

Position Title: Postdoctoral Sr. Research Associate Scientist
Department: Mass Spectrometry Core/R&AA
Reports to: Director, Mass Spectrometry Core
Date Updated: 05/26/09

Position Summary:

A postdoctoral level Sr. Research Associate position in the biochemical sciences is needed at the Beth Israel Deaconess Medical Center Mass Spectrometry Core. The Core is in a period of growth and houses state-of-the-art mass spectrometry instrumentation including a Thermo Scientific LTQ Orbitrap XL-ETD, Thermo LTQ linear ion trap and an Applied Biosystems 5500 Q-TRAP. The Core serves researchers at and beyond the medical center by way of both fee-for-service and collaborative efforts. The lab has a strong research focus and our interests are in label-free quantitative mass spectrometry to study the functional role of signaling molecules in the RTK-AKT-Tor pathway in cancers and related diseases. Another focus of the lab is the proteomics analyses of ancient fossil bone proteins and metabolomics analyses of cellular extracts are in the lab's future.

The candidate will be expected to help develop new mass spectrometry based quantitative proteomics strategies and independently guide a research project related to the dynamics of cell signaling systems including protein-protein interactions and posttranslational modifications. The projects can be geared more heavily towards a biology or disease focus rather than analytical chemistry. A postdoctoral candidate with a biochemical background is preferred in order to generate biological samples for mass spectrometry from cell culture and tissue extraction and perform biochemical assays and validations including immunoprecipitations, SDS-PAGE, Western blots, enzymatic digestions, etc. The candidate will be expected to contribute to the core's services, when needed, and therefore should be proficient in analytical instrumentation, preferably mass spectrometry and HPLC. Familiarity with mass spectrometry analyses including database searching and spectral interpretation software is desirable. Programming skills are a plus. Once hired, the candidate will be submitted for Harvard appointment for access to Harvard facilities. A Ph.D degree in biological/chemical sciences is required.

Primary Duties and Responsibilities:

- Protein biochemistry research using LC/MS systems including sample preparation, instrumental analysis and maintenance.
- Independently conduct proteomics research related to cancer biology.
- Cell culture, immunoprecipitations, Western blotting, SDS-PAGE, etc.
- Provide technical assistance for core submitted samples.
- Adhere to core's philosophy and laboratory structure while being an independent scientist.
- Help students and technicians with biochemical and mass spectrometry experiments.

Qualifications/Skills & Knowledge Requirement:

1. A Ph.D. degree in the biological/chemical sciences is required.
2. Very strong communication skills are required for presentations and writing.
3. Expertise in biochemical techniques and meticulous laboratory skills. Must be able to multitask and record data accurately and quickly with little supervision.
4. Experience and strong interest in analytical instrumentation, preferably mass spectrometry and HPLC.
5. Strong computer skills (databases, spreadsheets, and statistics) required.
6. Strong interpersonal and collaborative skills required.

Supervisory/Management Responsibility

Guide students and technicians with biochemical and mass spectrometry experiments.