



POST-DOCTORAL RESEARCH FELLOW
Cell and Molecular Biology of Cancer
Division of Gastroenterology

The Kelleher laboratory is seeking post-doctoral fellows to join a dynamic and newly established research team at the Life Science Institute at the University of British Columbia. The Kelleher laboratory investigates the roles of inflammation in gastrointestinal disease pathogenesis with a specific focus in esophageal cancers. Cancers of the esophagus are associated with one of the poorest overall survival percentages of all cancer types and occurs as either a squamo- or adeno-carcinoma. Pre-cancerous lesions such as Barrett's esophagus, and associated dysplasia, are common precursors in many adenocarcinomas and result from an altered, and genomically unstable, intestine-like differentiation programme (Duggan et al 2015 for example). The Kelleher lab has recently published a number of studies demonstrating the pathways connecting gastro-esophageal reflux disease with GATA family transcription factors supporting differentiation (Duggan, Kelleher et al 2015), inducing pro-proliferative secreted inflammatory cytokines (Duggan, Kelleher 2018) and inducing pro-metastatic cellular transitions (Phipps, Kelleher, Duggan et al 2020) during esophageal oncogenesis. Thus we, and others, suggest a clear role for inflammation in supporting disease states. In this fellowship the candidates will utilise a novel organoid/regenerative medicine-based model of precancerous esophageal lesions, regenerative medicine, pathological and single cell genomic strategies to dissect the relationship between stem cell differentiation, somatic variation and inflammation in the gastro-intestinal tract. This project will be supported by the combined strengths of the division of gastroenterology at UBC, BC cancer and the Michael Smith Genome Sciences Centre.

This position is an ideal opportunity for recent PhD graduates with experiences in either molecular immunology, molecular gastroenterology, cancer genomics and single cell genomics, functional genomics or pathological studies using organoid generation and manipulation. We expect the candidates to have proven skills, through a level appropriate publication record, and that the candidates have some experience in laboratory based teaching. Prerequisite skills include:- Cell line and tissue explant culture, cell and gene manipulation strategies, Western blotting, histopathology, gene expression profiling, excellent level of statistical and graphics package use in the R environment. Advantageous skills:- Candidates with proven skills in one or more of the following areas (1) gene editing; (2) RNA/DNA genome sequencing, single cell sequencing experience (10X genomics. MARS-seq or Smartseq2/3 platforms) and analysis for gene expression, somatic variation and epigenetic modifications; (3) murine or orthotopic cancer models; (4) and/or advanced cellular imaging would be at an advantage.

The successful candidates will join an exciting research team with an excellent network of clinical and pathological collaborators, both local and international, and will be surrounded by the superb facilities and world class researchers of the Life Science Institute at the University of British Columbia. Positions are open until filled.

Please send applications to: kelleherlab.applications@ubc.ca

Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, or Indigenous person.

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