

**Opportunity Title:** CDC Bioinformatics Fellowship  
**Opportunity Reference Code:** CDC-NCIRD-ID-2023-0051

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

**Reference Code** CDC-NCIRD-ID-2023-0051

**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
- Two educational or professional recommendations. 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.

**Application Deadline** 6/1/2023 3:00:00 PM Eastern Time Zone

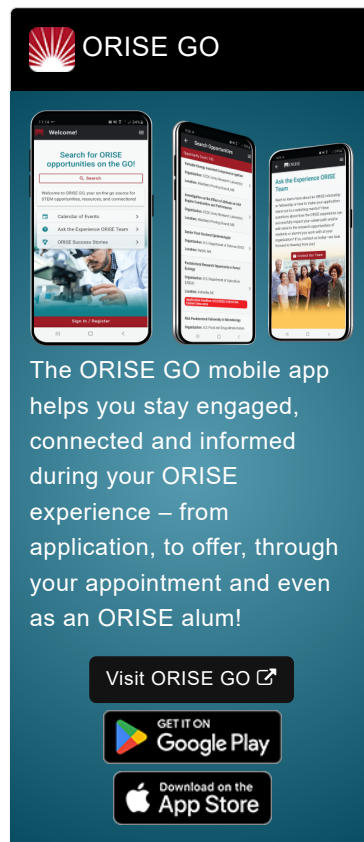
**Description** **\*Applications will be reviewed on a rolling-basis, and this opportunity will remain open until qualified candidates are identified.**

**CDC Office and Location:** A fellowship opportunity is currently available with the Influenza Division (ID), National Center for Immunization and Respiratory Diseases (NCIRD), at the Centers for Disease Control and Prevention (CDC) located in Atlanta, Georgia. **100% remote option available.**

The ID is responsible for surveillance of influenza viruses, both seasonal and those with pandemic potential. The ID utilizes Next Generation Sequencing (NGS) both internally and through national and international partners to monitor for genetic changes in these viruses to develop risk assessments and recommend vaccine components to the World Health Organization.


**Research Project:** To help accomplish this goal, the selected participant will join the Influenza Division, Virology, Surveillance and Diagnosis Branch's Bioinformatics Team. Under the guidance of a mentor, opportunities include:


- Contributing to the development of user-friendly software for local and cloud deployment of viral NGS assembly, annotation, quality control and public database submission.
- Building bioinformatic pipelines that help laboratory scientists prioritize phenotypic experiments through phylogenetics, variant analyses and other epidemiological criteria.
- Contributing to maintenance, testing and development of automated production-scale NGS bioinformatics pipelines
- Performing quality assessments and assembly optimization of NGS data from long-read sequencers from Oxford Nanopore Technologies




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and PacBio.

- Participating in the development of solutions for integration and analyses of sequencing, phenotypic and epidemiological data.

**Learning Objectives:** The fellow will learn practical bioinformatics skills desired in high throughput settings like government and industry. These skills include deployable application development, reproducible pipeline development, cluster computing and distributed database architecture. The fellow will also learn principals of viral genomics including NGS-based consensus assembly, minor variant analysis and phylogenetics. These projects will be accomplished by collaborating with diverse groups of bioinformatics and laboratory scientists and result in practical solutions tailored to their needs.

**Mentor(s):** The mentor for this opportunity is Ben Rambo-Martin ([nbx0@cdc.gov](mailto:nbx0@cdc.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** As soon as a qualified candidates are identified. Start date is negotiable.

**Appointment Length:** The appointment will initially be for one year, but may be renewed upon recommendation of CDC and is contingent on the availability of funds.

**Level of Participation:** The appointment is full-time.

**Participant Stipend:** The participant will receive a monthly stipend commensurate with educational level and experience.

**Citizenship Requirements:** This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the [Guidelines for Non-U.S. Citizens Details page](#) of the program website for information about the valid immigration statuses that are acceptable for program participation.

**ORISE Information:** This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and CDC. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

**Questions:** Please visit our [Program Website](#). After reading, if you have additional questions about the application process please email [ORISE.CDC.NCIRD@ornl.gov](mailto:ORISE.CDC.NCIRD@ornl.gov) and include the reference code for this opportunity.



**Qualifications** The qualified candidate should have received a bachelor's, master's or doctoral degree in one of the relevant fields, or be currently pursuing one of the degrees and will reach completion by the start date of the appointment. Degree must have been received within five years of the appointment start date.

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Preferred skills:

- Experience in bioinformatics and scripting (e.g. Linux/command line and R or Python)
- Experience in graphical interface frameworks like Rshiny or Python Dash
- Experience in bioinformatic pipeline development, i.e. Nextflow/Snakemake/WDL
- Experience in NGS analyses
- Experience in cloud computing
- Experience in molecular biology

**Eligibility Requirements**

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** ([2](#) )
  - **Life Health and Medical Sciences** ([12](#) )

**Affirmation** I certify that I have not previously been employed by CDC or by a contractor working directly for CDC. I understand that CDC does not permit individuals with a prior employment relationship with CDC or its contractors to participate as trainees in the ORISE program. (Exceptions may be granted for individuals who, since the previous CDC employment, have obtained a new STEM degree which necessitates training in a new field.)