

**Opportunity Title:** Research Participation Opportunity - The Effects of Cyanotoxins on Human Cells

**Opportunity Reference Code:** EPA-ORD-NHEERL-ISTD-2016-01

**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.

**Application Deadline** 5/28/2016 12:00:00 AM Eastern Time Zone

**Description** A research opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) Office of Research and Development (ORD)/National Health and Environmental Effects Research Laboratory (NHEERL). This appointment will be served with the Integrated Systems Toxicology Division (ISTD) in Research Triangle Park, NC.

This research project will develop *in vitro* methods to describe cyanotoxin exposure and subsequent human health effects. The project will utilize *in vitro* assays which will include the use of human hepatocytes and colon cells.

The participant may be involved in the following activities:

- conducting literature searches on current research regarding cyanotoxins and toxic effects,
- designing and implementing *in vitro* experiments to assess the active transport of cyanotoxins in a multi-well plate format using primary human hepatocytes and colon cells,
- analyzing samples using advanced analytical techniques
- presenting research findings at scientific meetings

The participant will gain experience in designing and implementing laboratory experiments. During this project, the participant will learn several *in vitro* laboratory techniques, analyze data, and interpret results to address concerns regarding human health and potential effects of cyanotoxin exposure. Specifically, the participant will gain experience in laboratory activities that will include: counting cells, preparing



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cells for experimentation, preparing standard solutions, conducting time dependent and dose response experiments, and analyzing samples for the activation of signaling pathways involved with cancer. The participant will be encouraged to interact with other scientist to further enhance technical skills. The participant will also gain valuable experience from interactions with an interdisciplinary research team with expertise in toxicology, environmental sciences, epidemiology, chemistry, biochemistry, and risk assessment.

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.


#### Qualifications

Applicants must have a minimum of two years undergraduate coursework, a bachelor's or master's degree in biology, biochemistry, toxicology, pharmacology, or other related fields within five years of the desired starting. Students must be in a degree granting program at an accredited U.S. college or university. Students will be required to provide proof of enrollment each semester.

The appointment is part 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.**

The mentor for this project is Vicki Richardson ([Richardson.Vicki@epa.gov](mailto:Richardson.Vicki@epa.gov)).

#### Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Life Health and Medical Sciences** (6 )