

Opportunity Title: FDA Fellowship in Research on Digital Pathology Image Analysis

Opportunity Reference Code: FDA-OWH-2023-02

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

Reference Code FDA-OWH-2023-02

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.CDRH@orau.org. Please include the reference code for this opportunity in your email.

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

A research opportunity is currently available with the Office of Commissioner (OC), Office of Women's Health (OWH), U.S. Food and Drug Administration (FDA). The project will be located at the Center for Devices and Radiological Health (CDRH), Division of Biomedical Physics (DBP) in the Office of Science and Engineering Laboratories (OSEL), Food and Drug Administration (FDA) located in Silver Spring, Maryland.

The participant will learn skills and gain experiences in research on development of assessment methods and tools for AI/ML algorithms applied to digital pathology image analysis. Specifically, the research project involves assessment of the robustness of AI/ML models across whole slide image (WSI) scanners in the task of predicting response to hormonal treatment of women with endometrial hyperplasia. The learning objectives include (1) color normalization methods for reducing color variations of WSI images (2) assessment of color normalization methods with color fidelity metrics, and (3) assessment of impact of color normalization methods on AI/ML models.

Anticipated Appointment Start Date: February 2023; 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 6 months 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



Opportunity Title: FDA Fellowship in Research on Digital Pathology Image

Analysis

Opportunity Reference Code: FDA-OWH-2023-02

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 be currently pursuing or have received a doctoral degree in biomedical engineering or computer science with research experience in artificial intelligence and digital pathology whole slide image analysis. Degree must have been received within the past five years.

Preferred Skills:

- Python programming
- Pathology whole slide image analysis
- Machine learning, especially generative adversarial networks
- Oral presentations and writing research papers

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** (2 )
 - **Engineering** (3 )

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.)