Opportunity Title: FDA Postdoctoral Fellowship in Comparative Toxicological Evaluation of Tobacco Smoke and ENDS Aerosols Using Human Lung Organoid Models
Opportunity Reference Code: FDA-NCTR-2026-0006

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

Reference Code FDA-NCTR-2026-0006

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

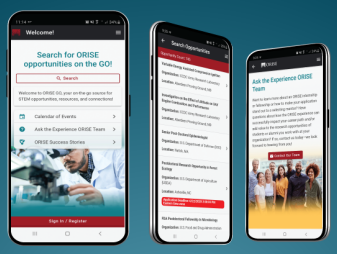
A complete application consists of:

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

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Application Deadline 11/20/2026 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), The National Center for Toxicological Research (NCTR) located in Jefferson, Arkansas.

The National Center for Toxicological Research (NCTR), is the only FDA Center located outside the Washington D.C. metropolitan area. The one-million square foot research campus in Jefferson, Arkansas plays an important role in the missions of FDA and the Department of Health and Human Services to promote and protect public health.

Research Project: You will engage in research focused on the comparative toxicity of tobacco products, including combustible cigarettes and electronic nicotine delivery systems (ENDS) such as JUUL. You will contribute to ongoing studies that utilize advanced *in vitro* human lung organoid models cultured at the air–liquid interface (ALI) to investigate the biological effects of tobacco smoke and aerosol exposures. You will participate in the design and execution of controlled exposure studies using automated smoking and aerosol generation systems/robots coupled with specialized exposure chambers. These studies involve repeated exposure schedules throughout the week, followed by systematic analysis of biological endpoints. You will collaborate with researchers to investigate functional and toxicological responses to exposures, including epithelial integrity, cellular viability, and physiological function. Your activities will include analyzing ciliary beating frequency, measuring transepithelial electrical resistance (TEER), and

evaluating cytotoxicity and metabolic activity through LDH and MTS assays. In addition, you will contribute to molecular and cellular investigations by applying techniques such as immunohistochemistry, comet assays for DNA damage assessment, and preparation of samples for sequencing-based mutation analysis. You will analyze experimental data, interpret findings, and contribute to the broader understanding of how different tobacco products impact lung biology.

This fellowship supports the mission of the U.S. Food and Drug Administration by generating high-quality data on the health effects of tobacco product exposures. You will contribute to research on the biological impacts of combustible and ENDS products, supporting the scientific and regulatory efforts of the Center for Tobacco Products. The training emphasizes scientific rigor, reproducibility, and innovative methods to advance understanding of tobacco-related risks and protect public health.

Learning Objectives: You will engage in structured training in inhalation toxicology, *in vitro* lung organoid models at the air–liquid interface (ALI), and the operation of automated robots for tobacco smoke and aerosol generation. You will develop skills in cell culture, toxicological and molecular assays, experimental design, and data analysis. Your training will also emphasize scientific documentation, data integrity, and laboratory safety. Through mentorship and collaborative discussions, you will strengthen your ability to interpret findings and contribute to the scientific understanding of tobacco product toxicity and public health.

You will participate in interdisciplinary training across toxicology, cell biology, and public health while collaborating with a diverse research team. You will contribute to reports, presentations, and potentially manuscripts, strengthening your scientific communication skills. Through this experience, you will develop critical thinking, experimental design, and data analysis skills, providing a strong foundation for careers in biomedical research, public health, and related fields.

Mentor: The mentor for this opportunity is Azra Nfn (Nfn.Azra@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.

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

Eligibility

- **Degree:** Master's Degree or Doctoral Degree.

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Requirements

- **Discipline(s):**
  - **Life Health and Medical Sciences** (51 👁)

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.