

**Opportunity Title:** High Throughput Chemical Screening

**Opportunity Reference Code:** EPA-ORD-NERL-EMMD-2017-03

**Organization** U.S. Environmental Protection Agency (EPA)

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**How to 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
- Two educational or professional references

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

If you have questions, send an email to [EPARpp@orau.org](mailto:EPARpp@orau.org). Please include the reference code for this opportunity in your email.

**Description** A research participation training opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD)/National Exposure Research Laboratory (NERL). This appointment will be served with the Exposure Methods and Measurements Division (EMMD) in Research Triangle Park, North Carolina.

The research participant will be part of an EPA team of investigators who are identifying chemicals of human exposure. The goal of this research is to identify classes of chemicals that individuals are exposed to on a daily basis in a high throughput manner.

Research will include non-targeted analysis of environmental samples for identification of classes of chemical contaminants humans are likely to be exposed to. These environmental media may include house dust, surface wipes and water.

Research activities will include:

- developing/interpreting large datasets (e.g., searching for trends, relevancy, patterns, etc.);
- developing extraction strategies for various media that are the most encompassing for the majority of screening chemicals;
- generating reports of screened samples via high resolution accurate mass (HRAM) mass spectrometry for screened compounds;
- presenting at professional meetings;
- preparing manuscripts for publication in peer-reviewed journals.

The research participant will learn to apply their creativity and intellect toward solving complex problems and generating ideas for further investigation. He/she will also have the opportunity to further develop their technical skills, analytical capability, and communication skills. More specifically, the research participant will learn to develop scientific methods that allow for a more intuitive and informative analysis of biomonitoring data in an exposure and/or risk context.



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The research participant will receive opportunities to be involved with other senior scientists who are experts in chemistry, biology, pharmacokinetics, biological modeling, survey statistics, and risk assessment for supporting regulatory decision-making.

In this research program, high throughput methods are being developed to determine what compounds humans are exposed to on a regular basis. From select environmental media this research project will investigate from the multitude of chemicals of commerce, those which appear to have the highest potential for exposure due to presence in environmental media. This research program will extend the current capability for screening environmental samples for chemicals of greatest concern.

The mentor for this project is Elin Ulrich ([ulrich.elin@epa.gov](mailto:ulrich.elin@epa.gov)). The desired start date is July 31, 2017.

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 EPA. The appointment is full time for one year and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend. Funding may be made available to reimburse the participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be made available to cover travel costs for pre-appointment visits, relocation costs, tuition and fees, or participant's health insurance. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee.**

**Qualifications** Applicants must have received a doctoral degree in chemistry, biology, environmental sciences or a closely related discipline within five years of the desired starting date, or completion of all requirements for the degree should be expected prior to the starting date. Experience in chem- or bio-informatics would be beneficial for this research opportunity. Analytical and sample preparation experience is necessary for full engagement in the project.

- Eligibility Requirements**
- **Degree:** Doctoral Degree received within the last 60 month(s).
  - **Discipline(s):**
    - **Chemistry and Materials Sciences** (5 )
    - **Earth and Geosciences** (1 )
    - **Engineering** (1 )
    - **Environmental and Marine Sciences** (3 )
    - **Life Health and Medical Sciences** (5 )