Supervisor Name: Stuart McCluskey, MD, PhD, Staff Anesthesiologist, Medical Director, Perioperative Blood Management Program and Abdominal Organ Transplantation Anesthesia Program and Department of Anesthesia and Pain Medicine, University of Toronto.

Dallas Duncan, MD, MHSc, Chair, Residence Research Committee, Department Anesthesia and Pain Medicine, University of Toronto and Staff anesthesiologist, Department of Anesthesia and Pain Management, University Health Network.

Project Title: Improving the management of perioperative fluid therapy: How do we measure improvement outcomes?

Hospital/Research Institution: Toronto General Hospital

Email: stuart.mccluskey@uhn.ca

Field of Research (2 keywords): Outcomes research and perioperative management.

Department: Anesthesiology and Pain Management

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

Brief Project Description (<300 words):

The intravenous fluids that are given to every patient undergoing surgery are rightly considered medications. Giving too much or too little, or the wrong kind can have a dramatic impact on our patients. Establishing the best way to give fluids is not straight forward and we are involved in local, national and international trials to try to find a solution. Locally we are introducing cardiac output monitors to help guide fluid therapy in kidney transplantation and free flap reconstructive surgery. The primary focus of this summer project will be in kidney transplantation, but a similar fluid therapy strategy is being used in head and neck reconstructive surgery which will supplement the summer experience. The next step is to try
to measure how these monitors are influencing practice and if patient outcomes are being affected. Students selected for this project will be exposed to a breath of research methods, including study design, data definition, data acquisition and data analysis. A background in statistics would be helpful, but is not mandatory. In addition to clinical exposure, students will be introduced to the complexity of multi-centred trials. All of our projects are multidisciplinary so there will be interaction with anesthesiologists, surgeons and internists.