

**RESEARCH ASSOCIATE (LIMITED TERM)**  
**Genetic Interactions/Haploid Genetics – MOFFAT LAB**

**Positions Available:** 1  
**Location:** Toronto, Ontario, Canada  
**Posted:** March 17, 2016  
**Applications Due:** April 18, 2016

Position Description:

The candidate will be responsible for leading the scientific aspects of the development of genetic interaction networks in haploid mammalian cells. The candidate would also be responsible for the technology development of novel methods to uncover genetic pathways underlying the functionality of biologics targeting cell surface epitopes. The candidate must have demonstrated the ability to make significant technical advance in the field of genetic interactions, large-scale genetic interaction mapping and design of new technology that will improve genetic interaction mapping strategies. The Research Associate requires a Ph.D. in Biology or Molecular Genetics and 5-7 years of postdoctoral experience in this field. Due to the academic and large-scale nature of the project, a strong background in Genomics, Genetics and Proteomics is also expected. Previous experience in the pharmaceutical industry, specifically in target discovery and validation, would be a strong asset. Consequently, the candidate is required to have strong experience in the area of cancer biology. Responsibilities will include the design, planning, and execution of all experiments relevant to the project. The individual will be required to present their work to Principal Investigators and other members of the research team. They must also demonstrate the ability to work independently and direct projects and have a publication record in the field of genetic interaction mapping. The candidate will be responsible for managing a team of 2 technicians and must have previous supervisory experience.

Duties:

The candidate will develop genetic screens in mammalian cells including haploid mammalian cells, with retroviral gene traps and additional methods for large-scale genetic interaction mapping. One goal will be to identify trafficking pathways critical for expressing specific cell surface protein epitopes. The work will be located at the University of Toronto in the Donnelly Centre. This project involves designing genetic screens for systematic analysis of genes or variations thereof required for specific cell states, carrying out the screens using molecular barcoding technologies, participation in the analysis of screening data as well as validation studies. This project involves the use of combinatorial small protein, antibody, and RNA interference libraries. The candidate will be responsible for carrying out independent research consistent with the goals of the program and for the management of a team of researchers, including students and technicians. The candidate will liaise with collaborators and assist in the compilation, analysis and reporting of research findings to researchers within and outside of the program.

Responsibilities/Required skills:

- Using and developing gene editing, transcript or protein perturbation methodologies for mapping genetic interactions in mammalian cells;
- Contributing to manuscripts for publication and present research findings at academic conferences
- Skills in molecular biology, biochemistry, and cell biology (specifically: vector construction, random mutagenesis, phage display, retrovirology, library construction, molecular barcoding technologies);
- Skills in genomic DNA purification, DNA sequence analysis software, PCR barcode strategies, next generation sequencing, bioinformatics tools, network biology;
- Experience in mammalian tissue culture, in vitro cancer models, confocal microscopy and live cell imaging;
- Designing, planning and executing research projects;
- Supervising and managing other research staff;
- Working with multi-disciplinary, multi-institutional teams;
- Co-ordinating with other project leaders, PIs and collaborators;
- Data analysis and reporting;
- Ensuring project goals are met within the context of the larger program;

Beyond these responsibilities, the individual will be expected to participate in the preparation of grant applications and research supervision of two or more staff. At all times, the individual is expected to support the overall research and teaching missions of the lab. Candidate will be expected to perform research with a high degree of independence and will design, direct, execute, analyze and present in written and oral forms novel investigative studies that build on and/or take advantage of the resources and expertise within the lab as well as candidate's academic expertise.

**Apply Now:**

**Please send curriculum vitae by email only to [patricia.mero\(at\)utoronto.ca](mailto:patricia.mero@utoronto.ca).**

**We appreciate your interest; however only those applicants selected for an interview will be contacted.**

The University of Toronto is strongly committed to diversity with its community and especially welcomes applications from visible minority group members, women, Aboriginal persons, persons with disabilities, members of sexual minority groups, and others who may contribute to further diversification of ideas.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.