

Advertisement

Post of Research Assistant (01 vacancy)

Project: Piloting the application of pathogen genomics for public health and surveillance of food borne diseases in Sri Lanka.

Background of the Project:

The Project "Piloting the application of pathogen genomics for public health and surveillance of food borne disease" is submitted by Enteric Reference laboratory, Medical Research Institute by Dr. Sujatha Pathirage as the principal investigator got selected for funding. Collaborating Institute for the project is Center for Pathogen Genomics, University of Melbourne.

The project aims to pilot the use of pathogen genomics for public health surveillance of foodborne disease in Sri Lanka, focusing on *Non-typhoidal Salmonella*, and *Shigella*. Genomic surveillance of these pathogens will provide crucial insights into their epidemiology, resistance mechanisms, and transmission dynamics, thus enabling more precise interventions to reduce disease burden. This initiative represents the first cross-sectoral, nationally representative genomics effort in Sri Lanka, enhancing local capacity and contributing to global antimicrobial resistance research.

Duties and Responsibilities

1. Data collection and fieldwork
 - Conduct field visits to collect samples from sentinel sites and assist with epidemiological data collection.
 - Ensure proper documentation and handling of samples according to established protocols.
2. Sample processing and Molecular Laboratory work
 - Process collected samples and carry out molecular techniques, including PCR, for pathogen detection and analysis.
 - Maintain laboratory equipment and adhere to safety and quality control standards during laboratory procedures.
3. Data analysis and interpretation
4. Report writing and documentation
5. Time Management and Project Adherence
 - Adhere to project timelines and manage tasks effectively to meet key project milestones.

Desired Qualifications and Experience for the Post

Qualifications for the Research Assistant should be as follows.

- B.Sc. Degree in Medical Laboratory Science or a related field with First class or a second class upper.
- The ideal candidate should have a strong research profile with a record of journal article publications. Additionally, experience in molecular laboratory work, particularly with techniques such as PCR, will be considered an advantage.
- Good references from previous work or academic settings.
- Candidate should strictly adhere to time lines
- Job will include data collection, Sample processing including molecular work, data analysis as well as report writing.

Nature of Duties

Full time/part time: Full time

No of days per week: 05 days

Working hours per day: Eight hours (8.30am to 4.15 pm)

Place of work: Medical Research Institute (MRI), Sri Lanka.

Salary: A basic salary of Rs 48,950.00 and other allowances

Candidates are requested to send the hard copy of their applications with updated CV and copies of relevant documents and contact details by post to Director, Medical Research Institute, Dr. Danister De Silva Mawatha, Colombo 08 and e-mail the soft copies to director@mri.gov.lk and info.food@mri.gov.lk on or before 14.01.2025.

The selected candidate will be notified through an email.



Dr. Suranga Dolamulla

Director

Medical Research Institute

Sri Lanka.

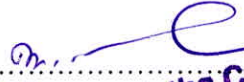
Dr. Suranga Dolamulla

MBBS, M.Sc., iMD(Medi Admin), PhD(University of York)

Consultant in Medical Administration

Director

Medical Research Institute
Colombo - 08.



Dr. Sujatha C. Palnirage

Consultant Microbiologist

Medical Research Institute

Sri Lanka.

Dr. Sujatha C. Palnirage
MBBS, Dip Micro, MD Micro
Consultant Microbiologist.
Medical Research Institute
Colombo 08.

Terms of Reference (TOR)

Recruitment of a Research Assistant

Background

Sri Lanka's current notification system for *Salmonella* and *Shigella* is syndromic, with cases notified to the Ministry of Health on the basis of clinical indication of dysentery or food poisoning. Reporting and investigation of cases is then aggregated, regardless of aetiology, meaning there is little understanding of the epidemiology or burden of non-typhoidal *Salmonella* or *Shigella*, including resistance mechanisms or patterns, and potential drivers of disease. Sri Lanka has recently developed a food safety policy which includes strategies to address food-borne pathogens along the food chain and provides guidelines and an outline of expectations for the investigation and control of relevant pathogens. Despite this, current surveillance systems mean there is limited data available to enact the policy, inform meaningful action or measure the success and impact of any action.

By leveraging existing infrastructure in sentinel surveillance sites to establish genomic surveillance for *Salmonella* and *Shigella*, MRI will generate an entirely novel prospective data set for food borne diseases that provides epidemiological typing information including serotype and Multi-Locus Sequence Type (MLST), resistance profiles including genes and mutations, and clustering and outbreak information based on genomic relatedness. This will allow for targeted responses to the general burden of disease, as well as providing Sri Lanka with information on new and emerging threats, including new strains, and the ability to conduct surveillance on antimicrobial resistance and the driving mechanisms. This is particularly important given the growing threat posed by the burden of antimicrobial resistance being observed in the Asia-Pacific region². This will be a novel project both in conducting surveillance specific to *Salmonella* and *Shigella*, but also in that this will be the first nationally representative genomics program in Sri Lanka. The project will also enable significant knowledge exchange between the Centre for Pathogen Genomics and the WHO CC for AMR at the University of Melbourne and MRI in Colombo, rapidly increasing Sri Lanka's capacity for genomics and genomic surveillance.

This project aligns closely with IPSN CSAU areas of work, by strengthening country capacity in pathogen genomics surveillance, building off gains from the COVID-19 pandemic and using evidence from use cases to inform where genomics can provide the most value for infectious diseases control, public health and food safety. Project outcomes will also assist with high level advocacy and communications to support genomic surveillance by informing the approach to develop a Genomics National Action Plan for the country.

Key personnel as part of this project have been trained by the Centre for Pathogen Genomic, University of Melbourne as part of Pulse Net Asia-Pacific in bacterial genomics sequencing and bioinformatics. MRI will partner with CPG for the *Salmonella* and *Shigella* project, who will provide expertise to support the genomic epidemiological analysis and interpretation of the data generated, imparting expertise and skills to MRI scientists leading the project.

CPG is the leading academic and training hub for Infectious Diseases genomics in the Asia-Pacific region. CPG will provide support for the *Salmonella* and *Shigella* project in microbiology, bioinformatics and genomic epidemiology. The project will comprise of a project leadership group comprising of project leads and a project technical group comprising of the scientists appointed into the project with representation from both MRI and CPG.

Scope of Work

This research assistant is expected to be performed.

1. Data Collection and Fieldwork

- Conduct field visits to collect samples from sentinel sites and assist with epidemiological data collection.
- Ensure proper documentation and handling of samples according to established protocols.

2. Sample Processing and Molecular Laboratory Work

- Process collected samples and carry out molecular techniques, including PCR, for pathogen detection and analysis.
- Maintain laboratory equipment and adhere to safety and quality control standards during laboratory procedures.

3. Data Analysis and Interpretation

4. Report Writing and Documentation

5. Time Management and Project Adherence

- Adhere to project timelines and manage tasks effectively to meet key project milestones.

Duration

The Successful recruit will work 05 days a week from 8.30am — 4.15pm for one year duration.

The successful candidate will be paid a monthly remuneration (A basic salary of Rs 48,950.00 and other allowances).

The selected candidate will be given a comprehensive training on preparation and implementation of the project.

Candidates are requested to send the hard copy of their applications with updated CV and copies of relevant documents and contact details by post to Director, Medical Research Institute, Dr. Danister De Silva Mawatha, Colombo 08 and e-mail the soft copies to director@mri.gov.lk and info.food@mri.gov.lk on or before 14.01.2025.

The selected candidate will be notified through an email.