Opportunity Title: FDA Medical Device Interoperability Research Fellowship
Opportunity Reference Code: FDA-CDRH-2026-0015

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

Reference Code FDA-CDRH-2026-0015

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

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.

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!

Application Deadline 4/30/2026 3:00:00 PM Eastern Time Zone

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

FDA Office and Location: A research opportunity is available immediately with the Food and Drug Administration (FDA), Center for Devices and Radiological Health (CDRH) located in White Oak, Maryland.

The mission of Center for Devices and Radiological Health (CDRH) is to protect and promote the public health. CDRH assures that patients and providers have timely and continued access to safe, effective, and high-quality medical devices and safe radiation-emitting products. CDRH provides consumers, patients, their caregivers, and providers with understandable and accessible science-based information about the products overseen by CDRH. CDRH facilitates medical device innovation by advancing regulatory science, providing industry with predictable, consistent, transparent, and efficient regulatory pathways, and assuring consumer confidence in devices marketed in the U.S.

Research Project: The FDA's Medical Device Interoperability Regulatory Science Program conducts regulatory science research to ensure safe and effective interoperable medical devices, including wearable technology and systems of devices in the home and integrated clinical environments. Interoperable medical devices being investigated may include wearable sensors (e.g., photoplethysmography for pulse oximetry and blood pressure measurements, inertial measurement units for gait and movement analyses), patient monitoring algorithms (e.g., artificial intelligence/machine learning approaches) for disease detection and management, and

physiologic closed-loop controlled devices. Research activities for studying interoperable devices include developing test methods for wearable technology as part of systems of devices in the home, non-clinical approaches for characterizing wearable sensor data, and developing computational modeling and cyber-physical testing for automated devices.

Learning Objectives: As a participant, you will have learning opportunities that may include:

- Conducting human subject research studies to evaluate wearable sensor-derived endpoints, including for movement and gait analysis;
- Designing and fabricating phantoms and non-clinical bench methods for characterizing wearable optical sensors (e.g., PPG);
- Testing medical device electronic interfaces;
- Applying signal processing and machine learning approaches to wearable sensor data (e.g., ECG, IMU, PPG);
- Developing computational modeling approaches for automated medical devices (e.g., physiologic closed-loop controlled devices).
- Developing multi-spectral computational modeling tools using GPU-based processors to map light propagation for characterizing wearable optical sensors under a wide range of scenarios.

Mentor: The mentor(s) for this opportunity are Kimberly Kontson (Kimberly.Kontson@fda.hhs.gov), Joshua Pfefer (Joshua.Pfefer@fda.hhs.gov), David Eguren (David.Eguren@fda.hhs.gov), and Christopher Scully (Christopher.Scully@fda.hhs.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: 2026. 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 FDA 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.

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 participant will receive a monthly stipend commensurate with educational level and experience. Proof of health

insurance is required for participation in this program. 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 Ethics Requirements

If an ORISE Fellow, to include their spouse and minor children, reports what is identified as a Significantly Regulated Organization (SRO) or prohibited investment fund financial interest in any amount, or a relationship with an SRO, except for spousal employment with an SRO, and the individual will not voluntarily divest the financial interest or terminate the relationship, then the individual is not placed at FDA. For additional requirements, see FDA Ethics for Nonemployee Scientists.

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 bachelor's, master's, or doctoral degree in the one of the relevant fields.

Point of Contact Ashley

Eligibility Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 5/31/2028 12:00:00 AM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (29 👁)
  - **Environmental and Marine Sciences** (14 👁)

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- **Life Health and Medical Sciences** (51 👁)
- **Mathematics and Statistics** (11 👁)
- **Physics** (16 👁)

Affirmation I have lived in the United States for at least 36 out of the past 60 months. (36 months do not have to be consecutive.)
and
I have read the FDA Ethics Requirements.