



## RESEARCH SCHOLAR PROGRAM – 2018

### SUPERVISOR & PROJECT INFORMATION FORM

Please complete and return, via email only ([crems.programs@utoronto.ca](mailto:crems.programs@utoronto.ca)) by **November 3<sup>rd</sup> 2017** (*forms received after this date will not be posted*).

#### *Supervisor Information*

Name: Benjamin Goldstein

Email: [benjamin.goldstein@sunnybrook.ca](mailto:benjamin.goldstein@sunnybrook.ca)

Degree: MD, PhD, FRCPC

SGS Appointment (IMS, IHPME, LMP etc.): Pharmacology

Academic Rank: Full Professor

Field of Research: bipolar disorder, adolescents

Research Institution Affiliation (if applicable): Sunnybrook Research Institute

Allocation of student contact time (number of hours per week YOU are available to the student for any concerns or to review progress):

1 hour per week

## Project Information

Title: Neuroimaging in Adolescent Bipolar Disorder

Description (max 500 words):

The focus of this CREMS project is on adolescent bipolar disorder. The selected student will be integrated into the overall activities of the laboratory, which includes psychiatry residents, medical students, post-doctoral fellows, graduate students, undergraduate research students, and research staff. The student will gain exposure to current methods being applied in the laboratory, including neuroimaging (MRI), retinal vascular photography, peripheral arterial tonometry, computerized cognitive testing, serum biomarkers, genetics, and novel complementary therapeutics. Descriptions of current ongoing studies can be found at the following website: <http://sunnybrook.ca/content/?page=bsp-youth-bipolar-disorder-research>

The primary focus of the laboratory is on the link between bipolar disorder and early atherosclerosis and cardiovascular risk. To this end, the student's project will seek to inform the field's understanding regarding the genesis of early atherosclerosis risk among adolescents early in the course of bipolar disorder. The project will focus on vascular brain MRI phenotypes (e.g. cerebral blood flow, cerebrovascular reactivity) and/or on other brain MRI phenotypes (e.g. structure, functional connectivity) in relation to cardiovascular risk factors (e.g. blood pressure, insulin sensitivity). Together with the PI, who will serve as the student's direct report, the student will identify a project for which the student will have primary responsibility and first-authorship. The project will be based on brain MRI images of approximately 100 adolescents (50% with bipolar disorder, 50% healthy controls). The student will be expected to work independently, with input and guidance from the PI as well as graduate students and post-doctoral fellows. The student will be expected to review the literature, generate hypotheses, and undertake analyses to test those hypotheses. The student will be encouraged to submit his/her findings for presentation at a national or international scientific meeting in Canada or the United States. The supervisor and members of his team will provide guidance and iterative feedback regarding scientific writing in order to support the student in achieving the goal of submitting a peer-reviewed publication based on the CREMS studentship.

If human subjects are involved, have Ethics been obtained?

YES

NO

Application Submitted

N/A

Do you expect this work will be published within the 20 months?

YES

NO

Uncertain

Student's roles and responsibilities (please be specific)

*Please indicate who will serve as the student's direct report (PI, PhD student, technician etc...)*

Together with the PI, who will serve as the student's direct report, the student will identify a project for which the student will have primary responsibility and first-authorship. The project will be based on brain MRI images of approximately 100 adolescents (50% with bipolar disorder, 50% healthy controls). The student will be expected to work independently, with input and guidance from the PI as well as graduate students and post-doctoral fellows. The student will be expected to review the literature, generate hypotheses, and undertake analyses to test those hypotheses. The student will be encouraged to submit his/her findings for presentation at a national or international scientific meeting in Canada or the United States. The supervisor and members of his team will provide guidance and iterative feedback regarding scientific writing in order to support the student in achieving the goal of at submitting a peer-reviewed publication based on the CREMS studentship.