

Opportunity Title: Microbiologist /Bioinformatics Fellowship -- CDC

Opportunity Reference Code: CDC-NCEZID-2016-0067

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 A fellowship opportunity is available in the Clinical and Environmental Microbiology Branch, Division of Healthcare Quality Promotion (DHQP), in National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia.

The mission of DHQP is to protect patients, protect healthcare personnel, and to promote safety, quality, and value in both national and international healthcare delivery systems. To support this mission, the Clinical and Environmental Microbiology Branch (CEMB) provides reference antimicrobial susceptibility testing; provides reference identification services for anaerobes, staphylococci and related genera, and the non-tuberculous mycobacteria (excluding *M. tb* complex, *M. leprae*, and *M. ulcerans*); provides laboratory assistance for the investigation of outbreaks and other adverse events in healthcare settings; maintains surveillance programs for important, healthcare-associated bacterial pathogens such as methicillin-resistant *Staphylococcus aureus* (MRSA), *Clostridium difficile* (*C. diff*), and Carbapenem-resistant *Enterobacteriaceae* (CRE); and develops and optimizes methods to detect and decontaminate pathogenic bacteria on healthcare surfaces, water, and devices.

The fellow may have the opportunity to be involved in the following:

- Developing a high level bioinformatics support program for molecular biologists and microbiologists by developing a pipeline for the interpretation of large data sets generated through genomic projects
- Providing statistical and computational tools for biologically based activities (such as genetic analysis, measurement of gene expression, and gene function determination)
- Supporting the training of scientists in the selection and use of bioinformatics tools



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- Analyzing complex datasets (such as raw microarray data, genomic sequence data, and proteomics data) for clinical or basic research purposes (such as outbreak investigations or identification of novel resistance genes)
- Participating in multidisciplinary research projects involving bacteriology, microbiome, and bioinformatics
- Compiling data for use in gene expression profiling, genome annotation, metagenomics, and structural bioinformatics
- Handling complex genome-wide sequencing data to implement a flow that will provide principal component analysis, structure, dendritic tree and other types of population genetic analyses
- Performing population analysis and interpreting data generated from high-throughput sequencing platforms
- Communicating research results through conference presentations, scientific publications, or project reports.

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 or the program administrator, and there are no fringe benefits paid.

- Qualifications**
- A bachelor's, master's, or doctorate degree in microbiology, biology, or a related science with strong training and/or experience with bioinformatics, biostatistics, and genomic sequence data analysis received within the last five years, or completion of all requirements for the degree should be expected prior to the starting date
 - Knowledge of routine microbiology laboratory procedures, molecular biology techniques and sequence data analysis is preferred
 - Knowledge of computer applications including various bioinformatics software programs for analyzing genomics data (eg, BioNumerics, Sequencher, DNASTar Lasergene, etc.), Blast®, Microsoft Office, is also desired

- Eligibility Requirements**
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 month(s).
 - **Academic Level(s):** Post-Bachelor's, Postdoctoral, or Post-Master's.
 - **Discipline(s):**

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- **Life Health and Medical Sciences** ([3](#) 👁)
- **Mathematics and Statistics** ([1](#) 👁)