

Project Title	Integration of patient data for the development of precision therapies for amyotrophic lateral sclerosis and Parkinson's disease
Principal Investigators	Guy Rouleau Edward Fon
Principal Institution	McGill University
Summary	
<p>More than 2% of Quebec's population over 65 is affected by Parkinson's disease (PD) or amyotrophic lateral sclerosis (ALS), two of the most common neurodegenerative diseases. Their complex nature and difficult access to patient cells slow down the development of new therapies and there is currently no cure for these diseases. Breakthroughs in stem cell biology are now enabling the generation of human induced pluripotent stem cells (commonly referred to as iPSCs) from patient-derived cell types. These iPSCs can then be differentiated into any brain cell, providing researchers with unique access to neuronal cells of patients. The goal of this project is to bring together a multidisciplinary team specialized in iPSC, drug discovery, genomics, transcriptomics, proteomics and big data, for the realization of a large collaborative project in partnership with the pharmaceutical Takeda and the Consortium of Structural Genomics. By allowing the identification of the optimal treatment for each patient, this project will make Quebec a pioneer in the development of precision therapies for neurodegenerative diseases.</p>	