

Surveillance of Malaria Control

Opportunity Reference Code: CDC-CGH-DPDM-2023-0112

Organization Centers for Disease Control and Prevention (CDC)

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<u>Store</u> or <u>Google Play Store</u> to help you stay engaged, connected, and informed during your ORISE experience and beyond!

A complete application consists of:

- An application
- Transcripts Click here for detailed information about acceptable transcripts
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- One educational or professional recommendation. Your application will be considered incomplete, and will not be reviewed until one recommendation is submitted.

All documents must be in English or include an official English translation.

Application Deadline 5/31/2023 3:00:00 PM Eastern Time Zone

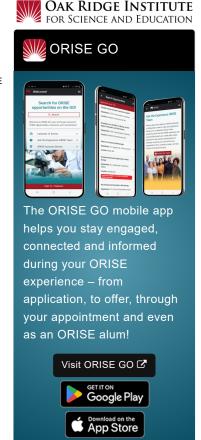
Description *Applications will be reviewed on a rolling-basis.

CDC Office and Location: A molecular biology fellowship is available to work on PARMA (Partner-supported Antimalarial Resistance Monitoring in Africa) activities in the Malaria Laboratory Research and Development Team in the Laboratory Science and Diagnostics Branch (LSDB)-proposed, Division of Parasitic Diseases and Malaria (DPDM), Global Health Center (GHC)-proposed at the Centers for Disease Control and Prevention (CDC) in Atlanta, GA.

The Centers for Disease Control and Prevention (CDC) is one of the major operation components of the Department of Health and Human Services. CDC works to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.

Research Project: CDC works with USAID and other partners to reduce malaria deaths and the global malaria burden through the US President's Malaria Initiative (PMI). The vision of PMI is a world without Malaria. PMI works in 26 partner countries in sub-Saharan Africa. PARMA was created with two primary objectives: 1) to assist PMI-partner countries in testing samples from therapeutic efficacy studies (TESs) for molecular correction and genetic markers associated with antimalarial drug resistance, and 2) to support training and capacity strengthening of African collaborators.

The goal of this project is to develop molecular surveillance techniques and implement them in partner laboratories to characterize and track drug-resistant malaria parasites. The project supports the development of effective treatment strategies in support of malaria control and elimination efforts globally through the automation and standardization of procedures related to malaria molecular surveillance.





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Training Focus 1: The research participant will learn genetic techniques for the surveillance of antimalarial drug efficacy. The fellow will be trained on techniques used for molecular correction of recurrent malaria infections and molecular surveillance, including DNA extraction, PET-PCR, PCR amplification of target genes, capillary electrophoresis, microsatellite analysis, and all quality control/assurance steps throughout the sample to result process.

Training Focus 2: The participant will participate in laboratory trainings hosted by the Malaria Laboratory for scientists from partner African countries. The participant will contribute to developing presentations, providing hands-on demonstrations of laboratory techniques, and analyzing data to differentiate between cases of Malaria recrudescence from new infections.

Training Focus 3: The participant will receive training on implementing quality management systems (QMS) for malaria molecular assays to aid in establishing an internal quality control program. The participant will learn to standardize commonly used molecular tests by writing and reviewing standard operating procedures (SOPs) used to generate high-quality data. The participant will learn to create standard controls for molecular diagnosis and genotyping malaria parasites.

Learning Objectives:

- Become proficient in a variety of laboratory methods and data analysis tools used to characterize malaria parasites collected during therapeutic efficacy studies (TES)
- Become proficient presenting and communicating results with laboratory and epidemiology colleagues
- Translate experiences in the laboratory to develop training materials and resources
- Apply QMS principles to ensure generation of high-quality data

<u>Mentor(s)</u>: The mentor for this opportunity is Cecilia Nelson (conelson@cdc.gov). If you have questions about the nature of the research please contact the mentor(s).

<u>Anticipated Appointment Start Date</u>: August 1, 2023. Start date is flexible and will depend on a variety of factors.

<u>Appointment Length</u>: The appointment will initially be for one year, but may be renewed upon recommendation of CDC and is contingent on the availability of funds.

<u>Level of Participation</u>: The appointment is full-time.

<u>Participant Stipend</u>: The participant will receive a monthly stipend commensurate with educational level and experience.

<u>Citizenship Requirements</u>: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the <u>Guidelines for Non-U.S</u>. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.



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ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and CDC. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

Questions: Please visit our Program Website. After reading, if you have additional questions about the application process please email ORISE.CDC.CGH@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a bachelor's, master's, or doctoral degree in one of the relevant fields. Degree must have been received within the past five years.

Preferred skills:

- · Familiarity with and desire to learn molecular methods, including DNA extraction, conventional or real-time PCR, Sanger and/or next generation sequencing techniques
- · Familiarity with microbiology, immunology and/or parasitology methods is helpful, but not required
- · Experience reading and following laboratory protocols
- · Experience reading scientific literature or other scientific documents
- · Proficiency with Microsoft Office (including Excel or Access, PowerPoint, Word, Outlook, MS Teams)
- Excellent oral and written communication skills
- · Detail oriented and highly-organized
- French, Portuguese or other non-English language skills are desirable, but not necessary
- · Experience or desire to work in a multicultural environment
- Strong interpersonal skills required for teamwork and extensive interaction with people across CDC and with external partners working abroad
- · Flexible and adaptable to changing timelines or priorities

Eligibility Requirements

- Degree: Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 month(s).
- Discipline(s):
 - Life Health and Medical Sciences (12)

Affirmation I certify that I have not previously been employed by CDC or by a contractor working directly for CDC. I understand that CDC does not permit individuals with a prior employment relationship with CDC or its contractors to participate as trainees in the ORISE program. (Exceptions may be



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granted for individuals who, since the previous CDC employment, have obtained a new STEM degree which necessitates training in a new field.)