

**Opportunity Title:** CDC Microbiology Laboratory Fellowship

**Opportunity Reference Code:** CDC-DFWED-2021-0073

**Organization** Centers for Disease Control and Prevention (CDC)

**Reference Code** CDC-DFWED-2021-0073

**How to Apply** *Connect with ORISE...on the GO!* Download the new ORISE GO mobile app in the [Apple App Store](#) or [Google Play Store](#) 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

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

If you have questions, send an email to [ORISE.CDC.NCEZID@orau.org](mailto:ORISE.CDC.NCEZID@orau.org). Please include the reference code for this opportunity in your email.

**Application Deadline** 4/7/2021 3:00:00 PM Eastern Time Zone

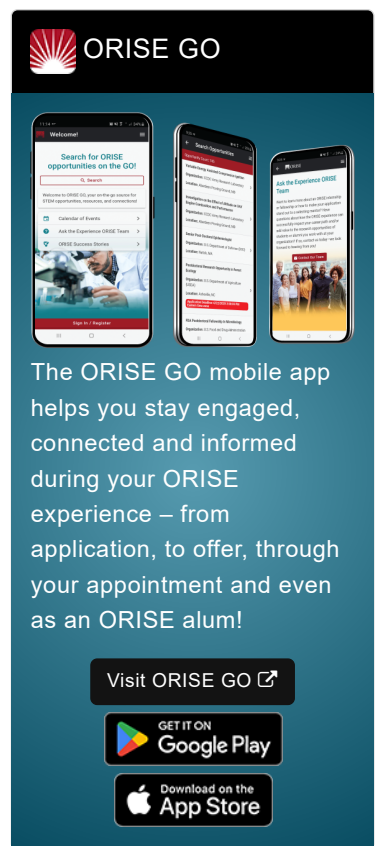
**Description** \*Applications will be reviewed on a rolling-basis.

A research opportunity is currently available in the Culture-Independent and Metagenomic Subtyping group (CIMS) in the Enteric Diseases Laboratory Branch (EDLB) in the Division of Foodborne, Waterborne, and Environmental Diseases (DFWED) in the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia.

To maintain long-term viability, foodborne enteric pathogen outbreak surveillance systems must transition from culture-based methods, which require extensive laboratory work to isolate pathogens from other microbes in a patient stool sample, to molecular techniques compatible with complex metagenomic samples. CIMS is working closely with PulseNet, the National Antimicrobial Resistance Surveillance Team in EDLB, and other partners to develop complete culture-independent workflows covering specimen collection to final pathogen report. As a part of this work, CIMS is offering a fellowship to support the development and optimization of laboratory procedures utilizing amplicon sequencing and shotgun metagenomic sequencing for culture-independent enteric pathogen surveillance. Activities of the selected participant will include gaining valuable experience and skills in following areas: collaborating with other project scientists to develop project plans, interpreting data, writing protocols, and presenting results to partner public health organizations. The participant will receive extensive laboratory mentoring with the goal of developing a robust molecular and microbiological skillset that will include many techniques commonly used in public health laboratories around the USA. Validated best practices resulting from this project will be distributed to public health laboratories.


Under the guidance of a mentor, the participant will be trained in the following activities:


- Evaluate, develop, and implement a variety of next generation sequencing (NGS) approaches for metagenomic testing of complex specimens for public health deployment
- Operate specialized equipment such as Fluidigm Juno, Perkin-Elmer SciClone, Illumina MiSeq, and Agilent Fragment Analyzer




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- Use standard microbiological techniques to safely manipulate primary clinical samples and pathogen isolates
- Extract DNA from pathogen isolates and stool for NGS
- Perform maintenance of shared laboratory spaces and equipment
- Maintain laboratory notebook and other project related records
- Communicate results to other project scientists and external collaborators

This opportunity involves working with human pathogen isolates and human clinical specimens (primarily stool). Relevant vaccinations for working with human clinical samples will be required. Extensive biosafety and chemical safety training and oversight will be provided.

**Anticipated Appointment Start Date: March 2021; start date is flexible**


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 can be up to 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** The qualified candidate should have received a bachelor's degree in one of the relevant fields. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Relevant micro or molecular biology laboratory experience, not including classwork
- Good written and oral communication skills

**Eligibility Requirements**

- **Degree:** Bachelor's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** ([46](#) )