

Opportunity Title: Molecular Laboratory Specialist **Opportunity Reference Code:** EPA-NSSC-0007-39

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply Ready to send share your interest with EPA scientists?

- Submit application and supporting documents by clicking on Apply Now button.
- For more information, contact EPAjobs@orau.org. Do not contact EPA directly.
- Check out our website at: <u>https://www.orau.org/epa/jobs.html</u>
- **Description** The EPA National Student Services Contract has an immediate opening for a full time Molecular Laboratory Specialist position with the Office of Research and Development at the EPA facility in Gulf Breeze, FL.

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.

What the EPA project is about

Within the Office of Research and Development (ORD), the Center for Environmental Measurement & Modeling (CEMM) conducts research to advance EPA's ability to measure and model contaminants in the environment, including research to provide fundamental methods and models needed to implement environmental statutes. The methods and models developed by CEMM are typically applied at the airshed, watershed and ecosystem level. Within CEMM, the Gulf Ecosystem Measurement and Modeling Division (GEMMD) provides leadership and specialized research in marine, estuarine, and watershed ecology and ecotoxicology to predict and assess the effects of human-generated stressors on the unique aquatic resources of the U.S. Gulf of Mexico & the Nation.

What experience and skills will you gain?

As a team member, you will receive hands-on laboratory experience in support of water quality assessment and aquatic toxicology research, including bacterial and viral-fecal indicators work and sample preparation for qPCR and development of *in vitro* cell-based assays. Molecular skills such as PCR, RT-PCR, qPCR, RT-qPCR, DNA and RNA extractions, microbial aseptic techniques and virology are greatly valued. You will also assist in laboratory experiments by collecting data and preparing samples. The goal of this project is to characterize species-specific molecular responses (gene expression and protein activation) to nutrients and contaminant exposure. Research will also involve isolation and characterization of environmental microorganisms from an urban watershed, from coastal waters, in order to determine the cause of the impairment. This position will involve field work, water filtration and concentration of microorganisms, nutrient filtration and molecular

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> applications to detect and identify viral and bacterial isolates. This research supports the Ecotoxicological Assessment and Modeling Research Area within the Chemical Safety for Sustainability Research Program and SSWR of EPA's Office of Research and Development.

How you will apply your skills

Primary duties:

- Preparing biological samples and evaluating gene expression. Lab techniques include RNA extraction, cDNA synthesis, qPCR, and gel electrophoresis;
- Collecting data and biological samples for aquatic toxicology experiments;
- · Assisting with cell-based reporter assay development and testing;
- · Performing cell cultures in sterile conditions;
- Preparing bacterial and viral-fecal indicators work and sample preparation for qPCR and development of *in vitro* cell-based assays;
- Sampling analysis using molecular biology skills such as PCR, RT-PCR, qPCR, RT-qPCR, DNA and RNA extractions, microbial aseptic techniques and virology; and
- Collecting water and process for molecular indicators of fecal contamination (bacterial and viral).

The position requires someone with excellent written and oral communication skills who is highly organized and is a self-starter with project management skills.

Required Knowledge, Skills, Work Experience, and Education

- Laboratory training and/or experience in a molecular biology, cell biology, virology, or biochemistry lab;
- Basic experience (at least three months) working in a laboratory setting;
- Experience following written protocols;
- Proficiency performing basic chemistry calculations, preparing solutions, and pipetting;
- Conducting laboratory analyses using biochemical assays, in vitro assays, and molecular biology techniques including RNA isolation; PCR, RT-PCR, qPCR, RT-qPCR, DNA and RNA extractions, microbial aseptic techniques and virology;
- · Basic experience working with hazardous substances;
- Experience collecting data, maintaining a detailed scientific laboratory notebook, and electronic recordkeeping;
- Experience with basic laboratory health and safety procedures;
- Strong written, oral and electronic communication skills; and
- Strong organizational skills including experience preparing spreadsheets and PowerPoint presentations as well as demonstrated ability to adhere to assigned deadlines.

Location: This job will be located at EPA's facility in Gulf Breeze, FL.

Salary: Selected applicant will become a temporary employee of ORAU



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and will receive an hourly wage of \$28.70 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 2020. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA. The initial project is through May 14, 2021, with up to 4 additional potential optional periods.

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

Qualifications • Be at least 18 years of age and

- Have earned at least a Master's degree in biology, microbiology, virology, molecular biology, biochemistry, and/or genetics, 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.

Eligibility • Citizenship: LPR or U.S. Citizen

- **Requirements** Degree: Master's Degree or Doctoral Degree received within the last 24
 - months or anticipated to be received by 7/8/2020 11:59:00 PM.
 - Overall GPA: 2.00
 - Discipline(s):
 - Chemistry and Materials Sciences (<u>12</u>)
 - Earth and Geosciences (21. (21)
 - Environmental and Marine Sciences (14 (14)
 - Life Health and Medical Sciences (45)
 - Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Master's degree in biology, microbiology, virology, molecular biology, biochemistry, and/or genetics, 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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