



KENYA MEDICAL RESEARCH INSTITUTE VACANCY ANNOUNCEMENT

Opening date: January 7, 2022

Vacancy: CGHR/246/01/22

Project description: Genomics of African Vectors for NMCP Management of Insecticide Resistance (GAVENIR) project is designed to develop the capacity of African scientists to use next-generation sequencing (NGS) data to inform their insecticide resistance management (IRM) strategies. This project was initiated under a Grand Challenges grant, to train African scientists on proper sample collection and preservation for NGS; provide hands-on training on NGS library prep and wet-lab procedures; provide introductory bioinformatics training and sequence RNA libraries to investigate transcriptomic markers of insecticide resistance. This project seeks to fill the following position (s)

Position: MSc. Scholarship (2)

Location: Kisumu

Duration: 1 year

Reporting to: Principal Investigator

Job Summary:

This position seeks a self driven, highly motivated individual in the second year of their MSc program having completed the mandatory coursework. The candidate will be required to take part in field work activities including mosquito collection; bioassays to determine presence and intensity of insecticide resistance to various insecticides used in malaria vector control; Wet Lab processing of mosquito sample including RNA extraction and preparation of RNA libraries and finally, bioinformatics analysis of the raw sequence data obtained to identify transcriptomic markers of insecticide resistance. The candidate will be required to publish the outcome of their work in at least one (1) peer reviewed journal as well as presenting their work in at least one (1) international conference.

Essential Requirements:

- a) Registered with a university undertaking an MSc. in Bioinformatics, Computational Biology, Bio-Statistics, Molecular biology, Genetics or any other related course.
- b) Completed course in the last two years or earlier.
- c) Hands on experience with programming languages R, Python, SQL
- d) Conversant with the Linux environment
- e) Strong interpersonal and communication skills (oral and written)
- f) Fluent in English and Swahili, both written and spoken
- g) Organized, Hardworking and independent – The candidate must be able to plan and implement their workplans within the required timelines

Skills and abilities:

- a) Good communication and organizational skills
- b) Ability to quickly learn new skills
- c) Ability to work independently as well as in a team
- d) Ability to lead field teams in mosquito collection
- e) Ability to identify potential problems/challenges and to troubleshoot

Duties and Responsibilities:

- a) Organize and lead field teams in collecting mosquito samples from the field
- b) Oversee the rearing of *Anopheles funestus* samples in the insectary into 3-5 days old adult mosquitoes prior to insecticide resistance bioassays.
- c) Preservation and shipment of mosquito samples to ensure retention of high quality RNA for downstream analyses
- d) Extraction and quality control of RNA from pools of mosquito samples as well as preparation of the RNA libraries for RNA sequencing using Illumina HiSeq platforms
- e) Reception and storage of raw sequence data from the sequencing facilities, uploading to the high compute servers
- f) Conduct bioinformatic analysis of raw sequence data to identify molecular markers associated with insecticide resistance in malaria vectors
- g) Active participation in both virtual classroom and in-person training on data analysis
- h) Attend conferences and workshops to disseminate research findings
- i) Perform any other duties as assigned by the principal investigator

Remuneration: A monthly stipend of 50,000 shillings will be paid to the student for one year. There will be no additional benefits and allowances.

Applications should include the following:

1. Letter of Application (**Indicate Vacancy Number**)
2. Current Resume or Curriculum Vitae with Telephone number and e-mail address
3. Three letters of reference with contact telephone numbers
4. Copies of Academic Certificates and Transcripts
5. KRA tax compliance certificate
6. Certificate of good conduct

If you meet the above criteria please Apply to Deputy Director, CGHR, PO Box 1578-40100, Kisumu. Submit your application including documents via Email address cghr@kemri.go.ke not later than February 14, 2022

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Only short-listed candidates will be contacted