Opportunity Title: FDA Postdoctoral Fellowship in the Application of Microphysiological Systems to Study the Blood-Milk Barrier
Opportunity Reference Code: FDA-CDER-2026-0020

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

Reference Code FDA-CDER-2026-0020

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.CDER@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 within the Food and Drug Administration (FDA) in The Center for Drug Evaluation and Research (CDER), Office of Clinical Pharmacology (OCP) Office of Translational Sciences (OTS), located at Silver Spring, Maryland.

The Center for Drug Evaluation and Research (CDER) performs an essential public health task by making sure that safe and effective drugs are available to improve the health of people in the United States. As part of the U.S. Food and Drug Administration (FDA), CDER regulates over-the-counter and prescription drugs, including biological therapeutics and generic drugs. These efforts cover more than just medicines.

Research Project: This fellowship will focus on investigating drug transfer across the blood–milk barrier using advanced microphysiological systems (MPS) that model human mammary tissue. The selected participant will collaborate with an interdisciplinary team of scientists to evaluate, refine, and validate an innovative MPS platform designed to predict how therapeutic compounds cross the mammary epithelium. The participant will actively conduct experiments, analyze barrier integrity and permeability, and compare in vitro findings with available clinical and pharmacokinetic data to assess model performance. These activities will advance understanding of maternal–infant drug exposure and contribute to the FDA's ongoing efforts to ensure the safety of medications used during

lactation.

Learning Objectives: Under the guidance of the mentor, you will receive structured, hands-on training in MPS design, operation, and analytical evaluation. Educational activities will include: 1) Cell culture training with human mammary epithelial and endothelial cells within PDMS-based microfluidic devices; 2) Barrier function and transport studies (including permeability assays and imaging-based analyses); 3) Analytical method development using fluorescence microscopy, ELISA, and LC–MS for drug quantification; 4) Data management and interpretation workshops, focusing on reproducibility, quality control, and statistical analysis; 5) Regulatory science seminars introducing FDA frameworks for evaluating emerging technologies and translational safety assessment.

Mentor: The mentor for this opportunity is Martha Garcia (martha.garcia@fda.hhs.gov). If you have questions about the nature of the research, please contact the mentor.

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.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) only.

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 doctoral degree in the one of the relevant fields.

Point of Contact Ashley

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (2 👁)
  - **Engineering** (5 👁)
  - **Life Health and Medical Sciences** (14 👁)
  - **Physics** (16 👁)

Affirmation I am a U.S. citizen, or 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.