Comprehensive Research Experience for Medical Students (CREMS)
2022 Supervisor and Project Information Form

Please complete and return via email ONLY to crems.programs@utoronto.ca by February 18, 2022.

Supervisor Information
NOTE: CREMS will not support pre-determined pairings of students and supervisors. Supervisors must agree to open their projects to all students and interview all that are interested.

Name: Jacob Udell
Email: jay.udell@utoronto.ca

Department: Medicine/Cardiology
Hospital/Research Institution: Women’s College Hospital

SGS Department(s) (if applicable):
Pharmacology & Toxicology / IHPME

ORCID ID (see https://orcid.org/ - If you do not have an ORCID ID we encourage you to sign up for one):
0000-0001-7402-9584

Location of Work:
Women’s College Hospital / ICES

Field of Research (up to 4 keywords):
Cardiovascular disease, prevention, health services research, clinical trials

Student contact time (number of hours per week YOU are available to the student for any concerns or to review progress):
Several hours a week as required
**Project Information**

NOTE: If this project is selected, this information will be posted on CREMS website for interested student applicants to view research opportunities.

**PROJECT TITLE:**

CANHEART SPOR Summer Studentship

**PROJECT DESCRIPTION:**

Including background, aim(s), methodS and significance of the project. Maximum 300 words.

The CANHEART ‘big data’ research initiative is aimed at measuring and improving cardiovascular health and the quality of ambulatory cardiovascular care provided in Ontario using the population-based CANHEART cohort. The CANHEART cohort was created through linkage of routinely collected health administrative, vital statistics, and laboratory databases housed at ICES. Building upon the insights gained to date from CANHEART, we are currently undertaking a CANHEART Strategy for Patient Oriented Research (SPOR)-funded project aimed at leveraging big data to conduct innovative cardiovascular clinical trials. We aim to: 1) undertake a pragmatic cluster randomized registry-based clinical trial to improve lipid-management amongst intermediate- and high-risk patients residing in high-risk health regions in Ontario, and 2) develop novel algorithms for measuring clinical outcomes in clinical trials using health-related databases and compare whether they are as accurate as traditional event ascertainment methods. These projects are undertaken by an interdisciplinary team consisting of experts in administrative health databases, implementation science, clinical trials, knowledge translation and patient engagement.

Potential options for summer student research projects and programs include, but are not limited to:

- Quantitative studies examining the association between patient, community and health system factors, and the incidence of cardiovascular health outcomes
- Studying primary and secondary prevention performance measures in the province of Ontario (e.g., CV risk assessment, medication utilization, adherence to guidelines, adherence to therapy), including knowledge translation activities in these areas aligned with our ongoing clinical studies
- Working with the study team to develop novel studies to identify clinical outcomes, using health administrative data, lab data, and clinical registries
- Development of novel methods for using ‘big data’ to conduct clinical trials
- Design and implement a print, digital, and social media campaign about CV health/risk assessment to disseminate knowledge and improve outcomes

**Is this project remote-capable (in case of new restrictions) or have an alternative remote option?**

☒ Yes, remote capable ☐ No

☐ Yes, alternate remote option. Please specify (100 words max): Click or tap here to enter text.

**If human subjects are involved, have the appropriate Research Ethics Board approvals been obtained?**

☒ Yes ☐ No ☐ Not Applicable

**If yes, please list the application submission date:**

**Do you expect this work will be published?**

☒ Yes ☐ No ☐ Uncertain / Other
Research Environment and Student Roles and Responsibilities

Please be specific as possible. Please describe the research environment, including availability of required facilities/equipment/expertise, supervisor’s experience and mentorship plans. Please clearly outline the student role(s) and responsibilities related to the project, potential educational value, and indicate who will serve as the student’s direct report for daily oversight (PI, PHD student, technician, etc.). Maximum 300 words.

From a practical standpoint, the student will be provided a touchdown research workstation with access to high-speed internet and communication tools; research librarian; research ethics board; and indirect access to data. The student will have opportunities to interact with research staff, students, trainees, and scientists during their project and will be supported by a research program manager, research coordinators, senior and junior statistical analysts, epidemiologists and biostatisticians, and clinical investigators. They will gain hands-on experience with coordinating and implementing a prospective research study with multiple stakeholders as well as contribute to retrospective analyses of existing data. The student will not be expected to conduct their own statistical analyses but gain familiarity with study design, data structure and organization, statistical analysis methodology, and data interpretation, including potentially drafting an abstract and manuscript for peer-review publication. From an education standpoint, the student may attend weekly research and clinical rounds. The student will have multiple opportunities to present their research at these rounds. Funding of the project will be from the PI’s established grants. The PI has had a successful training track record for 10 years since first faculty appointment with experience training and mentoring over 20 students at various levels of experience (high school, undergraduate, Masters/PhD-level graduate, medical student, postgraduate medical trainee, and postdoctoral trainees). The student will have an opportunity to meet/touchbase with the PI several times a week as necessary but be provided the opportunity to function independently with supervision/support. The student’s direct report for daily oversight will be shared between the project manager and a senior graduate/postgraduate trainee.