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by Queen's Psychology
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Congratulations to Queen's Psychology's PhD Candidate, **Steve Lamontagne**, on being awarded the Rossano Mind, Brain & Behavior Pre-doctoral Fellowship from Harvard's McLean Hospital. This highly competitive fellowship is awarded annually to one graduate student on the basis of academic and research potential, as well as a proposal outlining a project to be undertaken at McLean. Steve's proposed project, which was endorsed by Dr. Diego Pizzagalli (Harvard Medical School), investigates the role of dopamine function on behavioral and electrophysiological correlates of cognitive control.

For the funded project, Steve is manipulating dopamine function in healthy participants using varying doses of two cognitive enhancers (modafinil and methylphenidate). The objective is to examine how this intervention alters electrophysiological correlates of cognitive control. Steve investigated similar mechanisms (the mesocorticolimbic system) in rodents in the first half of his PhD.

The project is a subcomponent of a large collaboration with the University of California San Diego (UCSD). Led by Dr. Pizzagalli, Director of Research (Division of Depression & Anxiety

Disorders) at McLean Hospital, the group develops and implements novel cross-species neurophysiological assays of reward and cognitive domains.

“The project expands the scope of my PhD by investigating dopaminergic mechanisms involved in cognitive control, which complements my previous research with Dr. Mary C. Olmstead examining dopamine modulation in reward processing,” Steve explains.

Steve is currently completing his PhD in the Cognitive Neuroscience area in the MotiCog Lab with Dr. Olmstead at Queen’s University.

“Steve’s recent success in obtaining this highly prestigious award is a testament to his ability to integrate information across a range of disciplines”, Dr. Olmstead points out. “He actively pursued a collaborative project with Dr. Pizzagalli because it provided an opportunity to translate his preclinical work into clinical applications. Steve remains committed to understanding methodological details the new techniques he has adopted, while never losing sight of the broader theoretical issues that drive his research projects”.

Steve has been using one of those tasks, the probabilistic reward task, in his research with Dr. Olmstead in the MotiCog Lab since 2015. “After seeing our published work, Dr. Pizzagalli invited me to complete an exchange project in his Laboratory for Affective and Translational Neuroscience”, Steve recalls. “It has been an incredible experience to learn from the leading researchers in the field and I’m looking forward to bringing these new skills back to Queen’s”.

Since 2019, Steve has been working at McLean Hospital in Belmont, Massachusetts, the top-ranked freestanding psychiatric hospital in the United States. Under the supervision of Dr. Pizzagalli, Steve examines how acute ketamine administration alters neural underpinnings of executive function and reward learning in people with treatment-resistant major depressive disorder.

Dr. Ken Rossano developed the Rossano Mind, Brain & Behavior Pre-doctoral Fellowship in order to encourage Harvard graduate students to undertake a research project at McLean Hospital, the top-ranked freestanding psychiatric hospital in the USA. Being able to continue my research in Dr. Pizzagalli’s lab is an incredible opportunity to learn new skills in a human clinical population.