



# a place of mind

## THE UNIVERSITY OF BRITISH COLUMBIA

### POSITION DESCRIPTION

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<b>BUSINESS TITLE:</b>	Research Asst/Tech 3
<b>EMPLOYMENT GROUP:</b>	Technicians & Research Assists
<b>JOB FAMILY:</b>	Research/Technical - Non Union
<b>JOB CODE:</b>	500603 - Research Asst/Tech 3
<b>VP/FACULTY:</b>	Faculty of Medicine
<b>DEPARTMENT:</b>	Pathology
<b>PAY GRADE:</b>	4

### JOB SUMMARY

The Lange laboratory focuses on pediatric cancers. The goal is to develop new diagnostic and therapeutic approaches to detect and treat children suffering from cancer earlier, better and with reduced impact on their life. To reach this goal, we use proteomics; biochemistry; cell biology; and molecular biology approaches to study protein function and cell signaling related to childhood cancers. We are seeking an exceptional research technician (**mass spectrometry / laboratory management**) to pursue this goal together with us and join our young and dynamic translational research laboratory.

The individual's main role is to perform proteomics sample preparation and operate/maintain the mass spectrometry and liquid chromatography instrumentation. The individual will also be responsible for operation of the laboratory and will conduct experiments designed to improve technology and investigate signaling processes in cancer cells. We are seeking an experienced individual with strong skills and expertise in proteomics, mass spectrometry and biochemistry as well as autonomy in designing and conducting experiments.

### ORGANIZATIONAL STATUS

The Lange lab is a newly established research laboratory located in the BC Children's Hospital Research Institute (BCCHRI) within the Oak Street Campus. This position reports to the principal investigator and interacts with other members of the laboratory (1 post doc, 5 graduate students, and 2 undergraduate students).

### WORK PERFORMED

- Independently maintain, calibrate, and operate a liquid chromatography tandem mass spectrometry instrumentation system (Thermo easy nanoLC 1200 + Q Exactive HF).
- Routine preparation of proteomics samples (tissue lysis, protein precipitation, labeling, digestion, SCX, HILIC, SEC chromatography, ...)
- LC-MS/MS analysis of complex proteomes from various sources.

- Contribute to and perform biological experiments related to research in a range of normal and cancer tissues/cells including leukemia and medulloblastoma; troubleshoot problems as they arise
- Contributes to the development of new analytical techniques and methodologies
- Act as the main personnel in communicating with collaborators; perform proof-of-concept experiments and technique training; advise on experiment setup and data analysis
- Independently perform a variety of biochemical techniques as including western blotting, protein expression/purification/quantification
- Operation and oversight of the laboratory
- Technique and safety training for students and junior lab staff
- Contribute to the preparation of research publications and grants
- Participate in meetings related to technical and scientific aspects of the projects in the laboratory.
- Other duties as required

### **CONSEQUENCE OF ERROR**

Errors may result in the permanent loss of irreplaceable tissue samples, loss of thousands of dollars of material and/or damage to equipment. Loss of research results could result in the failure of a funded project and put in jeopardy any future funding and the international reputation of the Laboratory and the Institute.

### **SUPERVISION RECEIVED**

Works under minimum supervision, receiving specific instructions only on unusual problems or when receiving new projects outlines from the principal investigator.

### **SUPERVISION GIVEN**

Train students and junior lab staff; has input on staff/co-op student selection and performance evaluation.

### **QUALIFICATIONS**

Undergraduate degree in a relevant discipline or Graduation from a technical college or institute. B.Sc. or M.Sc. graduate in Biochemistry, Microbiology, Genetics, Biology, Chemistry or other appropriate discipline. Minimum of 3 years related experience or the equivalent combination of education and experience. All relevant UBC safety courses including biosafety and chemical safety are required but can be completed during orientation. We are seeking an applicant with the following qualifications:

- Demonstrated ability to work independently and communicate effectively with faculty, staff, trainees, and collaborators.
- Advanced knowledge and experience in operation and maintenance of nano-LC systems for protein and peptide separation.
- Advanced knowledge and experience in operation, calibration and maintenance of mass spectrometers for proteomics.
- Advanced knowledge and experience in the evaluation of MS spectra and raw data at the instrument level. Experience in down-stream data analysis including database searching and protein quantitation an asset.
- Proven troubleshooting skills in LC-MS/MS instrumentation and workflows.
- Advanced knowledge and experience in proteomics sample preparation techniques for complex proteomes (lysis, precipitation, reduction, alkylation, digestion, de-salting, ...)

- Advanced skills in proteomics techniques (dimethyl labeling, phospho-enrichment, SILAC, iTRAQ, TMT) and other laboratory techniques (i.e., SDS page, western blot, cell culture, immunohistology, ...) considered an asset.
- Experience in laboratory management an asset.
- Strong organizational skills and ability to work in a team-oriented environment.
- Good English verbal and written communication skills.

**We Offer:**

- A dynamic and diverse work environment.
- The opportunity to take the lead in building a new mass spectrometry facility at the BC Children's Hospital Research Institute.
- The opportunity to work with and learn from world experts in proteomics at UBC, BC Cancer Research Centre and the BCCHRI.
- The opportunity to conduct research and develop new methods.
- Plentiful opportunities to advance your skills and take on new roles.

This position will commence as soon as possible. This is a one-year term appointment, with potential for annual renewal. **To apply**, please send a cover letter, CV and contacts for three references to Brenda Tse at [brenda.tse@ubc.ca](mailto:brenda.tse@ubc.ca) by **Sept 29, 2017**. This position will remain open until filled.

*UBC hires on the basis of merit and is strongly committed to equity and diversity within its community. We especially welcome applications from visible minority group members, women, Aboriginal persons, persons with disabilities, persons of minority sexual orientations and gender identities, and others with the skills and knowledge to productively engage with diverse communities. All qualified candidates are encouraged to apply.*