



Job Opportunity – Molecular Lab Analyst

1. Project Description:

The Ohio-Kentucky-Indiana Water Science Center of the U.S. Geological Survey in Columbus, Ohio houses a laboratory that investigates microbiological contamination of the Nation's water resources. The Ohio Water Microbiology Laboratory is in need of a student contractor to assist with analyzing water samples using molecular methods for DNA from specific animal hosts (for microbial source tracking), as well as DNA from bacteria responsible for harmful algal blooms and toxin production. This position will start immediately and can be full-time or part-time during the school year and then full-time during the summer.

2. Description of Student Services:

The student will be expected to assist in sample receipt, log in, and initial processing steps. Molecular methods will be done according to Standard Operating Procedures developed by the lab. Strict quality control/quality assurance will be followed.

The student's main duty will be to run environmental samples using quantitative polymerase chain reaction (qPCR). This includes:

- Microfiltration of environmental water samples
- DNA extraction and purification
- Developing standard curves, calculating limits of detection and quantification, and running tests for inhibition
- Running qPCR analyses for various molecular targets
- Primary data review

In addition to the main duties, the student may be assisting with general laboratory analyses, quality control checks, and maintenance/upkeep of the lab.

3. Required Expertise/Skills:

The student should have advanced knowledge of molecular biology and/or microbiology, as well as experience with molecular techniques through course work and/or previous related lab experiences. The student should know the basic safety requirements of working in laboratories, aseptic technique, and have experience working with micropipettors and small volumes. Strong attention to detail is required. The student will also need to be proficient with Microsoft Excel in order to assist with data calculations and data analysis.

4. Description of Working Conditions:

Student will be working in a Biosafety Level 2 laboratory. Student will be required to wear long pants and closed-toed shoes, as well as safety glasses, gloves, and lab coats when working in the lab. All personal protective equipment will be provided by the USGS. Laboratory duties may require prolonged periods of standing and manual dexterity. There is walking, bending, and lifting of samples and coolers.

5. Compensation:

Compensation is commensurate with the level of education and experience, as follows: \$21.32 per hour for a student who meets the above criteria. The student is responsible for all costs of transportation to and from the principal duty station location. The Government does not provide housing, meals, or other living expenses while working at the principal duty station.

6. Principal Duty Station & Technical Point of Contact:

Ohio-Kentucky-Indiana Water Science Center
Columbus Office
6460 Busch Blvd (Suite 100)
Columbus, Ohio 43229

Technical POC: Amie Brady, amgbrady@usgs.gov, 614-430-7760

The student may enter the building only during business hours or when approved by the Technical POC or their designee.