

Opportunity Title: EPA Biological Sample Laboratory Support

Opportunity Reference Code: EPA-SSP-0027-7

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 Biological Sample Laboratory Support with the Office of Research and Development at the EPA facility in Cincinnati, OH.

The National Exposure Research Laboratory (NERL) protects human health and the environment by developing and applying innovations in exposure science. NERL provides scientific leadership, understanding, and tools necessary to quantify exposure for humans and ecosystems

The Exposure Methods & Measurement Division (EMMD) provides the science that underlies the measurement of environmental stressors and their interaction with biological systems. This science includes method development, evaluation, and field and laboratory testing. These measurement methods are foundational to the Agency's regulatory programs and stakeholder needs in protecting public health and the environment.

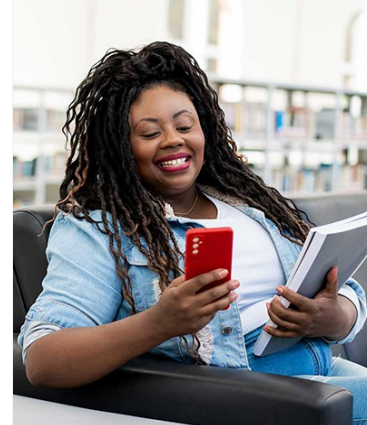
The selected candidate shall provide technical laboratory support for research projects focusing on studying: 1) efficacy of green infrastructure systems for water conservation including constructed wetland and a water recycling facility and 2) expression of different proteins involved during infection of mammalian cells by protozoan parasites. He/she shall work with other members of the EMMD team and shall assist the team with collection of environmental samples (e.g. wastewater and surface water), sample processing (e.g. membrane filtration, hollow-fiber ultrafiltration), culture-based (e.g. bacteriophage, fecal indicator bacteria) as well as molecular (e.g. nucleic acid extraction, PCR/qPCR/ddPCR) analysis of environmental samples. Additional work shall involve assistance with inoculation of mammalian cell culture(s) and biochemical analyses (e.g., Western blots), purification and quantification of various host/pathogen derived proteins.

Technical laboratory support responsibilities shall include:

- Preparing sampling materials (e.g. coolers, bottles, etc) and local sample collection from various wastewater treatment plants and surface waters,
- Processing of samples including membrane filtration and hollow-fiber ultrafiltration/elution,
- Preparing microbiological media and supplements for analysis of culturable bacteria and infectious bacteriophage,
- Analyzing infectious bacteriophage (using double agar overlay method and/or US EPA method 1602),
- Extracting complete or partial nucleic acid using a variety of commercial kits or other protocols supplied by the investigators,
- Analyzing general as well as host-associated microbial markers (and other targets) using (but not limited to) quantitative, real-time PCR (qPCR) and digital droplet PCR (ddPCR),



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- Inoculating mammalian cell cultures with protozoan parasites,
- Purifying and quantifying proteins using a variety of commercial kits or other protocols supplied by the investigators,
- Detecting/identifying different proteins using Western blot and other biochemical techniques,
- Assisting with preparation of Quality Assurance Project Plan,
- Maintaining careful and accurate records in designated laboratory notebooks, and
- Maintaining inventory of supplies.

Location: This job will be located at EPA's facility in Cincinnati, OH.

Salary: Selected applicants will become temporary employees of ORAU and will receive an hourly wage of \$27.94 for hours worked.

Working Conditions: The work will be in a laboratory setting and may 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 student, and review the student contractor's work.

Travel: Occasional overnight travel may be required.

Expected Start Date: The position is full time and expected to begin November 2016. The selected applicant will be a temporary employee of ORAU working as a contractor to EPA. The initial contract period is through May 14, 2017, followed by three (3) additional 12 month option periods.

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 Master's degree in microbiology, biology, molecular biology, 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 candidate shall:

- Working knowledge of general laboratory techniques for assessing water quality (i.e., knowledge of aseptic technique) as well as general laboratory safety practices,
- Experience with collection of environmental samples,
- Demonstrated proficiency in bacteriological culture techniques,
- Working knowledge of bacteriophage enumeration techniques,

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- Advanced experience and demonstrated proficiency with molecular techniques including nucleic acid and protein extractions/purifications and analysis by PCR or real-time, quantitative PCR (qPCR),
- Demonstrated proficiency in protein detection/identification techniques including Western blots,
- Strong written, oral and electronic communication skills, and
- Proficiency with Microsoft Office applications (i.e., Excel, PowerPoint, Word, Outlook).

Desired Knowledge, Skills, Work Experience, and Education

- Working knowledge of mammalian cell culture techniques.

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.

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| Eligibility Requirements | <ul style="list-style-type: none">• Citizenship: LPR or U.S. Citizen• Degree: Master's Degree or Doctoral Degree received within the last 24 month(s).• Overall GPA: 2.00• Discipline(s):<ul style="list-style-type: none">◦ Environmental and Marine Sciences (1 )◦ Life Health and Medical Sciences (45 ) |
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Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Master's degree in microbiology, biology, molecular biology, 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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