Project Title	**The Neuro-CERVO Alliance for Drug Discovery in Brain Diseases**
Principal Investigator	**Edward Fon**
Principal Institution	McGill University

Summary

Despite decades of research, patients suffering from neurodegenerative diseases (Parkinson's disease, amyotrophic lateral sclerosis) or major psychiatric disorders (schizophrenia, bipolar disorder and major depression) are offered palliative treatments, which at best alleviate symptoms, but do not slow the progression of the disease. These complex and highly debilitating diseases affect more than 10% of the population in the G7 countries. Without effective treatment, the burden will continue to fall on patients, their families and society.

Patients suffering from these neurological and psychiatric diseases present a great clinical diversity, reflecting a very heterogeneous pathophysiology and genetics, which explains, to some extent, the difficulty in finding effective therapies. Thus, the Neuro-CERVO Alliance has set itself the goal of identifying biomarkers that will allow patients to be stratified into subgroups, with the aim of developing personalized therapies.

The Neuro-CERVO Alliance will meet this challenge by exploiting the resources and expertise of two Quebec centres of excellence in neuroscience (The Neuro and the CERVO Centre) and several public and private partners (Quebec biotechs and pharmas). By combining cutting-edge technologies, in areas such as neurophotonics, and artificial intelligence, the Neuro-CERVO Alliance will develop next-generation tools to stratify patients into subgroups, identify biomarkers, new therapeutic targets and allow for earlier detection. The Neuro-CERVO Alliance will implement unique and innovative methodology and expertise to elucidate the underlying molecular causes of neurological and psychiatric disorders and advance the next generation of therapies for patients in Quebec and beyond.