



Comprehensive Research Experience for Medical Students
Summer Research Program 2019

Supervisor/Project Information Form

Due February 20 2019 by email to crems.programs@utoronto.ca

Supervisor Name: Allison McGeer (co-supervisors: Jeff Powis, Matthew Muller)

Project Title: Assessing the risk of colonization with carbapenemase producing *Enterobacteriaceae* (CPE) at hospital admission

Hospital/Research Institution: Sinai Health System

Email: Allison.mcgeer@sinaihealthsystem.ca

Field of Research (2 keywords): infection prevention, antimicrobial resistance

Department: Infectious diseases/infection prevention and control

School of Graduate Studies Appointment (IMS, LMP, IHPME etc)? Yes/No: YES If YES, please name: LMP, IHPME, DLSPH

Project Title: PRECISE: PREventing the Emergence of CPE In hospitals: understanding key Epidemiologic parameters.

Brief Project Description (< 300 words):

This summer studentship will link the student to the start-up of a CIHR funded cluster of observational studies to obtain epidemiologic data needed to support infection prevention and control programs to mitigate the emergence of a one particularly important form of antibiotic resistance in hospitals – carbapenemase production in *Enterobacteriaceae*. The student's primary project will be the implementation of a study to assess the prevalence of and risk factors for colonization with carbapenemase producing *Enterobacteriaceae* (CPE) in patients at admission to three Toronto hospitals (Sinai Health System, Toronto East General, and Unity Health Toronto), and to assess the sensitivity of culture compared to PCR for the detection of colonization with CPE. For this project, the student will work with the infection prevention and control, microbiology and informatics groups at the three hospitals to design and implement sample and data collection, and with the research microbiology laboratory and epidemiology groups in the Infectious Diseases Epidemiology Unit at Sinai Health System to test samples and analyze data. The student will also participate in overall team meetings, to observe and contribute where appropriate to a systematic review of sink decontamination procedures for CPE, a study of risk factors for sink contamination, and a study of the testing needed to identify that patients have cleared CPE colonization. The expected outcome would be an abstract to be presented at the annual meeting of the Association of Medical Microbiology and Infectious Diseases – Canada meeting the next spring.