

Opportunity Title: Cell Culture Technician at EPA Opportunity Reference Code: EPA-SSP-0012-26

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-SSP-0012-26

- How to Apply Submit application and supporting documents by clicking on Apply Now button.
  - For more information, contact EPAjobs@orau.org. Do not contact EPA directly.

Description The EPA Environmental Research and Business Support Program has an immediate opening for a Cell Culture Technician at EPA position with the Office of Research and Development at the EPA's Research Triangle facility in Raleigh-Durham, 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.

The National Center for Computational Toxicology (NCCT) is responsible for developing computational tools and solutions for improving environmental risk assessments and regulatory decisions pertaining to chemical safety and sustainability. The NCCT is testing thousands of chemicals in a wide range of state-of-the-art high-throughput biological assays, with the goal of building computational models for predicting toxicity. Supporting this effort are various new laboratory research services, and databases tracking massive amounts of information related to bioassay outputs, chemical structures and identifiers, and detailed tracking of the chemical samples undergoing testing and a suite of web applications make these data available to the public.

The projects this Laboratory Support Technician will be assisting with are part of an overall research program aimed at populating databases of chemical concentration-response data from two cell-based screening assays: 1) targeted RNA-Seq based high-throughput transcriptomics (HTTr) screening and 2) high content imaging based high-throughput phenotypic profiling (HTPP). This student will assist with cell husbandry and performing experiments for NCCT using in house resources, including cell culture tools, laboratory robotics and instruments for data collection under the mentorship of an NCCT scientist.

The selected candidate shall assist NCCT laboratory scientific researchers with laboratory experiments, maintenance and management, sample inventory and management, data analysis, as well as some administrative support functions.

## Analytical and laboratory responsibilities shall include:

 Preparation and/or maintenance of cell cultures to be used in laboratory experiments. This may include passaging and expansion of clonal cell lines and primary cultures from human or animal tissues;





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- Preparation of subcellular fractions, homogenates, cell or tissue lysates and DNA or RNA extracts from cells or tissues;
- Molecular biology analysis of cell and tissue samples include immunocytochemistry, Western blotting, polymerase chain reaction (PCR) and DNA sequencing;
- Cellular fluorescent, confocal and brightfield microscopy and high content image analysis;
- Recombinant DNA cloning, cellular transfection and/or transduction;
- Maintaining, managing and organizing laboratory facilities, supplies and reagents;
- Preparation of solution, reagents and test compound stock solutions that are needed for experiments;
- · Maintaining inventories of laboratory reagents;
- · Maintaining sample inventories and logs;
- Following protocols and experimental workflows for conducting highthroughput screening assays. Conduct of experiments will include setting up the equipment, administering test compounds, collecting data and clearly documenting all important experimental details using written and/or electronic laboratory notebooks according to NCCT Quality Assurance plans;
- Assisting in assay development and optimization by troubleshooting results and suggesting solutions;
- Preliminary analysis of experimental results including preparing reports, summary tables, graph and basic statistical analysis;
- Conduct literature reviews, obtain and review publications and summarize scientific literature;
- Sterilize and clean glassware and maintain laboratory facilities in a neat and orderly fashion; and
- Strict adherence to safety rules and procedures for conducting laboratory research.

### Communications-related responsibilities shall include:

- Participate as a member of a multi-disciplinary research team;
- · File and organize records;
- Assist in summary analysis documents of results and impacts from data analyses; and
- Assist in writing study results in manuscripts, presentations, and fact sheets.

The selected candidate may be asked to present work performed as a poster at a scientific conference.

**Location:** This job will be located EPA's Research Triangle facility in Raleigh-Durham, NC.

**Salary:** Selected applicant will become temporary employee of ORAU and will receive an hourly wage of \$21.27 for hours worked.

Hours: Full Time.

Travel: Occasional overnight travel may be required.



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**Expected Start Date:** The position is full time and expected to begin January 2019. The initial project is through May 14, 2019, followed by up to one (1) 12-month optional periods.

### **Working Conditions:**

The selected applicant shall be supervised by a mentor who will provide day-to-day direction, as well as coach, advise, counsel and review his/her work. This position will involve work in a laboratory setting and may involve exposure to hazardous elements including, but not limited to hazardous chemicals (CSL3). Laboratory safety training will be provided and completion will be required.

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# Qualifications Eligible applicants must:

- · Be at least 18 years of age and
- Have earned at least a Bachelor's degree in chemistry, biology, toxicology, environmental science, or other related field of study 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.

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

The applicant shall possess:

- Prior experience working with environmental, biological and/or human samples including sample organization, labeling, receiving, inventory and processing,
- A working knowledge of good cell culture practice as well as basic
  molecular biology techniques such as DNA/RNA extraction, polymerase
  chain reaction (PCR), reverse transcription polymerase chain reaction
  (RT-PCR), recombinant cloning, transfection, protein lysate preparation,
  Western blotting and immunocytochemistry,
- · Experience with general laboratory safety and record keeping practices,
- At least 16 semester hours of laboratory coursework that includes pipetting, preparing solutions and dilutions, good cell culture technique, sterilization and laboratory sanitation and basic molecular biology techniques, and
- Experience using Microsoft Excel to summarize and manipulate data files, manage data, create graphics, and conduct basic data analysis.

# Desired Knowledge, Skills, Work Experience, and Education

### It is desirable for the candidate to have:

Prior work experience in a working laboratory environment outside of a



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classroom setting,

- · Experience with microscopy techniques, image analysis, flow cytometry and small-scale laboratory automation, and
- Experience with R programming language and packages for data analysis.

- Eligibility Citizenship: LPR or U.S. Citizen
- Requirements Degree: Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 month(s).
  - Discipline(s):
    - Chemistry and Materials Sciences (12. •)
    - Environmental and Marine Sciences (13.49)
    - Life Health and Medical Sciences (45 •)

Affirmation I certify that I am at least 18 years of age; have earned at least a Bachelor's degree in chemistry, biology, toxicology, environmental science, or other related field of study 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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