

Opportunity Title: Next Generation Sequencing Fellowship

Opportunity Reference Code: CDC-DVD-2017-0159

Organization Centers for Disease Control and Prevention (CDC)

Reference Code CDC-DVD-2017-0159

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 A fellowship opportunity is available in the Division of Viral Diseases (DVD) at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia.

The Division of Viral Diseases is responsible for disease surveillance for many viruses associated with vaccine preventable and non-vaccine preventable viral diseases. A significant component of laboratory-based surveillance for viral diseases is genetic characterization of pathogens by DNA sequencing. The availability of next-generation sequencing technology (NGS) now makes it possible to routinely obtain full genomic sequence information from viral samples. As part of CDC's Advanced Molecular Detection Initiative, DVD has a goal of developing a standardized pipeline for high efficiency genomic sequencing of viruses that are studied by DVD. The sequence information will allow for high resolution viral surveillance and expand our knowledge of transmission pathways, strain diversity and distribution, and for some of the viruses, detection of endemic versus imported viruses. In addition, the NGS methods will allow for faster identification of the viral etiologic agents responsible for cases and outbreaks, and will permit detection of previously unknown viruses. Analysis of full genome sequences will permit monitoring of important genetic features of the viruses that affect pathogenesis or may compromise vaccine efficacy.

The selected individual will assist the DVD Sequencing Core Team.


Activities may include:


- optimization and standardization of NGS protocols and workflows for each of the viruses studied in DVD (e.g., polioviruses, measles virus, rubella virus, mumps virus, noroviruses, rotaviruses, coronaviruses, herpesviruses)
- evaluation of NGS platforms and methods to determine which is most suitable for efficient sequencing
- generation of genomic sequence data for input into the bioinformatics


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analysis pipeline and for submission to public databases

- collaboration with subject matter experts and team members
- construction of libraries and use of several NGS platforms to obtain genomic sequence data.

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**
- Bachelor's or Master's degree in virology, microbiology, molecular biology, genetics, or related discipline earned within the past five years
 - Laboratory experience in molecular biology, next generation sequencing and sequence analysis preferred

- Eligibility Requirements**
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([4](#))