

JOB DESCRIPTION

POST	Postdoctoral Research Associate (PDRA): Insecticide Resistance in African Malaria Vectors
REFERENCE	013-19a
CONTRACT	Fixed Term
REPORTS TO	Hilary Ranson
ROLE PURPOSE/SUMMARY	To develop, evaluate and implement phenotypic and molecular tools for measuring insecticide resistance in African malaria vectors
SCOPE	The Department of Vector Biology at LSTM has an international reputation for its research on the biology and behaviour of mosquito vectors. We have recently been awarded a new grant from the Bill and Melinda Gates Foundation to develop entomological indicators to assess the public health value of next generation long lasting insecticidal nets. As part of this project, we have an opportunity for a motivated and experienced molecular scientist to join the research team to develop, evaluate and implement the best tools to measure insecticide resistance in African malaria vectors. The successful candidate will benefit from joining a large, dynamic, internationally leading insecticide resistance research team in Liverpool, UK, with an excellent international network of collaborators.

ROLE SPECIFIC RESPONSIBILITIES

	KEY RESPONSIBILITIES	KEY ACTIONS These set out how the Key Responsibilities will be achieved
1	Identification of molecular markers of pyrethroid resistance	Development/application of Taqman assays for known insecticide resistance candidate loci Development of SNP arrays to test for phenotype:genotype association Generate and analyse data on transcriptome/genomic datasets Functional validation of candidate insecticide resistance genes Preparation of results for manuscripts
2	Developing robust phenotypic assays for insecticide resistance	Conduct insecticide bioassays and develop statistical analysis plans in collaboration with other team members Assist in development of bioassays for new insecticide chemistries Participate in meetings with external partners to revise guidelines where required Assess patterns of cross resistance between insecticide classes

3	Provide support to PhD students and technical staff	Provide training in molecular and bioassay techniques to others in the lab and project partners
		Assist in the design and supervision of MSc/BSc student projects
		Support PhD students working on similar topics in the analysis of their data

FURTHER RESPONSIBILITIES

	KEY RESPONSIBILITIES	KEY ACTIONS These set out how the Key Responsibilities will be achieved
1	General	Assist with the development and implementation of data/sample management tools for the project
		Assist with the preparation of grant applications and ethics applications
		Present findings in group meetings and, where appropriate, to external partners
		Any other duties commensurate with the grade and nature of the role

PERSON SPECIFICATION

POST	Postdoctoral Research Associate (PDRA): Insecticide Resistance in African Malaria Vectors	
COMPETENCY CRITERIA	ESSENTIAL/ DESIRABLE	ASSESSMENT
Qualifications, Training & Knowledge		
PhD in Biological Sciences	Essential	Application Form & CV
Trained in working with insects	Essential	Application Form, CV & Interview
Knowledge of insecticide resistance and vector control	Desirable	Application Form, CV & Interview
Experience		
Experience of development of genotyping assays	Essential	Application Form, CV & Interview
Experience of analysing large genomic/transcriptomic data sets	Essential	Application Form, CV & Interview
Experience of field work in malaria endemic countries	Desirable	Application Form, CV & Interview
Experience of functional genomic techniques to manipulate gene expression in insects	Desirable	Application Form, CV & Interview
Experience of rearing haematophagous insects	Desirable	Application Form, CV & Interview
Published in peer reviewed journals	Essential	CV
Experience in providing training to students	Desirable	Interview
Well developed research skills with the ability to present research findings in oral and written format	Essential	Interview
Skills & Behaviours		
Ability to synthesise and critically appraise large volumes of scientific literature	Essential	Interview
Good problem-solving skills and ability to take initiative	Essential	Interview
Excellent organisational ability and attention to detail	Essential	Interview
Able to work without detailed supervision and under pressure to competing deadlines	Essential	Interview
Experience of communication with wide range of disciplines and cultures	Essential	Interview
A demonstrable interest in translational research and impact	Essential	Interview
French speaking	Desirable	Application Form, CV & Interview
Circumstances		
Fixed Term for 36 months		
Based in Liverpool with opportunities for field work in Africa		