Supervisor/Project Information Form

Due February 14 2018 by email to crems.programs@utoronto.ca

PLEASE SUBMIT IN WORD FORMAT ONLY. PDF will not be accepted

Supervisor Name: Tony P. George, M.D., FRCPC

Hospital/Research Institution: Centre for Addiction and Mental Health (CAMH)

Email: tony.george@camh.ca

Field of Research (2 keywords): Addiction, Neuromodulation

Department: Psychiatry

School of Graduate Studies Appointment (IMS, LMP, IHPME etc)? Yes/No:

Yes

If YES, please name: IMS

Project Title: Effects of Repetitive Transcranial Magnetic Stimulation (rTMS) on Cannabis Use and Cognitive Dysfunction in Schizophrenia

Brief Project Description (<300 words):

The prevalence of cannabis use disorder (CUD) in people with schizophrenia is ~25% compared to <3% in general population, and is associated with poorer functional outcomes, early onset of psychosis and symptoms exacerbation, and higher rates of psychiatric hospitalization. This NIH-funded study specifically tests the effects of active (n=20) versus sham (n=20) high frequency rTMS (20 Hz) delivered by a standard Figure-8 TMS coil on cannabis use and cognitive outcomes in a total of N=48 patients with schizophrenia and co-morbid CUD, in a 4-week, single-blind, randomized, parallel groups controlled trial. The primary outcome measure would be trial endpoint self-reported cannabis use assessed by timeline follow-back confirmed by cannabis urine toxicology. Secondary outcome measures include neurocognitive outcomes (e.g. verbal memory and learning, working memory), cannabis craving and withdrawal and psychosis symptom ratings (Positive and Negative Symptoms Scale for Schizophrenia, Calgary Depression Scale for Schizophrenia). We predict that active versus sham rTMS would significant reduce cannabis use and increase trial endpoint negative cannabis urine frequency, improve neurocognitive outcomes such as verbal learning and memory and working memory, and reduce cannabis withdrawal and craving, and positive and negative symptoms of schizophrenia.
The medical student would be involved with subject recruitment, screening and study assessments of cannabis use, craving, withdrawal and cognitive function, and learn about the principles of neuromodulation.