

ORISE fellowship at CDC

Opportunity Name

Research Participation Opportunities at the Centers for Disease Control and Prevention

Reference Code

CDC-General-RPP-2020-0059

Academic Level

Post-Master's

Short Description of Research Project

Diseases caused by parasites are notoriously difficult to identify. Even when scientists can acquire sequence data, parasitic genomes are so large that they require specialized computer programs to decipher. But using Advanced Molecular Detection technologies, CDC scientists developed a laboratory method that has the potential to revolutionize parasitic diagnostics. The Universal Parasite Diagnostic assay, or UPDx, selectively detects all parasite DNA in a clinical blood sample without interference from human DNA. This will make it easier to identify not just which parasite made someone sick, but also important genetic information about it, all in one test. The next challenge is to make this test work on more complex specimen types, starting with tissue.

Describe what the participant will learn during this project.

This project is for an individual ORISE fellow to become highly competent in the development of novel Polymerase Chain Reaction (PCR) and next generation sequencing based diagnostics for parasitic diseases. The fellow will be trained in the development and application of bioinformatic workflows and minor software development for use in novel diagnostic tools. The fellow will be trained in the development of next generation sequencing library preparation and Illumina MiSeq sequencing for targeted amplicon sequencing. The fellow will learn how to validate novel diagnostic tests for use in human diagnostic testing and apply quality management principles required for clinical testing.

Level of Participation

Full-time - 40hrs

Proposed Appointment Period

3-11 months with start date ASAP (November 2021 preferred)

Facility

Centers for Disease Control and Prevention
1600 Clifton Rd
Atlanta, Georgia 30329
United States

Application information and questions

Contact:

Dr Yvonne Qvarnstrom

bvp2@cdc.gov

404-718-4123