

Opportunity Title: CDC Phylogenetics/Evolutionary Genetics Fellowship

Opportunity Reference Code: CDC-NCEZID-2022-0054

Organization Centers for Disease Control and Prevention (CDC)

Reference Code CDC-NCEZID-2022-0054

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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 5/31/2022 3:00:00 PM Eastern Time Zone

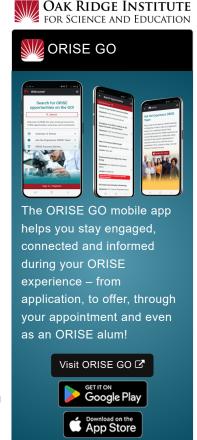
Description *Applications will be reviewed on a rolling-basis.

CDC Office and Location: A fellowship opportunity is currently available with the Evolutionary Analysis and Ecology (EAE) Team of the Poxvirus and Rabies Branch (PRB), Division of High-Consequence Pathogens and Pathology (DHCPP) at the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) at the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia.

The EAE Team focuses on the study of evolutionary and ecological aspects of zoonotic poxviruses and lyssaviruses (including rabies virus) through integrative approaches that involve field work, genetic/genomic analyses, spatial analyses and modeling.

Research Project: The Fellow will have the opportunity to be involved in several research projects conduct genetic analyses of poxviruses and lyssaviruses (including rabies virus) to examine intra- and interspecific levels of genetic variation, identify mutations of evolutionary and clinical importance (e.g., virulence factors, protein modifications impacting use of MCMs), and generate trees/networks to determine evolutionary relationships using partial and/or whole genome sequences. Specific activities will include performing bioinformatic techniques (e.g., linux or similar programming language expertise, pipeline development, genomic assembly and annotation, database management) and conducting population genetic analyses to be integrated with epidemiological data to study the transmission/dynamics of these viruses in human and wildlife populations. These activities are part of current projects supporting the mission of PRB and offer opportunities to collaborate with domestic and international public health professionals of diverse cultural and scientific backgrounds. Additional opportunities of involvement in other projects and learning experiences within the Team and the Branch could be offered as they arise.

Learning Objectives:



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- · Contribute to multiple multidisciplinary projects integrating ecological, epidemiological and molecular data
- · Collaborate with internal and external research partners in both, domestic and foreign institutions
- · Gain experience leading projects that involve the analysis of sequencing data through genomic analyses, phylogenetic analyses, population genetics, bioinformatics, and molecular epidemiology
- · Contribute to projects aimed to the understanding of ecological, epidemiological and evolutionary aspects of zoonotic poxviruses and lyssaviruses
- · Preparing manuscripts for peer reviewed publications
- · Present research results in scientific meetings

Mentor(s): The mentor for this opportunity is Yoshinori Nakazawa (inp7@cdc.gov). If you have questions about the nature of the research please contact the mentor(s).

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

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 <u>Program Website</u>. 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 doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion by June 2022. Degree must have been received within five years of the appointment start date.

Preferred skills:

Strong background in phylogenetics and evolutionary biology with

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experience leading projects

- Skills in bioinformatics, population genetics and virology
- Solid verbal and written communication skills
- Ability to initiate, maintain, and strengthen collaborations with public health professionals within CDC, other Federal agencies, or in international settings

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 6/30/2022 11:59:00 PM.
- Discipline(s):
 - Life Health and Medical Sciences (<u>48</u> ●)

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