Dr. Matt Farrer Canada Excellence Research Chair in Neurogenetics and Translational Neuroscience
Dr. Donald Rix B.C. Leadership Chair in Genetic Medicine
Professor, Medical Genetics, University of British Columbia (UBC)

An ambitious researcher, Dr. Matthew Farrer has made several influential discoveries in neurogenetics, and is critically acclaimed for his work on the genetics of Parkinson's disease. Before accepting his position as Canada Excellence Research Chair in Neurogenetics and Translational Neuroscience at UBC, Dr. Farrer was a professor of molecular neuroscience and Director of the Division of Neurogenetics, the Transgenic Core Facility, and several neurogenetics laboratories at Mayo Clinic, Jacksonville, Florida.

Dr. Matthew Wiggin holds degrees in molecular biology and engineering, and a PhD in molecular biology (UBC) where he was supervised of Andre Marziali. Matthew's PhD project developed a proof-of-concept method for nanopore force spectroscopy, which had a number of applications. The first was rapid genotyping of SNPs predicting drug response during severe inflammatory response syndrome, i.e. severe sepsis. The second application involved studying protein folding dynamics, in this case, conversion of prion proteins between benign and pathogenic states.

After he graduated, Matthew took a post-doctoral position with Nynke Dekker at the Delft University of Technology in the Netherlands. There, he worked developing novel single molecule platforms for measuring DNA mechanics, including a magnetic tweezer for studying processes that change the helicity of double stranded DNA.

In 2011, Matthew joined Boreal Genomics as the Head of Product Development. There, he has led a team developing liquid biopsy assays - i.e. the detection of mutant DNA shed by tumors into the plasma of individuals with cancer. Boreal's assay, known as the OnTarget assay, is non-invasive, and allows regular, repeated testing which opens up new possibilities in cancer diagnosis For example, it allows near real-time tracking of drug response, regular monitoring of patients in remission, and ultimately, may enable early detection by regular testing of healthy patients without symptoms

Dr. Aly Karsan, MD, FRCPC is the Medical Director of the Cancer Genetics Laboratory and the Centre for Clinical Genomics (CCG); Pathology and Laboratory Medicine & Distinguished Scientist, Genome Sciences Centre, BCCA; Professor, Department of Pathology and Laboratory Medicine, University of British Columbia. He completed his medical degree at Queen's University followed by residency training at the University of British Columbia, and a research fellowship at the University of Washington. Dr. Karsan is trained as a hematopathologist and has a major interest in developing next-generation sequencing approaches for application in the clinic. His work led to the clinical implementation of the first College of American Pathology-accredited next-generation sequencing test in Canada. He is also actively applying genomics technologies to understanding the pathogenesis of leukemias and other cancers. In this context he has a major interest in the function of microRNAs in regulating the activity of normal and leukemic stem cells.

Dr. Paul A. Keown is Professor of Medicine and Director of Immunology at the University of British Columbia, with appointments in Medicine, Pathology and Laboratory Medicine. Dr. Keown graduated in Medicine from the University of Manchester, and pursued postgraduate training in England, France, and Canada. He holds research Doctorates in both Medicine and in Science from the University of Manchester, and an MBA from Simon Fraser University in British Columbia. Dr. Keown's research focuses particularly on the immune response in transplantation and autoimmune disease, and ranges from molecular genetics to healthcare economics. He has served as Executive Director of the British Columbia Transplant Program, Head of the UBC Division of Nephrology, president of the Canadian Transplant Society, Vice President and member of the Executive Committee of the Transplantation Society, and in numerous other national and international scientific societies and professional organizations. He is a Fellow of the Royal College of Physicians of Canada, the Royal College of Physicians of London, the Royal College of Pathologists, the Royal Society of Chemistry, the Society of Biology, the American College of Physicians, and the American Society of Nephrology. Dr. Keown is the founder and C.E.O. of Syreon Corporation, a global research corporation specializing in the use of advanced information technologies for health sciences research.

Dr. Fiona Brinkman is a Professor in Bioinformatics and Genomics the Department of Molecular Biology and Biochemistry at Simon Fraser University, with cross appointments in Computing Science and the Faculty of Health Sciences. She is most known for research and development of widely used computer software that aids both microbe and human immune genomics analyses. She is currently co-leading a national effort to use microbial genomes as a fingerprint to better track, and understand, the spread of infectious diseases. She is also leading development of an approach to integrate very diverse data. She is on several committees and Boards, including the Board of Directors for Genome Canada, and the Scientific Advisory Board for the European Nucleotide Archive. She has received a number of awards, including a TR100 award from MIT, and most recently was recognized as a Thompson Reuters High Cited Researcher (top 1% in her field).

Dr. Steven Hallam is a molecular biologist, microbial ecologist, entrepreneur, and innovator with over 20 years experience in field and laboratory research and innovation at disciplinary interfaces. He is an Associate Professor of Microbiology and Immunology at the University of British Columbia, Canada Research Chair in Environmental Genomics and a scholar in the Canadian Institute for Advanced Research (CIFAR) integrated microbial biodiversity program. He is also a program faculty member in the Bioinformatics and Genome Sciences and Technology training. Dr. Hallam currently directs ECOSCOPE an NSERC CREATE industrial stream training program in support of the emerging bioeconomy. Dr. Hallam's current research intersects microbial ecology, biological engineering and bioinformatics with specific emphasis on the creation of functional screens and computational tools that reveal hidden metabolic powers of uncultivated microbial communities. His laboratory has developed MetaPathways, a modular annotation and analysis pipeline to predict metabolic interactions from environmental sequence information. Other research areas include single-cell genome sequencing and biosensor development for environmental monitoring and enzyme discovery. He recently become a Leopold Leadership Fellow and was elected a Fellow in the American Association for the Advancement of Science for distinguished contributions to the fields of environmental genomics and microbial ecology.

Dr. Jonathan Page is the co-founder and CEO of Anandia Labs and an Adjunct Professor in the Botany Department at UBC. He has spent his career deciphering the genetic and biochemical secrets of medicinal plants, including the production of THC and other cannabinoids in cannabis. He received his PhD from the UBC (1998), undertook postdoctoral training in Germany (1998-2003) and directed a lab at the National Research Council's Plant Biotechnology Institute (2003-2013). Dr. Page co-led the Canadian team that reported the first sequence of the cannabis genome and his work has helped elucidate the biochemical pathway leading to the major cannabinoids. Anandia Labs is using genomics and plant breeding to improve cannabis as a medicine and crop.