

TITLE: Mass spectrometry for targeted and non-targeted analysis (U.S. Citizens preferred)

#### Overview

The Material Measurement Laboratory of the National Institute of Standards and Technology is seeking qualified persons (U.S. Citizens preferred) to develop and perform targeted and non-targeted analytical (NTA) chemistry methods for the purposes of characterizing NIST reference materials to support clinical, food and nutrition, and manufacturing industries. The qualified candidate will utilize liquid chromatography (LC) and/or gas chromatography (GC) with high-resolution mass spectrometry (HRMS) to analyze biological, and other matrices. The qualified candidate will perform standardized chemometric analysis, including artificial intelligence and machine learning, of the analytical data generated to develop novel insights into biological and chemical processes related to public health and chemical manufacturing.

#### Duties

- Method development for the NTA of NIST reference materials for exogenous and endogenous chemicals in biological, and industrial materials.
- Routine targeted chemical analysis of NIST reference materials for clinically relevant chemicals.
- Routine documentation of results from chemical and data analysis of NIST materials.

#### Required Skills, Expertise, and Qualifications

- Expertise with sample preparation of biological tissues and fluids (human and other biological sources) and food and nutritional materials.
- Expertise in the use and maintenance of LC-HRMS, including quadrupole-time-of-flight and quadrupole-orbitrap mass spectrometers.
- Expertise with software including at least one relevant programming language (R, Python, or MATLAB) and NTA software (e.g., MS-DIAL, mzMine, or XCMS).

#### Other Desirable Qualifications

- Expertise with AI/ML algorithms or tool development
- Use of point-of-care or IVD instrumentation for the clinical analysis of human samples

Employment Terms: This opportunity is to be an associate researcher in the NIST Chemical Sciences Division for a term of 1 year, with options to renew. Associate researchers are NOT Federal Employees, but they work along with NIST researchers and with NIST's often world class instrumentation. Relocation expenses will not be provided. U.S. Citizens hired into associate positions may have the opportunity to seek longer term Federal Employment.

Salary: \$55,000 to \$85,000

How to express interest: Persons (U.S. Citizens preferred) who meet all of the required qualifications and who would be interested in taking this position are invited to express their interest by sending an email that briefly describes their qualifications along with a CV to [646assoc@nist.gov](mailto:646assoc@nist.gov). U.S. Citizens should note "U.S. Citizen" and the opportunity title in the email subject line. All others should note "Non-U.S. Citizen" and the opportunity title in the email subject line.