

Medical Device Innovation Fellow: Postdoctoral research position in Focused Ultrasound and Ophthalmology

Status: Full time

Research Unit: Focused Ultrasound Group, Sunnybrook Research Institute

Principal Investigator: Kullervo Hynynen PhD. Professor, Department of Medical Biophysics and Cross Appointed Professor, Institute of Biomedical Engineering, University of Toronto.

Co-Principal Investigator: Gary Yau MD MS FRCPC. Faculty, Department of Ophthalmology & Vision Sciences, University of Toronto

Overview

The Focused Ultrasound (FUS) Laboratory at Sunnybrook Research Institute in Toronto, Ontario and the Department of Ophthalmology & Vision Sciences at Sunnybrook Health Sciences Centre is seeking applications from highly qualified and motivated postdoctoral researchers to be involved in the investigation and development of a novel medical device to treat a blinding ocular condition using FUS. FUS is changing the way that surgery is performed by allowing treatment of tumours and other diseases without ever making an incision. Our group is one of the leading laboratories in the world in the development of highly innovative, leading-edge technology for completely non-invasive image-guided surgery and targeted drug delivery using focused ultrasound.

Training Opportunity

The Fellow will be involved in the investigation and development of a novel medical device to treat a blinding ocular condition, working alongside a multidisciplinary group of experts in physics, engineering, biology and medicine. The successful candidate will be primarily responsible for the design and execution of experiments to investigate the effect of FUS on preclinical (tissue and animal) models of this disease, as well as be involved in the design and fabrication of a functioning prototype. The ultimate goal of this research is to translate this device for a “First-in-Human” trial, with the results of this work forming the proof of concept for this trial. Given this overarching goal, the Fellow will be in close collaboration with clinician end-users throughout the project. The Physical Sciences Platform at Sunnybrook has spun off many companies, and is a hotbed for innovation, and the successful Fellow will be placed in the opportunity to be a key driver of this innovation. If interested, the Fellow can be involved in commercialization related activities and gain experience in the steps involved from translating scientific discoveries to the bedside.

In addition to being involved in high-impact translational science, the successful Fellow will join a national cohort of postdoctoral researchers and be enrolled in an exclusive self-paced professional development curriculum with expert facilitators that prepares fellows for success as leaders in research and industry. This curriculum is unique and informed by experienced consultation groups of academic researchers. This interactive and customised program helps fellows develop meaningful professional and academic networks across Canada.

Qualifications and Skills

- PhD (<5 years) in Medical Biophysics, Biomedical Engineering or related fields
- Experience in experimental investigation (in vivo and in vitro) with analysis of biomedical data, with experience in focused ultrasound a particular asset
- Ability to work independently and collaboratively, and deliver work on schedule
- Outstanding written and verbal communication skills

A competitive salary commensurate with experience will be provided for 2 years, with the possibility of extension. This position will remain open until filled. The anticipated start date is for July 2023, though an earlier start date can be negotiated. Qualified candidates should send a cover letter (brief description of reason for interest, relevant research experience), curriculum vitae, and name and contact information of two references to the contact email to Dr. Gary Yau:

g.yau@utoronto.ca

Due to the high volume of applicants only candidates selected for an interview will be contacted. We thank you in advance for your interest.

Sunnybrook Research Institute is committed to providing accessible employment practices that are in compliance with the Accessibility for Ontarians with Disabilities Act (AODA). If you require accommodation for disability during any stage of the recruitment process, please indicate this in your cover letter.

Sunnybrook Research Institute is strongly committed to inclusion and diversity within its community and welcomes all applicants including but not limited to: visible minorities, all religions and ethnicities, persons with disabilities, LGBTQ persons, and all others who may contribute to the further diversification of ideas.

Please be advised that in order to be eligible for employment at Sunnybrook, all new hires must have received the full series of a COVID-19 vaccine or combination of COVID-19 vaccines approved by Health Canada (e.g., two doses of a two-dose vaccine series, or one dose of a single-dose vaccine series); AND have received the final dose of the COVID-19 vaccine at least 14 days ago. Medical exemptions or any other kind of requested exemption based upon the Hospital's obligations pursuant to