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**Opportunity Title:** FDA Postdoctoral Fellowship - Metabolic Activation of Nitrosamine Impurities
**Opportunity Reference Code:** FDA-NCTR-2026-0004

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

**Reference Code** FDA-NCTR-2026-0004

**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

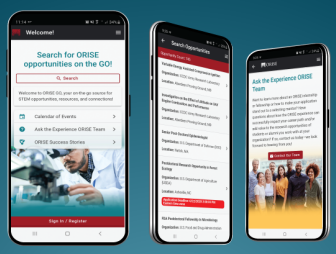
All documents must be in English or include an official English translation.

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** 12/1/2026 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:** This fellowship will focus on investigating the metabolism of nitrosamine drug substance-related impurities (NDSRIs) and its potential impact on mutagenicity and carcinogenicity to address critical FDA regulatory knowledge gaps regarding drug safety. You will collaborate with an interdisciplinary team of scientists to elucidate metabolic activation pathways of structurally complex NDSRIs, with a particular emphasis on DNA adduct formation, using in vitro metabolic systems and mammalian cell models. These studies will provide mechanistic insights into the structure-activity relationships underlying the mutagenic and carcinogenic potency of NDSRIs. The research activities will also support improvements in (quantitative) structure-activity relationship ([Q]SAR) modeling and enhance the FDA's ability to conduct regulatory safety assessments of NDSRIs in affected drug products.

**Learning Objectives:** Under the guidance of the mentor, you will receive hands-on training in mechanistic study design, experimental execution, and systematic evaluation in the fields of drug metabolism and chemical carcinogenesis.

Educational activities will include:

- Gaining experience with in vitro metabolism studies using liver S9 fractions, microsomes, and mammalian cell culture systems.
- Learning to characterize major intermediates and metabolites using high-performance liquid chromatography-ultraviolet spectroscopy (HPLC-UV), liquid chromatography-tandem mass spectrometry (LC-MS/MS), and/or proton nuclear magnetic resonance spectroscopy (1H-NMR).
- Developing skills in the identification and quantification of DNA adducts formed by NDSRIs in S9/microsomal incubations with DNA and in cell culture systems, using 1H-NMR and LC-MS/MS.
- Presenting research findings at scientific conferences and publishing results in peer-reviewed journals.

You will gain valuable research experience and scientific insight to support career advancement in toxicology, drug development, and regulatory affairs across multiple sectors.

**Mentor:** The mentor for this opportunity is Qiangen Wu (qiangen.wu@fda.hhs.gov). If you have questions about the nature of the research, please contact the mentor.

**Anticipated Appointment Start Date: October/November 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.

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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

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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. Degree must have been received within the past five years, or anticipated to be received by 12/31/2026.

**Point of Contact** Ashley

**Eligibility Requirements**

- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 12/31/2026 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **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.