

Opportunity Title: CDC Molecular Biologist Postdoctoral Fellowship

Opportunity Reference Code: CDC-NCEZID-DHCPP-2023-0182

Organization Centers for Disease Control and Prevention (CDC)

Reference Code CDC-NCEZID-DHCPP-2023-0182

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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 9/15/2023 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling-basis.**

CDC Office and Location: An interesting and challenging research training opportunity is currently 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](#).

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.

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 transmissible infection in the world. 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 with HPV surveillance in other countries.

Research Project: Under the guidance of a mentor, the selected participant will join laboratory staff in surveillance and reference laboratory projects for HPV prevalence and vaccine impact monitoring. The fellow will train in the application of next-generation sequencing and other molecular methods for reliable longitudinal surveillance of HPV to inform policy on



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effectiveness of vaccination and other public health practices. The fellow will learn how to maintain and use an HPV plasmid biorepository to serve as standards for assay development and proficiency panels. The fellow will learn how to monitor lab processes and validate new methods under a laboratory quality management system (QMS). The fellow will develop subject matter expertise to assist domestic and international public health partners with HPV surveillance. Specific activities may include:

- Participate in updating standard operating procedures, risk assessments, and quality requirements for NGS, plasmid biorepository, and other molecular biology research.
- Record and maintain laboratory records detailing experiments and results and submit technical reports and project summaries of research performed.
- Evaluate performance characteristics and applications of molecular genotyping tests for HPV surveillance studies.
- Sequence on Illumina MiSeq and ThermoFisher IonTorrent platforms.
- Perform bacterial transformation, plasmid extraction, DNA quantification and confirmatory assays for HPV plasmid biorepository expansion
- Coordinate with domestic and international partners.
- Analyze data with bioinformatics and statistical software
- Conduct literature survey and monitor advances in molecular technologies applicable to HPV surveillance
- Apply and document laboratory safety processes
- Draft assay budgets and purchase requests
- Participate in Team, Branch, Division, and group meetings to advance research and coordinate efforts.
- Communicate research through conferences and peer-reviewed publications

Learning Objectives: This training is an opportunity for the participant to improve their molecular biology skills and apply them in a high-quality laboratory setting where lab data informs public health practice. In addition, 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.

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

Anticipated Appointment Start Date: April 30, 2024. Start date is flexible and will depend on a variety of factors. Depending on these factors, a start date in November or December 2023 is possible.

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

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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.

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@ornl.gov and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion by August 31, 2023. Degree must have been received within the past five years.

Preferred Skills:

- Experience with molecular techniques including plasmids and sequencing
- Good oral and written communication skills

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 8/31/2023 12:00:00 AM.
- **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

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granted for individuals who, since the previous CDC employment, have
obtained a new STEM degree which necessitates training in a new field.)