Opportunity Title: CDC Influenza Bioinformatics Fellowship
Opportunity Reference Code: CDC-ID-2020-0017

Organization	Centers for Disease Control and Prevention (CDC)
Reference Code	CDC-ID-2020-0017
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
- One educational or professional recommendation. Your application will be considered incomplete, and will not be reviewed until one recommendation is submitted.

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

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

Application Deadline	12/11/2019 3:00:00 PM Eastern Time Zone
Description	***Applications will be reviewed on a rolling-basis.**

A research opportunity is currently available within the Influenza Division (ID), in the National Center for Immunization and Respiratory Diseases (NCIRD) at the Centers for Disease Control and Prevention (CDC) located in Atlanta, Georgia. ID performs domestic and international influenza surveillance, aids in influenza diagnosis, and is a leader in influenza virus characterization and control efforts.

The Influenza Division's Office of the Director (ID/OD) informatics group performs cross-cutting work spanning multiple areas, including the development of computational methods, data integration and enrichment, statistical analysis, laboratory automation, system management, special R&D projects, and technical consultation. The Informatics Group seeks to empower and strengthen informatics efforts throughout the division via innovation, collaboration, service, and the management of shared analytics resources. Additionally, the group serves as a forum for informatics knowledge exchange, helping to align division-wide computational efforts.

The participant will have several advanced training opportunities within the ID/OD Informatics Group. Centered around the informatics infrastructure established for the ID next-generation sequencing (NGS) pipeline, this opportunity will include exposure to laboratory information management system (LIMS) interfaces, large-scale database analytics, and computer programming related to influenza virus genomics. Under the guidance of a mentor, the participant will be involved in the following activities:

- High-throughput image processing analysis of NGS quality control (QC) instrumentation data, and investigation of machine learning approaches for associating downstream outcomes
- Surveying of containerization frameworks to package sequencing curation pipeline components for deployable solutions

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- Exploration of automation techniques for NGS pipeline operations through robotics integration
- Studying methods and parameterizations for efficiently separating mixed samples and virus populations identified during assembly

Anticipated Appointment Start Date: January 6, 2020

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 can be full-time or part-time, depending on the candidate's availability, 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 be currently pursuing or have received a master's degree in one of the relevant fields. Degree must have been received within five years of the appointment start date. Candidates who have received their degree are preferred.

Preferred skills:

- Bioinformatics experience with next-generation sequencing (NGS) pipelines, and familiarity with the steps taken to perform NGS
- Scripting in programming languages such as R, Groovy, Python or Perl
- Familiarity with Linux command-line operations (BASH, etc.)
- Experience in at least one of the following is strongly preferred: (a) image processing / associated machine learning techniques, (b) containerization of applications/pipeline code, or (c) experience with application program interfaces (APIs)

Eligibility Requirements

- **Degree:** Master's Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (3 👁)
  - **Engineering** (2 👁)
  - **Life Health and Medical Sciences** (7 👁)