

Opportunity Title: Cell Culture Scientist Opportunity Reference Code: EPA-NSSC-0009-38-3-25-24

Organization U.S. Environmental Protection Agency (EPA)

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- How to Apply Click <u>HERE</u> to apply.
  - **Description** The EPA National Student Services Contract has an immediate opening for a full time Cell Culture Scientist at EPA position with the Office of Research and Development at the EPA facility in Research Triangle Park, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

# What the EPA project is about

The Center for Computational Toxicology & Exposure (CCTE) is a scientific organization working to support Agency decisions by providing solutionsdriven research to rapidly evaluate the potential human health and environmental risks due to exposures to environmental chemicals and ensure the integrity of the freshwater environment, and its capacity to support human well-being. Within CCTE, the Chemical Characterization and Exposure Division (CCED performs research to develop and advance experimental chemistry approaches that are critical to the rapid characterization of the presence, structural characteristics, and properties of chemicals that are of interest to EPA scientists due to their potential environmental fate and toxicity. In addition to chemical characterization, CCED develops computational models to predict external exposure and internal doses for large numbers of chemicals based on minimal data.

The Experimental Toxicokinetics and Toxicodynamics branch within CCED supports EPA's mission to protect human health and the environment by developing new approaches to quantify chemical toxicity and advance chemical risk management. New approaches include cell-based assays, use of archival tissue samples from prior toxicity studies, and gene expression-based dose-response modeling. These efforts aid EPA in more rapidly assessing chemical risk especially for new or data poor chemicals with limited toxicity information.

# What experience and skills will you gain?

As a team member, you will conduct a variety of lab-based experiments including cell and animal assays with emphasis on cell and molecular biology to understand the effects of chemical exposure on the transcriptome. These effects will be related to phenotypic response and used with benchmark dose modeling to inform chemical risk. This will require the use of a variety of equipment and materials to conduct planned and approved studies and involve collecting, presenting, preparing, and analyzing study samples including extracting, purifying and quantifying

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> nucleic acid using good sterile technique. The team member will be responsible for assessing quality, manipulating and analyzing large gene expression and imaging datasets using benchmark dose analysis and other approaches. The team member will collect and input data into spreadsheets, and record procedures in the electronic notebook.

# Assay Development, Execution, and Analysis responsibilities will include:

- Maintaining laboratory instrumentation and supporting documentation;
- Preparing buffers and reagents for laboratory usage; tracking supplies;
- Maintaining laboratory inventories of samples, reagents and cells;
- Maintaining cells and conducting cell culture experiments using aseptic technique;
- Developing and executing high-throughput cell-based toxicity screening assays;
- · Assisting with rodent toxicity studies including necropsies;
- Analyzing high-content imaging and gene expression data;
- Maintaining quality of in vitro and in vivo assays, data acquisition, sequencing, and phenotypic data;
- Creating visualizations, data tables, reports, and summaries of study results; and
- Performing literature review.

# Communications-related responsibilities will include:

- Participating as a member of a multi-disciplinary research team;
- Interacting with other members of the development team as well as EPA scientists;
- Documenting methods; and
- Presenting work performed at a scientific conference as required.

#### Required Knowledge, Skills, Work Experience, and Education

- Demonstrated education and/or experience in cell culture including experience in culturing of human cell lines or cells (e.g., hepatocytes, bone cells) and in using aseptic technique;
- Expertise with nucleic acid isolation, PCR, and RT-qPCR;
- Strong written, oral and electronic communication skills;
- Demonstrated proficiency in the use of general laboratory procedures and techniques that include but are not limited to: standard curve preparation, pipetting, and dilution preparation; and
- Strong organizational skills, including demonstrated ability to handle multiple assignments with competing deadlines.

#### Desired Knowledge, Skills, Work Experience, and Education

• Experience with gene expression analysis and high-content image processing and



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• Experience programming in Python, R or other scripting languages.

Location: This job will be located EPA's facility in Research Triangle Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$32.01 for hours worked.

Hours: Full-time.

Travel: Occasional overnight travel may be required.

Expected start date: The position is full time and expected to begin May 2024. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA.

For more information, contact EPANSSC@orau.org. Do not contact EPA directly.

#### Qualifications • Be at least 18 years of age and

- · Have earned at least a Master's degree in the fields of biology, toxicology, pharmacology, molecular biology, genetics, biochemistry, environmental science, or a related field from an accredited university or college within the last 24 months and
- Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

- Eligibility Citizenship: LPR or U.S. Citizen
- Requirements
- **Degree:** Master's Degree received within the last 24 month(s).
- Overall GPA: 2.00
- Discipline(s):
  - Chemistry and Materials Sciences (1. )
  - Environmental and Marine Sciences (2. (2)
  - Life Health and Medical Sciences (4. (2))

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Master's degree in the fields of biology, toxicology, pharmacology, molecular biology, genetics, biochemistry, environmental science, or a related field from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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