

Opportunity Title: Molecular Diagnosis of Infectious Diseases

Opportunity Reference Code: CDC-IDPB-2018-0106

Organization Centers for Disease Control and Prevention (CDC)

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How to Apply 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
- Two educational or professional references

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

If you have questions, send an email to CDCrpp@orau.org. Please include the reference code for this opportunity in your email.

Description An opportunity is available in the Infectious Diseases Pathology Branch (IDPB) at the Centers for Disease Control and Prevention in Atlanta, Georgia.

The IDPB is the primary CDC program to provide tissue-based diagnosis of infectious diseases. The participant will be trained in the development and validation of molecular diagnostic assays, including pyrosequencing assays for the identification of wide-range of pathogens, including various bacteria and viruses, from FFPE tissues.

The participant will be trained in the optimization and validation of newly developed assays/techniques such as automated nucleic acid extractions, RT-PCR/PCR, pyrosequencing-based assays and next-generation sequencing (NGS). The fellow will also train in preparation of standard operating procedures (SOP)/protocols and in routine laboratory maintenance.

The fellow will gain experience in the following under the guidance of the Molecular Pathology Team Lead:

- developing and standardizing nucleic acids extraction protocols for fixed tissue specimens.
- evaluating nucleic acid integrity and quality control protocols.
- validating PCR/RT-PCR and pyrosequencing assays for detection and characterization of wide array of pathogens.
- optimizing next generation sequencing (NGS) protocols using various approaches.
- maintaining inventories, electronic and hard copy records, and in preparation of protocols, project summaries, case reports etc.
- conducting nucleic acid extractions from paraffin embedded tissue specimens.



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- performing quality control and diagnostic conventional and real-time polymerase chain reaction (PCR)/RT-PCR and pyrosequencing-based assays.
- gel purification and nucleotide sequencing of PCR products.
- routine maintenance for lab, including maintaining inventories, autoclaving of consumables, quality control checks, maintaining equipment logs..
- writing technical reports and project summaries
- reviewing literature related to the project and assist in data compilation and preparation of manuscripts/presentations.

The participant will have opportunities to attend CDC seminars, training courses and DHCPP weekly seminars to enhance existing knowledge in microbiology/biological sciences, epidemiology and public health.

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and CDC. The initial appointment is for one year, but may be renewed upon recommendation of CDC contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at CDC in the Atlanta, Georgia, area. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits.

- Qualifications**
- MS or BS degree in biology/microbiology or related field earned within the past five years is required.
 - Experience and proficiency in using various molecular biology techniques, including DNA/RNA extractions from FFPE tissues, PCR/RT-PCR, gel electrophoresis, gel purification, Sanger sequencing and Pyrosequencing is preferred

- Eligibility Requirements**
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
 - **Discipline(s):**
 - **Environmental and Marine Sciences** ([1](#) )
 - **Life Health and Medical Sciences** ([45](#) )