

Opportunity Title: EPA Risk Assessment Database Support

Opportunity Reference Code: EPA-SSP-0007-4

Organization U.S. Environmental Protection Agency (EPA)

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Description The EPA Environmental Research and Business Support Program has an immediate opening for an EPA Risk Assessment Database Support 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 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.

NCEA addresses the needs of stakeholders by preparing technical reports and assessments that integrate and evaluate the most up-to-date research. These products serve as a major component of the scientific foundation supporting EPA's regulations and policies. NCEA also conducts cutting-edge research to develop innovative quantitative risk assessment methods and tools that: help extrapolate between experimental data and real-world scenarios, improve our understanding of uncertainties, and facilitate careful weighing of evidence. A number of databases have been developed by NCEA to support these activities; three of those databases are relevant to this position.

The Exposure-Response database (ERDB) stores legacy in vivo toxicology data which were used in some historical assessments and in the development of advanced dose-response modeling. These data, combined with other similar data, are being analyzed across multiple lines of comparison to better understand the determinants of risk from exposure to these chemicals.

The Reference Value database (RefValueDB) project will develop a data clearinghouse from existing data sources from both within NCEA, from other parts of the Agency and from outside sources. Reference Values are developed by a number of organizations to provide an exposure level on which some risk management decision can be made. Different reference values are developed to serve the mandate for the organization deriving the value whether it be occupational values for the Occupational Safety and Health Administration (OSHA) or a Reference Dose (RfD) developed by the EPA to protect the general public. The goal of this project is to link to all of the authoritative organizations developing reference values to ensure the most up-to-date versions of their values are available to decision makers when the need arises, such as in an emergency situation.

The Health and Environmental Research Online (HERO) database provides an easy way to access and influence the scientific literature behind EPA science assessments. The database includes more than 600,000 scientific references and data from the peer-reviewed literature used by EPA to develop its regulations for the following: Integrated Science Assessments (ISA) that feed into the NAAQS review, Provisional Peer Reviewed Toxicity Values (PPRTV) that represent human health toxicity values for the Superfund, and the Integrated Risk Information System (IRIS), a database that supports critical agency policymaking for chemical regulation. These assessments supported by HERO characterize the nature and magnitude of health risks to humans and the ecosystem from pollutants and chemicals in the environment.

The selected candidate shall provide data management, data curation and data analysis support to the ERDB and the RefValueDB projects, and will interact with staff working on the HERO project. This will require a combination of skills to include 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 NCEA's team to maintain this system, quality control entered data, and perform downstream analysis. The participant will be a member of a multi-disciplinary research team and will be trained to support the development, maintenance, and analysis of ERDB and RefValueDB.

Data curation and analysis will include:

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- Performing quality control of entered data (data entered by third parties),
- Running automated data quality tests,
- Curating data,
- Developing analysis tools for exploring and visualizing data,
- Developing scripts to provide reports on the data,
- Developing analysis methods for performing dose response modeling, and
- Developing models that explore the relationship between variables in the dataset to explore which are determinants of risk.

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, and
- Documenting code and database development efforts.

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

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

Salary: The selected applicant will become a full time temporary employee of ORAU and will receive an hourly wage of \$20.65 for hours worked.

Travel: Occasional overnight travel may be required.

Working Conditions: This position will involve work in an administrative setting and is not expected to involve exposure to hazardous elements.

The selected candidate shall be supervised by a mentor who will provide day-to-day direction, as well as coach, advise and counsel the selected candidate, and review his/her work.

Expected Start Date: The position start date is December 2016. The selected applicant will be temporary employees of ORAU working as a contractor to EPA. The initial contract period is through May 14, 2017. EPA may elect to renew the contract for an additional three 12-month optional periods.

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

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.

Qualifications Eligible applicants must:

- Be at least 18 years of age **and**
- Have earned at least a Bachelor'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

Successful candidates will have:







- Demonstrated education and/or experience in toxicology and/or biology,

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- A working knowledge of in vivo toxicology studies,
- A working knowledge of relational databases,
- R-language programming (or other scripting language) experience, and
- Strong written, oral and electronic communication skills.

**Eligibility
Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 month(s).
- **Overall GPA:** 2.00
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** (16 )
 - **Environmental and Marine Sciences** (1 )
 - **Life Health and Medical Sciences** (46 )
 - **Mathematics and Statistics** (11 )
 - **Other Physical Sciences** (12 )
 - **Physics** (16 )

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Bachelor'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.

ORAU is an Equal Opportunity Employer (**EOE AA M/F/Vet/Disability**); visit the [ORAU website](#) for required employment notices.