One Year Research Assistant/ Postdoctoral Fellowship in abdominal MRI
St. Michael’s Hospital
Toronto, Canada

The Department of Medical Imaging at St. Michael’s Hospital (SMH), a University of Toronto teaching hospital, is committed to being an internationally recognized department that provides the highest standards of radiology education and research.

The Department has a busy clinically focused MRI Research Centre that was established in 2013, featuring a dedicated research 3.0T Siemens Skyra with an adjacent mirror platform Siemens Skyra clinical 3.0T system, and two 1.5T Philips Ingenia MRI scanners (fully upgraded in 2016) available for research studies. The main research focus of the Canada Foundation for Innovation-funded MRI Research Centre is utilizing state-of-the-art MRI technology to generate measurable quantitative endpoints which can be used in high impact clinical trials. The MRI Research Centre currently supports over 30 funded research studies requiring MRI, and performs >20 research MRI scans per week. One of the key research programs in the MRI Research Centre is the Kidney MRI program, where we are studying the utility of multiparametric MRI methods on acute and chronic kidney disease in both native and transplant kidneys. St. Michael's is one of the leading hospitals performing kidney transplants, however many fail within several years of transplantation. We have an active research group dedicated to developing new techniques and tests to help manage patients with kidney transplants and identify those at high risk of needing retransplantation.

We are currently offering a one year Research Assistantship/Postdoctoral Fellowship focused in MRI research starting ASAP. The Department has a full-time Research Office supporting its research administration, 2 full-time Research MRI Technologists, to complement a full-time abdominal radiologist faculty Principal Investigator and a Transplant Nephrology full-time faculty Co-PI Clinician Scientist.

You will be responsible for the execution of MRI quantitative data processing and analysis work to support this Kidney MRI research program. You will be responsible for processing the MRI data using our in-house software programs based on Matlab, python, ImageJ, and R, to extract parameters that may determine kidney prognosis. Further, you will perform data analysis using R and Matlab to support the growing Kidney MRI research program. You will be responsible for maintaining/developing an “imaging science and analysis” software pipeline and have the opportunity to work in a clinical environment under the supervision of Principal Investigators in Radiology and in Nephrology.
Requirements

- Masters degree in medical biophysics, physics, computer/electrical/biomedical engineering, computer science or imaging science, PhD preferred;
- Minimum of 2 years relevant research experience and strong analytical skills;
- Previous experience in medical imaging data analysis (required), and MRI data analysis (preferred);
- Programming experience (required), in MATLAB (preferred; Python and R and other image processing software such as ImageJ, scripting languages are also beneficial);
- Grant and peer-reviewed manuscript writing, and making presentations to scientific audiences is preferred;
- An aptitude for accuracy, detail and problem-solving;
- Experience in data management;
- Demonstrated ability to work both independently and as part of a team;
- Excellent communication skills, both written and verbal.

Qualified candidates should send: a curriculum vitae, cover letter stating their career goal and interest in the position, and names of 3 references, to: Anish Kirpalani, MD FRCPC, Department of Medical Imaging, email: kirpalania@smh.ca