

POSITION TITLE: Staff Scientist

An exciting Staff Scientist position has been created for an experienced researcher to join Prof. Andrew Emili's laboratory at the Knight Cancer Institute Center at Oregon Health & Science University in Portland, OR. We are seeking an experienced researcher to join our growing team in a full-time role, who will work independently and as a collaborative project co-leader, to establish and support our precision mass spectrometry platform.

As an Staff Scientist, you will support cutting-edge mass spectrometry-focused functional proteomics research at Prof. Emili's Collaboratory for Network Systems Biology (CNSB). Major new project initiatives involve interrogation of primary patient specimens, tissue specimens from animal models of disease, and engineered cell culture systems, to characterize the macromolecules and biological pathways altered in disease states, as well as the mechanisms of action of bioactive compounds.

The primary role for the Staff Scientist candidate will be to support serve as the principal proteomic mass spectrometry support expert for the group. This role will involve the operation, maintenance and support of high-performance LC/MS instrumentation, and participation as lead scientist on select projects throughout their lifespan including providing significant input on experimental study design, control inclusion and placement, data acquisition strategies and, critically, the analysis, mining and interpretation of datasets.

Additional and important roles for the candidate will involve providing support in sample preparation, method development, instrument optimization, and tracking of instrument use, samples, datasets, methods (experimental and analytic) over collective studies.

The candidate will be required to explore and apply new MS proteomic capabilities as they emerge, and will need to scale analytic platforms and algorithms for highly scaled collaborative studies.

The candidate will independently design, execute and interpret proteomic method development studies critical to the evolution of our workflows to support advanced sample interrogation.

The candidate, an exceptional self-starter, should be inquisitive and highly motivated, and able to operate effectively with internal team members and actively solicit input from expert external consultants and collaborators.

The candidate will on occasion oversee more junior analysts and experimental researchers and train them on appropriate methods and approaches to build wider team expertise.

Qualifications

- Doctoral degree in relevant field and 3+ years of relevant post-doctoral work experience
- >3 years research experience in proteomics/analytical chemistry or closely related discipline
- Practical understanding/experience with, shotgun mode mass spectrometry analysis of protein/peptide mixtures.
- Experience with high performance (Orbitrap) nano-LC/MS instrumentation (operation, maintenance)
- Understanding proteomic method development and best lab practices for sample handling and analysis
- Strong analytical and practical skills in protein sample preparation
- Experience and operational knowledge of high throughput setups and proteomics workflows
- Experience with quantitative LC/MS (e.g. isotope-tagging) and PTM analysis for discovery proteomics
- Proven ability to generate high quality / high quantity mass spectrometry data
- Familiarity with data processing, interpretation, and visualization
- Excellent communication, analytical and organizational skills: both written and verbal
- Ability to work independently and as part of a team while being collaborative in resolving problems

Preferred experience

- Degree in biochemistry, molecular biology, biomedical engineering, analytical chemistry and/or mass spectrometry
- 4+ years hands-on LC-MS experience
- Computational skill with latest versions of proteomic software such as MaxQuant.
- Experience with R, MATLAB, or python and general computational abilities
- Ability to prioritize multiple tasks at one time.
- Intermediate skills with MS Office (Excel, Outlook, Word, PowerPoint), statistical tools and programming languages.

Contact information:

Please contact (send Resume/CV) Professor Andrew Emili: emili@ohsu.edu

Duties include but are not limited to:

- Act as principal mass spectrometry facility director for the Emili Lab/CNSB to ensure high quality data acquisition.
- Responsible for SOP development and updating to keep proteomic workflows consistent across the team with new developments and advancing standards. Incorporation critical refinements adopted to reduce unnecessary sample variation, automatic monitoring of system suitability and QC, and use of both internal and external controls.
- Independently analyze samples from key experimental studies and also design, execute and interpret proteomic study design and method development critical to the evolution of workflows to support deep sample interrogation.
- Write summary reports and research papers and produce figures and scientific presentations.
- Ensure rigor in the lab's design and execution of mass spectrometry-based assays including proteomics data generation, processing, visualization, and interpretation.
- Perform routine QC and maintenance of high-performance LC/MS systems, including Thermo/Orbitrap family of mass spectrometers with UHPLC separation for high-throughput quantitative proteomics analyses.
- Support general day-to-day operations and troubleshooting of the LC/MS systems in the lab.
- Perform protein isolation from mammalian cells and peptide preparation and isotopic labeling for quantitative mass spectrometry. Help to develop, improve and implement new proteomics methods and workflows in the group