

Laboratorian: Molecular Biology for Viral Surveillance

Opportunity Reference Code: CDC-NCEZID-DHCPP-2022-0291

Organization Centers for Disease Control and Prevention (CDC)

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How to Apply

Connect with ORISE...on the GOI 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 11/18/2022 3:00:00 PM Eastern Time Zone

Description

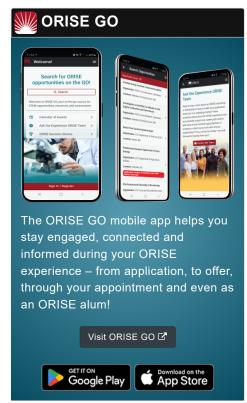
*Applications will be reviewed on a rolling-basis.

CDC Office and Location: An interesting public health laboratory training 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. The virus can cause cervical, vaginal, vulvar, penile, anal, and oropharyngeal 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 international partners in other countries, e.g. Botswana.

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.







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Research Project: Under mentor guidance, the fellow will be trained in critical public health molecular biology techniques. The project will include using recombinant DNA technology for creation of HPV plasmid standards, optimizing and validating molecular HPV assays, and testing surveillance specimens. The training will include the life cycle of a sample from receipt through nucleic acid extraction, genotyping, and data management to archiving or destruction. The participant will be involved in laboratory tasks including processing, testing, and archiving specimens in support of HPV epidemiology and vaccine implementation studies.

Specific activities may include:

- Cloning, screening, and maintaining a recombinant DNA HPV plasmid repository
- Cataloging, processing and storing biologic samples received in the HPV DNA laboratory while observing all safety guidelines
- Extracting nucleic acid from human specimens
- Detecting, quantifying and genotyping HPV with molecular assays
- Recording and maintaining hardcopies and electronic copies of laboratory notebooks detailing experiments and results
- Managing records in electronic databases (e.g. Microsoft Access, SQL and laboratory information systems [LIMS])
- Drafting internal reports of tasks performed as they are requested
- Analyzing data with Excel, Access, R, and SnapGene
- Performing quality control and safety procedures necessary for the performance of laboratory protocols involved in interacting with biohazard materials
- 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.

Learning Objectives: 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 (QMS). This training will be supported further through a strong cohesive team of public health laboratory and data scientists.

<u>Mentor(s)</u>: The mentor(s) for this opportunity is Troy D. Querec



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(hep0@cdc.gov). Please contact them if you have questions about the nature of this research.

Anticipated Appointment Start Date: October 3, 2022. Start date is flexible and will depend on a variety of factors.

<u>Appointment Length</u>: 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.

<u>Participant Stipend</u>: The participant will receive a monthly stipend commensurate with educational level and experience.

<u>Citizenship Requirements</u>: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the <u>Guidelines for Non-U.S. Citizens Details</u> 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 candidate should have received a bachelor's degree in one of the relevant fields, or be currently pursuing the degree with completion by September 2, 2022. Degree must have been received within five years of the appointment start date.

Some prior hands-on experience in a biological laboratory outside of a classroom setting is preferred.



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Eligibility Requirements

- Degree: Bachelor's Degree received within the last 60 months or anticipated to be received by 9/2/2022 12:00:00
- Academic Level(s): Post-Bachelor's or Undergraduate Students.
- Discipline(s):
 - Life Health and Medical Sciences (48 ●)

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.)