Biology or related fields and should be well versed in molecular biology, vector biology, and vector competence and incrimination. Previous experience working with insect/mosquitoes and vector</p>

	competence (malaria and/or viruses) is required. Previous experience working in malaria endemic countries and field is advantageous but not essential.
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JOB DESCRIPTION

	KEY RESPONSIBILITIES	KEY ACTIONS 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	Conduct detailed entomological surveys for adults, larvae and pupae and collect environmental data Conduct experimental Anopheles and Aedes incrimination/infections and vector competence assays Mosquito husbandry (e.g., identification, rearing, colony establishment, maintenance, and experimentation) Help maintain a system for cataloguing, storing, and accessing research materials and samples and shipment overseas. Assess the effect of sugar feeding and temperature on mosquito vector competence Develop SOPs, data entry forms, analytical pipelines, and training materials for mosquito thermal experiments Responsible for providing procurement, stock checking and ensuring health and safety compliance Contribute to the technical excellence and adherence to QA/QC during performance of experiments Contribute to the communication with stakeholders, communities, schools, as well as to public engagement videos including Virtual Reality
2	Develop novel projects	Generate ideas and data to support new project applications Contribute to the writing of research grants/fellowships in collaboration with PIs Disseminate findings through open access peer reviewed publications and conferences
3.	Provide support and supervision to students and technical staff within the group	Create training materials and assist in training, mentoring, and guidance to colleagues, students and technical staff in the project Support student and technicians working in the project with analyses of their data

FURTHER RESPONSIBILITIES

	KEY RESPONSIBILITIES	KEY ACTIONS These set out how the key responsibilities will be achieved
1.	General	Contribute to peer-reviewed research publications as well as present finding in international meetings and symposia

		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

POST	Post Doctoral Research Fellow
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COMPETENCY CRITERIA	ESSENTIAL/DESIRABLE	WHERE MEASURED
Qualifications & Training		
PhD in Entomology, Molecular Biology, Genetics, Biochemistry, Vector Biology or related fields	Essential	Application
Skills and Experience		
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 data management and analysis	Essential	Application/Interview
Assay development troubleshooting	Essential	Application/Interview
Experience of training in lab practices	Essential	Application/Interview
Evidence of acquiring or applying for funding	Desirable	Application/Interview
Evidence of peer reviewed publications	Essential	Application/Interview
Experience working with climatic 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
Excellent mentorship skills	Essential	Application/Interview
A problem-solving attitude	Essential	Interview
Ability to use initiative and work independently with minimal supervision	Essential	Interview

Location

The candidate will be based in the lab of Dr Shehu Awandu at JOOUST in Bondo and KEMRI in Kisumu (Kenya) with frequent travel across Kenya to remote field sites for field sampling and assays. The candidate will spend 8 months at the MRC-University of Glasgow Centre for Virus Research in the lab of Emilie Pondeville during year 2 of the project.

Terms and conditions of service

The successful candidate will be offered a fixed term contract of 3 years.
The candidate will be expected to start the job immediately.

Am not sure if we need to mention remuneration at this point. Probably not important

How to apply

Candidates who satisfy the requirements stated above should forward their applications via email with subject: **Application for Research Fellow REF: JOOUST/PDRA/MosKenya/2024.**

The supporting statement section should set how qualifications, experience and training meet each of the selection criteria. Please provide one or more paragraphs addressing each criterion. The supporting statement is an essential part of the selection process and thus a failure to provide this information will mean that the application will not be considered. Provide 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 with copies to sawandu@jooust.ac.ke by 1st August 2024.

Only shortlisted candidates will be interviewed.