

Opportunity Title: Chemical Data Analysis and Curation Support at EPA

Opportunity Reference Code: EPA-SSP-0012-23

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-SSP-0012-23

- 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 Chemical Data Analysis and Curation Support 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 Toxicity Value Database (ToxVaIDB) research project aims to store and analyze legacy in vivo toxicology data. Supporting this effort are various efforts at further curating studies in the database with detailed quantitative information as well as performing more detailed data quality assessments.

The selected candidate shall provide data management, data curation and data analysis support to the ToxRefDB project. This is a combination of limited MySQL database management, file management, data curation and extraction, quality control, as well as performing qualitative and quantitative data analysis. He/she will work with other members of NCCT's team to maintain this system, quality control entered data, and perform downstream analysis. The selected candidate will be a member of a multi-disciplinary research team and will be trained to support the development, maintenance, and analysis of ToxRefDB.

### ToxRefDB data curation and analysis responsibilities shall include:

- Maintaining quality control of entered data (data entered by third party);
- Running automated data quality tests;
- Curating data into ToxRefDB;
- Developing analysis tools for exploring and visualizing ToxRefDB data;
- · Developing scripts to provide reports on the data;
- Developing analysis methods for performing dose response modeling;
- · Developing models that explore the relationship between in vivo, in vitro and in silico datasets.

### Communications-related responsibilities shall include:





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- Participating as a member of a multi-disciplinary research team;
- Interacting with other members of the development team as well as EPA scientists; and
- · Documenting code and database development efforts.

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 \$28.14 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 July 2017. The initial project is through May 14, 2018, followed by up to two (2) 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 an administrative setting and is not expected to involve exposure to hazardous elements.

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### Qualifications Eligible applicants must:

- · Be at least 18 years of age and
- Have earned at least a Master's degree in biology, toxicology, chemistry, bioinformatics, statistics, computational biology, math, physics, information science, or a closely 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:

- Experience with chemical biology and toxicology,
- Proficiency with Microsoft Office applications (i.e., Excel, Access, PowerPoint, Word, Outlook), Atlassian Jira,
- Proficiency with descriptive statistics to provide reports on curation progress,
- Experience with R-language programming (or other scripting language),

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- Experience with MySQL database and MySQL workbench,
- · Experience with CDISC/SEND terminology,
- · Knowledge of the principles, theories and practices of biology, neurobiology, reproductive biology, and developmental biology to collect, curate, and manage in vivo toxicological data,
- Knowledge of multigenerational reproductive and developmental neurotoxicity study design,
- Experience with a relational database that holds quantitative and qualitative toxicity data, and
- Knowledge of benchmark dose modeling for health risk assessment.

# Eligibility Requirements

- Citizenship: LPR or U.S. Citizen
- Degree: Master's Degree or Doctoral Degree received within the last 24 month(s).
- Discipline(s):
  - Chemistry and Materials Sciences (12. •)
  - Computer, Information, and Data Sciences (16 🍩)
  - Engineering (2\_②)
  - Environmental and Marine Sciences (1. )
  - Life Health and Medical Sciences (45 )
  - Mathematics and Statistics (<u>10</u> <a>
    </a>)
  - Physics (<u>16</u> •)

Affirmation I certify that I am at least 18 years of age; have earned at least a Master's degree in biology, toxicology, chemistry, bioinformatics, statistics, computational biology, math, physics, information science, or a closely 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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