Opportunity Title: CDC Public Health Laboratory Data Scientist Fellowship
Opportunity Reference Code: CDC-NCEZID-DHCPP-2024-0092A

Organization	Centers for Disease Control and Prevention (CDC)
Reference Code	CDC-NCEZID-DHCPP-2024-0092A
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. 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.

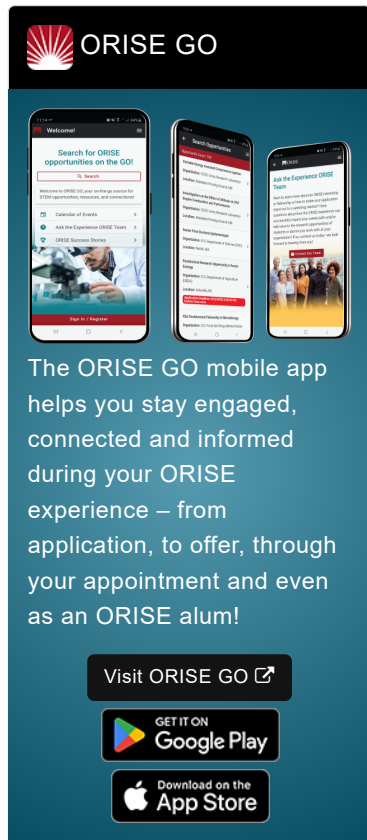|	
Application Deadline	12/1/2024 11:59:00 PM Eastern Time Zone
Description	***Applications will be reviewed on a rolling-basis.***

CDC Office and Location: A public health laboratory training research opportunity is available in the Chronic Viral Diseases Branch (CVDB) within the Division of High-Consequence Pathogens and Pathology (DHCPP) of the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) at the Centers for Disease Control and Prevention (CDC), located in Atlanta, Georgia**.**

CVDB's activities include laboratory-based method development and studies of human papillomavirus (HPV) infection, HPV vaccine effectiveness, and HPV-associated diseases to enable effective control and prevention. HPV is the most common sexually transmitted virus in the U.S and can cause some cancers, warts, and recurrent respiratory papillomatosis. The branch's HPV surveillance projects include the National Health and Nutrition Examination Survey (NHANES), Human Papillomavirus Vaccine Impact Monitoring Project (HPV-IMPACT), and supporting partners in other countries.

The Centers for Disease Control and Prevention (CDC) is one of the major operation components of the Department of Health and Human Services. CDC works to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.

Research Project: Under mentor guidance, the fellow will be trained in public health molecular biology laboratory data management and analysis. The fellow may learn how to apply their academic education involving computer science to meet user needs and policy requirements in a laboratory setting. The fellow will support laboratory databases that are

centralized, standardized, scalable, allow process automation, meet regulatory requirements, integrate studies and assay platforms, ensure data integrity, and configured to meet end user needs.

Learning Objectives: The participant will develop experience with an enterprise level laboratory information management system (LIMS), a custom structured query language (SQL) database, RMarkdown reports and other systems. The training will include management of a biological specimen data life cycle from specimen receipt through nucleic acid extraction, genotyping, data quality control, data reporting, and inventory management. In addition to mentor guidance, the fellow's development will be supported by various resources at CDC including a team of public health laboratory scientists, Quality Management Systems (QMS) officer, CDC/ATSDR R User Group, and Office of Scientific Computing and Bioinformatics Support. The fellow will develop several supporting skills applicable to a wide range of laboratory disciplines: teamwork, project management, written and oral communication, supply inventory management, laboratory safety, and quality management systems (https://www.cdc.gov/labquality/qms-tools-and-resources.html).

Specific research activities may include:

- Analysis of HPV nucleic acid by next-generation sequencing bioinformatics pipeline.
- Software validation in accordance with QMS.
- Recording and maintaining records detailing experiments and results.
- Improving and managing electronic databases (e.g. Microsoft Access, SQL and laboratory information systems [LIMS]).
- Analyzing data with Excel, Access, R, and PowerBI.
- Using Databricks to manage data, analyses, and visualizations.
- Drafting internal reports of tasks performed as they are requested.
- Adhering to quality control and safety procedures.
- Assisting in laboratory quality management activities as assigned.
- Attending weekly departmental meetings that address current scientific activities of the branch.
- Participating in the CDC Fellows Professional Development Collective which offers periodic seminars, career mentorship, and networking with other fellows across the CDC.
- Supplementing mentor-lead training with CDC trainings or external online courses to further develop new skills that support the team's goal and personal career path.

Mentor(s): The mentor for this opportunity is Troy Querec (hep0@cdc.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: November 11, 2024. Start date is flexible and will depend on a variety of factors. Start would not be sooner than November 11, 2024. Availability to start in November 2024 is preferred. For a candidate that is an excellent match for the opportunity,

starting the first week of January 2025 could be considered.

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: Stipend rates may vary based on numerous factors, including opportunity, location, education, and experience. If you are interviewed, you can inquire about the exact stipend rate at that time and if selected, your appointment offer will include the monthly stipend rate.

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.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

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

Qualifications   The qualified applicant must have received, or currently be pursuing a bachelor's or master's degree. Degree must have been received within the past five years.

Preferred Skills:

- Experience with at least one of the main programming languages used in this laboratory: SQL, R, or Visual Basic for Applications (VBA)
- Experience with Databricks
- Applied coding experience outside of the classroom
- Exposure to clinical, public health or academic laboratory research
- Experience using coding languages to build visualization and reporting tools (e.g. Rservers, Rshiny, RMarkdown, and PowerBI)
- Experience with version control (e.g. Git)
- Experience with Microsoft Office (Excel and Access)

- Strong written and oral communication skills
- Ability to work well on a team
- Interest in public health research

Eligibility Requirements

- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Mathematics and Statistics** (11 👁)

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.)