

Opportunity Title: FDA COVID Genomics and Bioinformatics Fellowship

Opportunity Reference Code: FDA-CFSAN-2021-0024

Organization

U.S. Food and Drug Administration (FDA)



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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

All documents must be in English or include an official English translation.

If you have questions, send an email to ORISE.FDA.CFSAN@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline

7/22/2021 3:00:00 PM Eastern Time Zone

Description

***Applications will be reviewed on a rolling-basis. Early submissions are encouraged, as a selection could be made before the deadline.**

A research opportunity is currently available with the U.S. Food and Drug Administration (FDA), Center for Food Safety and Applied Nutrition (CFSAN), Office of Analytics and Outreach (OAO) located in College Park, Maryland.

The project will focus on developing bioinformatics infrastructure for the processing, submission, monitoring, and analysis of viral genomes, especially SARS-CoV-2, from metagenomic sequencing of wastewater samples. SARS-CoV-2 has had a major impact on public health starting in 2020. Vaccines have been developed for this virus, but variants continue to emerge that threaten our ability to adequately respond to this virus. In order to assist in monitoring for variants for this virus and monitor for viruses more generally, it is important to put in place a system that will allow us to collect representative viral samples in the ecosystem that can affect people and CFSAN regulated products.

The participant will receive hands-on training, under the guidance of a mentor, in the following activities:

- Developing a robust variant detection pipeline for sequence data from SARS-CoV-2 environmental samples, including the phylogenetic analysis of isolates and automated reporting of actionable information on variants for vaccine evaluation
- Developing an automated process for sequence assembly and submission of data to external databases
- Collaborating with research virologists in the analysis of genomic and metagenomic data and development of bioinformatics workflows to help them achieve their objectives and those of CFSAN regarding SARS-CoV-2 in environmental samples
- Present data at scientific meetings in either oral or poster form as well as publication of research results in peer-reviewed manuscripts

Anticipated Appointment Start Date: As soon as possible; start date is flexible

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and FDA. The initial appointment is for one year, but may be renewed upon recommendation of FDA contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at FDA in the College Park, Maryland, area. Participants do not become employees of FDA, DOE or the program administrator, and there are no employment-related benefits.

Completion of a successful background investigation by the Office of Personnel Management is required for an applicant to be on-boarded at FDA. OPM can complete a

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background investigation only for individuals, including non-US Citizens, who have resided in the US for a total of three of the past five years.

FDA requires ORISE participants to read and sign their FDA Education and Training Agreement within 30 days of his/her start date, setting forth the conditions and expectations for his/her educational appointment at the agency. This agreement covers such topics as the following:

- Non-employee nature of the ORISE appointment;
- Prohibition on ORISE Fellows performing inherently governmental functions;
- Obligation of ORISE Fellows to convey all necessary rights to the FDA regarding intellectual property conceived or first reduced to practice during their fellowship;
- The fact that research materials and laboratory notebooks are the property of the FDA;
- ORISE fellow's obligation to protect and not to further disclose or use non-public information.






Qualifications

The qualified candidate should have received a master's or doctoral degree in one of the relevant fields. Degree must have been received within the past five years.

Preferred skills:

- Experience with scientific programming and independent development of workflows and pipelines to manage and analyze next-generation sequence data
- Demonstrated broad and extensive knowledge of computational and programming methods for the management and analysis of next-generation sequence data
- Possesses a strong commitment to producing production level code (python, R, etc.) and best practices in managing and versioning code
- Possesses a working understanding of genomics and biology as it relates to whole-genome sequencing, de novo genome assembly, QC/QA of whole-genome sequence data, etc.

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** (1 )
 - **Earth and Geosciences** (1 )
 - **Engineering** (1 )
 - **Environmental and Marine Sciences** (4 )
 - **Life Health and Medical Sciences** (13 )

Affirmation

Have you lived in the United States for at least 36 out of the past 60 months? (36 months do not have to be consecutive.)