

Opportunity Title: FDA Bioinformatics Software Engineering Fellowship

Opportunity Reference Code: FDA-CBER-2021-0012

Organization U.S. Food and Drug Administration (FDA)

Reference Code FDA-CBER-2021-0012

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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

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

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

Application Deadline 8/11/2021 3:00:00 PM Eastern Time Zone

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

A research opportunity is currently available with the Office of Biostatistics and Epidemiology (OBE), at the Center for Biologics Evaluation and Research (CBER), Food and Drug Administration (FDA) located in Silver Spring, Maryland.

The ORISE Research Participation Program at the U.S. Food and Drug Administration is an educational and training program designed to provide college students, recent graduates, and university faculty opportunities to connect with the unique resources of the FDA. With the support of an assigned mentor, participants have authentic hands-on research experience and allows them access to unique research opportunities, top scientists and engineers, and state-of the art facilities and equipment. The Center for Biologics Evaluation and Research (CBER) is one Center within the Food and Drug Administration, an Agency within the United States Government's Department of Health and Human Services. CBER's mission is to protect and enhance the public health through the regulation of biological and related products including blood, vaccines, allergenics, tissues, and cellular and gene therapies.

The selected participant will be involved in developing novel scientific algorithms and adopting existing tools. This role contains applications computing on biological and scientific information. The primary objective is to provide technical and scientific support to CBER in its efforts to enhance the development, operations, and management of FDA's HIVE infrastructure and scientific environment.

Under the guidance of a mentor, the participant will be involved in the following activities:

- Develop and implement novel scientific algorithms and optimize existing ones
- Suggest and implement new software and tool



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- Maintain, support and test existing tools for bugs, redundancies, and security issues
- Standardize and automate application-level processes
- Maintain and improve bioinformatics HPC environment
- Support and contribute to daily operations and maintenance that are effective in supporting Scientific program goals and flexible enough to accommodate rapidly changing technologies, instrumentation, hardware, and software

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 Silver Spring, 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 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 bachelor's, master's or doctoral degree in one of the relevant fields, or be currently pursuing one of the degrees with completion by the end of June 2021. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Background in Bioinformatics, Mathematics, Computer Science or equivalent experience
- Experience in Linux environment and shell scripting
- Experience with Python, or other OOP languages, and script languages such as R
- Familiarity with SQL
- Familiarity with HPC environment
- Knowledge of bioinformatics concepts such as data structures, alignments,





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clustering etc.

- Knowledge of networking and application-level operations
- Excellent communication skills

Eligibility Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 6/30/2021 11:59:00 PM.
- **Discipline(s):**
 - **Communications and Graphics Design** (1 )
 - **Computer, Information, and Data Sciences** (17 )
 - **Life Health and Medical Sciences** (2 )
 - **Mathematics and Statistics** (10 )