Professional Associate – Scientific
Chemist II Fellow
Division of Public Health

This is the most advanced level of professional chemistry laboratory work requiring an application and in-depth understanding of chemical methods, chemical theory and the principles of related sciences, to evaluate, develop, conduct and interpret the results of the most complex qualitative and quantitative chemical analyses on a wide variety of substances. Employees usually operate under very limited or no technical direction with broadly defined objectives and functions. Employees evaluate, select, arrange, modify and develop complex laboratory equipment and elaborate instrumentation to implement the most complex testing operations.

Project Description:

In this exposure investigation, the North Carolina Division of Public Health (NC DPH) Building Resilient Environmental Health Capacity (BREHC) program plans to pilot a heavy metals biomonitoring study in North Carolinians who use private well water as their primary source of drinking water. The goals of the pilot project are to:

1. Measure exposure to heavy metals through analysis of urinary samples and corresponding water samples from pregnant women who received care at UNC hospitals and who primarily get their drinking water from private wells. Both the urinary samples and water samples were previously collected by the Fry Lab as part of the EPOCH cohort.
2. Compare urinary heavy metal exposure levels of private well EPOCH participants to heavy metal exposure distribution of nationwide NHANES participants, matched by year of sample collection.

Management Preferences:

- Working knowledge of the state and federal laws and regulations pertinent to clinical testing.
- Ability to establish and maintain effective working relationships.
- Solid background in wet chemistry, extractions, chemical derivatization and small molecule quantitation.
- Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) experience.
- Ability to perform complex procedures and techniques, and to prepare technical reports from analytical results obtained.
- Ability to express technical information clearly, both orally and in writing, when reporting results and explaining procedures to others.
- Ability to adapt and modify techniques to enhance accuracy, reliability, and timeliness.
- Ability to analyze results, interpret and evaluate methodologies, understand, and solve complex theoretical problems.

Knowledge, Skills, and Abilities

- Must meet federal CLIA ’88 requirements for testing personnel in a high complexity laboratory. Candidates must attach a copy of their transcript(s) and/or certification(s) in order to be considered.
- Experience reviewing laboratory data for quality assurance purposes including QC review, kit verifications, instrument comparisons, developing Standard Operating Procedures (SOPs) and verifications/validations.
- Experience using Microsoft computer applications, including Word, Excel and Powerpoint.
- Two or more years of experience working with potentially infectious materials.
- Experience understanding and interpreting large data sets and reporting results.
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- Thorough knowledge of theoretical principles of analytical chemistry and instrumental procedures.
- Knowledge of scientific methodology and of the hazards involved in laboratory procedures along with related safety practices.
- Ability to independently perform and record standardized, non-standardized and highly complex laboratory tests and procedures with a high degree of precision and accuracy.
- Ability to understand and perform basic mathematical calculations, problem solve and troubleshoot problems with a method of analysis and communicate method and procedures to others.
- Ability to understand and solve simple theoretical problems, and to provide work direction and instruction to other technicians concerning a variety of chemical procedures.

Minimum Education and Experience

Bachelor’s degree in chemistry from an appropriately accredited institution