KENYA MEDICAL RESEARCH INSTITUTE

VACANCY RE-ADVERTISEMENT

Opening date: 9/16/2022   **Vacancy: CGHR/311/08/22**

Project description: Genomics of African Vectors for NMCP Management of Insecticide Resistance (GAVENIR) project was 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. The project has recently received a follow-on grant to expand project activities in collaboration with the University of Abomey-Calavi in Benin, US Centers for Disease Control and prevention (CDC) and H3A BioNet. This project seeks to fill the following position.

Position: PRINCIPAL BIOSTATISTICIAN/BIOINFORMATICS, JOB GROUP KMR 4

Location: Kisumu

Duration: One (1) year with a possibility of extension

Reporting to: Principal Investigator

Job Summary:

We are looking for a motivated Bioinformatician to join our research team in advancing the use of next generation systems of high-throughput RNA and DNA sequencing for informing malaria vector control policy. This individual will support research scientists and students by providing data analysis support for the teams in Kenya and Benin as they analyse RNAseq, WGS and other 'omics data through a virtual high-performance compute (HPC) server. The successful candidate should work well in a team environment, exercise great attention to detail, and have keen analytical insight. This is an exciting opportunity to be a part of a talented and dynamic team working on novel approaches for understanding insecticide resistance in malaria vectors in Africa.

Essential Requirements:

  i.   Master's Degree in Bioinformatics; Statistics, Medical Statistics, Biostatistics, Health statistics, Biometry or equivalent qualification from a recognized Institution
  ii.   Expertise in genomics, population genetics, data science, computational biology
  iii. Hands on experience with scripting languages such as Linux, Python, R and a strong grounding in biological sciences
  iv.   Familiarity with commonly used tools for variant detection (samtools, bowtie2, BWA, IGV, ANNOVAR, GATK) and file formats (BED, VCF, FASTQ, BAM, FASTA)

v.   Familiarity with commonly used and publicly available bioinformatics databases (e.g. GenBank, Uniprot, DDBJ, Ensemble, GEO, SRA, ExAC, ESP,ClinVar, VectorBase, KEGG, HGMD, OMIM, PubMed, UCSC)
vi.   Experience designing bioinformatics experiments and/or providing oversight for the design of 'omics/bioinformatics experiments.
vii.   Experience working with unstructured data sources, (experience with genome assembly)
viii.   An understanding of genome sequencing technologies and strategies.
ix.   Having a familiarity with Big Data analysis including data mining, complex data visualization.
x.   Proficiency in computer application; and
xi.   Fulfil the requirements of Chapter Six of the Constitution

Desirable Attributes

Enthusiastic and strong interest in mosquito genomics, insecticide resistance and vector control
Experience with mathematical modelling and computational biology
Strong project management, communication, and interpersonal skills
Membership of relevant professional networks (h3A, ASBCB, EASCB, ISCB and ISMB)
Previous work with mosquitoes, or knowledge and ecology of mosquitoes will be an added advantage
Artificial Intelligence and Machine learning skills in design of appropriate statistical analysis of experimental data
Experience working with high-performance computing
Experience in successfully leading teams

Skills and abilities:

Excellent organizational capability to structure and organize tasks and set priorities logically and effectively
Results driven; ability to judiciously spend resources available to achieve the most optimal outcomes
Ability to build and lead strong teams and achieve projected milestones
Ability to identify potential problems and trouble-shoot solutions

Duties and Responsibilities:

i.   Participation in capacity building on bioinformatics by guiding MSc and PhD students on the project in both Kenya and Benin
ii.   In charge of reception and storage of raw sequence data from the sequencing facilities, uploading to the high compute servers
iii.   Take leadership in setting up virtual classroom discussions; small group discussions; data carpentry workshops, personalized virtual office hours with trainees on the statistical analyses of genomic data
iv.   Participation in designing, review and update of the vector genomics and bioinformatics training curriculum
v.   Leadership in conceptualizing, innovating and development of new bioinformatic pipelines for analysis of genomic data
vi.   Conduct bioinformatic analysis of raw sequence data to identify molecular markers associated with insecticide resistance in malaria vectors
vii.   Attend conferences and workshops to disseminate research findings
viii.   Leadership in drafting of technical reports, manuscripts, and outcomes of the project outputs
ix.   Perform any other duties as assigned by the principal investigator

Terms of Employment: 1-year renewable contract as per KEMRI scheme of service and a Probation period for the first 3 months.

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. Fulfillment the requirements of Chapter six of the Constitution

All the applications to be done through KEMRI Website www.kemri.go.ke/e-recruitment portal- on or before October 6, 2022, latest 5.00 p.m. Please visit the KEMRI web site www.kemri.go.ke for more details on the advertisement.

KEMRI IS AN EQUAL OPPORTUNITY EMPLOYER; WOMEN AND DISABLED PERSONS ARE ENCOURAGED TO APPLY. KEMRI DOES NOT CHARGE A FEE AT ANY STAGE OF ITS RECRUITMENT PROCESS INCLUDING APPLICATION, INTERVIEW MEETING AND PROCESSING OF OFFER LETTER. IF ASKED FOR A FEE, REPORT SUCH REQUEST IMMEDIATELY TO RELEVANT AUTHORITY

Only short-listed candidates will be contacted