

# NEWS

WINTER 2016

**IN THIS ISSUE**

**2**

**NEWS: Not Your Average Operating Room; Funding Scientific Findings; It's a Boy**

- 5 CV: DR. CHRISTINE DÉMORÉ
- 6 TRAINEES' POST
- 7 APPLAUSE



## Centre of Excellence in **FOCUSED ULTRASOUND**

**Sunnybrook is first in Canada to receive honour**

Full story on page 3.

## Not Your Average Operating Room

In September 2016, Sunnybrook Research Institute opened the Biophotonics Experimental Operating Room, a project spearheaded by **Dr. Victor Yang**, a senior scientist in Physical Sciences. The facility is unique in its focus and scope. It is equipped with 3-D augmented reality visualization, optical imaging, automated medical laser ablation and tools for surgical navigation.

The experimental operating room enables research and development into biophotonics devices, which use light to image and manipulate cells and tissues. Optical, or light-based imaging technologies are less invasive and do not use harmful radiation. Yang will also study how optical imaging can be used alongside standard imaging techniques like MRI and computed tomography; for example, to look at plaque in the carotid artery in people at risk for stroke.

The aim is to translate technological developments into minimally invasive imaging for improved diagnosis and therapy monitoring. Yang has developed surgical navigation equipment that he is commercializing via 7D Surgical, a startup. The device will be tested clinically in the experimental operating room.

The facility was funded primarily by the Canada Foundation for Innovation, and the Ontario Ministry of Research, Innovation and Science.



**Dr. Victor Yang and team in the Biophotonics Experimental Operating Room. [Photo courtesy of Dr. Victor Yang]**

## Funding Scientific Findings

Five scientists working in the areas of brain, cancer, heart and trauma research at Sunnybrook Research Institute secured funding in the latest rounds of competitions.

The Heart and Stroke Foundation awarded two researchers in Evaluative Clinical Sciences with a grant-in-aid.

**Dr. Joyce Chen**, a scientist in the Hurvitz Brain Sciences Research Program, will develop a personalized approach to stroke motor recovery with transcranial direct current stimulation.

**Dr. Harindra Wijesundera**, a scientist in the Schulich Heart Research Program, will conduct a pan-Canadian evaluation to improve triage and inform capacity needs for patients with severe aortic stenosis undergoing transcatheter aortic valve implantation.

The Physicians' Services Incorporated Foundation awarded **Drs. Nick Daneman** and **Paul Karanicolas** each with a research grant in its latest competition.

Daneman, a scientist in the Trauma, Emergency & Critical Care Research Program, will receive \$165,500 over two years. He will further his work on the randomized control trial called BALANCE, short for Bacteremia Antibiotic Length Actually Needed for Clinical Effectiveness. Using patients enrolled in the trial, he will conduct the BALANCE of the microbiome substudy to test whether seven days of treatment is better than 14 days of treatment. The results from both studies will define the appropriate course of treatment for bloodstream infections and potentially reduce use of antibiotic treatments across Ontario.

Karanicolas, a scientist in the Odette Cancer Research Program, will receive \$16,000 over six months to evaluate the capability of using the MRI contrast agent Primovist to estimate liver volume and assess function of the remaining liver prior to resection. This multicentre large-scale analysis will help enhance prediction of post-hepatectomy liver failure, improve patient selection before surgery and lower postoperative deaths.

From the Canadian Institutes of Health Research, **Dr. Jill Timmouth**, a scientist in the Odette Cancer Research Program, received an embedded clinician researcher salary award worth \$300,000 over four years. The funds will support her work on the design and implementation of efficient and effective colon cancer screening through Cancer Care Ontario's ColonCancerCheck program, and improve the quality of colonoscopy in the province.

## It's a Boy!

Baby Lorenzo Gordijo Bonifacio came into the world a little earlier than expected for Claudia and her husband Leonardo Bonifacio.

**Claudia Gordijo**, a projects officer working in the strategic research programs office at Sunnybrook Research Institute, gave birth to a healthy baby boy on Sept. 30, 2016 at Sunnybrook's Women & Babies birthing unit. Lorenzo weighed a hefty eight pounds, 3.5 ounces.



**Lorenzo Gordijo Bonifacio**  
[Photo: Betty Zou]

Big sister Olivia is very excited to have a cute little brother. Mom, dad, Olivia and their bundle of joy are all doing well.

## FOCUSED ULTRASOUND CENTRE OF EXCELLENCE

### First in Focused Ultrasound

Sunnybrook Health Sciences Centre is recognized as a Centre of Excellence in focused ultrasound (FUS). The Focused Ultrasound Foundation, the leading organization for research and advocacy in the field, announced the honour Nov. 17, 2016.

Sunnybrook is the first centre in Canada to receive this honour. It has one of the most comprehensive and successful FUS research programs in the world, with technical, scientific and clinical experts accelerating progress in the field. The designation recognizes the pioneering work of our research and clinical teams, united under the scientific leadership of **Dr. Kullervo Hynynen**.

“With an unparalleled team of scientists and clinicians, Sunnybrook has been in the vanguard of focused ultrasound innovation, making groundbreaking progress on many fronts,” says Dr. Neal F. Kassell, founder and chairman of the Focused Ultrasound Foundation. “They are a model for other sites—not only because of their world-class knowledge and experience, but also for the collaborations that they have forged with institutions across specialties and geographies.”

Researchers at Sunnybrook are making groundbreaking advances in FUS, from discovery research, to technology development, to clinical trials. We have achieved many firsts, notably in the treatment of brain diseases. Expertise in neurosurgery has positioned Sunnybrook at the forefront of clinical translation in FUS research, an effort that is intensifying under the clinical directorship of **Dr. Nir Lipsman**.

Other clinical applications of FUS include urology, oncology, orthopedics and gynecology. Hynynen credits the teamwork within the institution and across the field for creating such a research powerhouse. “To help get focused ultrasound to benefit as many patients as possible, we are very open to collaboration,” he says. In the past five years, he has had more than 80 papers published with an excess of 160 investigators from over 30 institutions. Hynynen adds: “This work cannot be done at just one centre, and that is where I see the Focused Ultrasound Foundation as being so instrumental—in stimulating collaboration and progress.”

Ten principal investigators are leading studies to advance focused ultrasound. With them are dozens of highly skilled technical, engineering, biological sciences and clinical research personnel. The work is conducted in SRI’s Centre for Research in Image-Guided Therapeutics, which spans 150,000 square feet of laboratories, facilities and clinical space. The equipment includes several MRI systems (3T and 7T preclinical), custom FUS systems, a Philips body system and an Insightec Neuro brain system. The Canadian government has contributed \$75 million to the Centre, with an additional \$86 million in private and institutional investment.

“Focused ultrasound is one of the jewels in the crown at Sunnybrook,” says **Dr. Barry McLellan**, Sunnybrook’s president and CEO. “Our vision as an academic health sciences centre is to invent the future of health care, and we believe that with focused ultrasound, we truly are inventing the future. This is not just for the patients we treat here; we are having an impact around the globe.”

In 2012, Sunnybrook became the first Canadian centre to use FUS to treat essential tremor, the most common movement disorder. The centre subsequently played a key role in the first international, randomized controlled trial for FUS in essential tremor. Results from that study led the U.S. Food and Drug Administration and Health Canada to grant regulatory approval to FUS as a treatment option for essential tremor.

In 2015, Sunnybrook researchers were the first in the world to use FUS to open the blood-brain barrier and deliver chemotherapy directly into the brain of a woman with brain cancer, completely noninvasively.

These historic milestones are paving the way for tackling some of the most difficult-to-treat diseases, including those with few or no treatment options. Sunnybrook is the first centre in the world to obtain regulatory approval to use FUS to open the blood-brain barrier to treat Alzheimer’s disease.

Other current clinical research projects in neurosciences include the first North American trials to harness FUS for neuromodulation therapy in treatment-refractory obsessive-compulsive disorder and major depression; and using FUS to deliver therapeutic proteins in Parkinson’s disease.

Learn more about the Centre of Excellence in focused ultrasound at [sunnybrook.ca/research/fus](http://sunnybrook.ca/research/fus).

*Content from Focused Ultrasound Foundation media release.*



**Drs. Isabelle Aubert and Kullervo Hynynen collaborate on research into use of focused ultrasound to treat Alzheimer’s disease. Here, they examine an ultrasound array being engineered in Hynynen’s lab. [Photo: Kevin Van Paassen]**

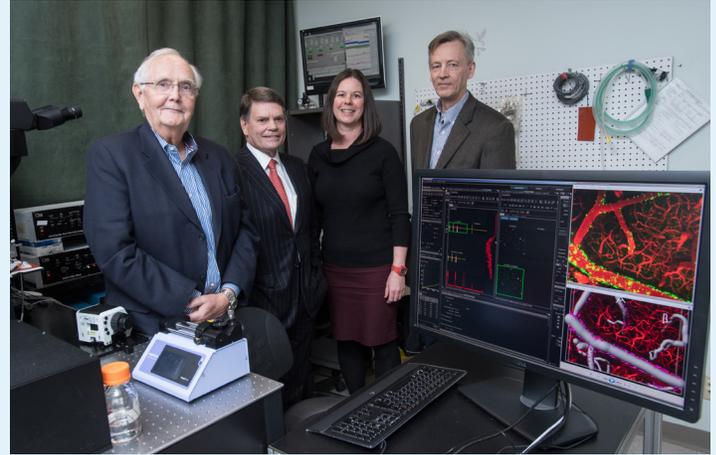
# Tool Kit: Olympus Multiphoton Laser Scanning Microscope

Sunnybrook Research Institute (SRI) has a new multiphoton microscope. The Olympus FluoView FVMPE-RS multiphoton laser scanning microscope supports brain-related projects at SRI that are working to develop novel therapeutics and improve delivery of existing therapies. It can visualize changes in living cells and tissues that are caused by neurodegenerative diseases, stroke and cancer, and in response to treatments.

“It is being used in projects aimed at optimizing delivery of therapeutics across the blood-brain barrier via focused ultrasound,” says **Dr. Bojana Stefanovic**, a senior scientist in the Hurvitz Brain Sciences Research Program, who is a primary user of the system. “Our set-up is unique. We focus on in vivo neuroimaging in preclinical models of disease and optimization of image-guided therapy using focused ultrasound.” Sunnybrook Research Institute leads in this research, and was recently named Canada’s first Centre of Excellence in focused ultrasound.

With its extended infrared range of up to 1300 nm excitation, the system is equipped with high-speed resonant scanners in addition to the conventional galvanometer scanners. This means it can image deep within a specimen. It can image 30 frames per second with 512 x 512 frames; or 438 frames per second with 512 x 32 frames, the fastest commercially available. This high temporal resolution is of particular interest for brain applications, says Stefanovic. Typical imaging sessions take about three hours.

Other SRI researchers who will use the multiphoton microscope include **Drs. Isabelle Aubert, David Goertz, Kullervo Hynnen** and **JoAnne McLaurin**. The collective effort is to understand the



Left to right: Mr. Bob Beamish and Mr. Gerry Connor with Drs. Isabelle Aubert and Kullervo Hynnen in the multiphoton lab at Sunnybrook Research Institute. [Photo: Kevin Van Paassen]

biological effects of focused ultrasound with and without therapy, and the neurovascular changes associated with progression of amyloid and tau pathologies in Alzheimer’s disease.

The equipment was purchased with the generous support of philanthropists Messrs. Bob Beamish and Gerry Connor. The microscope was installed in December 2016. It will allow researchers to build upon work conducted on an older twin FV1000-MPE system, which is still in operation. — Eleni Kanavas

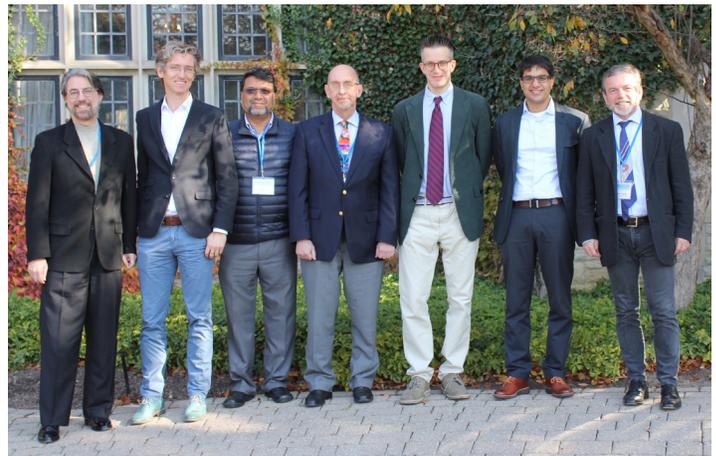
## Magnifying Innovation

A brass ring of cancer research is to develop targeted treatments that work better, have fewer adverse effects and can be adapted for each patient. Image-guided medicine is integral to this quest, and featured prominently in conferences on cutting-edge cancer research held at Sunnybrook Research Institute (SRI). Scientists at SRI hosted the first meeting, “Innovations in Radiation-Engineered Therapy,” on Nov. 14 and 15, and the second, “Innovations in Cancer Therapy and Response Monitoring,” on Nov. 16 and 17.

**Dr. Arjun Sahgal**, a clinician-scientist in SRI’s Odette Cancer Research Program, co-chaired the former. He says the aim was to “bring together international experts—clinical and research—to talk about the new technologies that we have already started to implement, including the MR-linac [linear accelerator] and MR brachytherapy, so we can develop these new technologies and start inventing the future of health care now.”

Both systems use MRI guidance during radiation therapy to target a tumour precisely and to assess response in real time. For example, the improved accuracy afforded by the MR-linac reduces the size of the safety margins around tumours, thereby minimizing how much healthy tissue is exposed to radiation.

The focus of the second conference was on new imaging methods to monitor cancer therapy response. It showcased new methods in MRI and the first human images obtained through photoacoustic imaging, which uses short laser pulses to excite ultrasonic signals that are detectable by ultrasound. **Dr. Greg Czarnota**, director of the Odette Cancer Research Program at SRI and meeting co-chair, says response monitoring is essential to tailoring care to patients and developing new treatments.



Speakers at the “Innovations in Radiation-Engineered Therapy” conference, held Nov. 14–15, 2016 at Sunnybrook Research Institute. From left to right: Drs. Richard Kolesnick, Bas Raaymakers, Chandan Guha, John Kirkpatrick, Greg Czarnota, Arjun Sahgal and Jacek Capala. [Photo: Alisa Kim]

Read the full story at [sunnybrook.ca/research](http://sunnybrook.ca/research).

# We Are SRI

## CV: Dr. Christine Démoré



**Bio basics:** A scientist in Physical Sciences and the Odette Cancer Research Program at Sunnybrook Research Institute (SRI), and an assistant professor in the department of medical biophysics at the University of Toronto. Did her postdoctoral fellowship at the University of Dundee in Scotland, and her PhD at Queen's University in Kingston, Ont. Married with one daughter. Joined SRI in August 2016.

### Did you always want to be a scientist?

Yes. I briefly thought about medicine when I was a teenager, but what I liked about that was the science. I was always trying to build things and mix things, and for a long time I thought I might be interested in chemistry, like my mother and her parents were, but I realized it's the physics of the chemistry that I really liked. I also liked figuring out how things worked at a base level, so engineering was a good fit.

### What attracted you to ultrasound imaging?

I find it fascinating, from the materials that the ultrasound probes are made from, piezo electric materials, to how they're put together—the manufacturing methods, the engineering process and how we can design them for different applications.

### What is your research focus?

A lot of my work is to miniaturize ultrasound probes and put them on the end of a catheter or on the end of an endoscope, say, for esophageal imaging, or to put them into biopsy needles. When you put the probe near or into a tumour you can get an image of everything surrounding the biopsy needle rather than just that core biopsy. This could be used for guiding procedures—to give more information that could help with diagnosis, prognosis or treatment plans.

I've also done a fair bit of work on acoustic manipulation, or 'tweezing.' With all the biological sciences work here, I'm certain that there are uses for that.

### What is acoustic 'tweezing'?

It's where you're using sound to move objects around. Some people are using acoustic tweezing to build up layers of tissue and keep tissue together. There's potential to make a tissue scaffold for tissue engineering type of work. With acoustic 'tweezers' you can trap and then controllably move objects.

### What do you look forward to at SRI?

There's a wealth of expertise here. There are also lots of ideas about what research can be done and what's useful. For example, there are many procedures that clinicians do effectively blind because there aren't any tools to help them see. In many cases that is good enough, but there are many cases where being able to visualize what they're doing and see into tissue, which ultrasound can do, could make a clinician's job much easier and make the patient experience much better.

For a longer transcript visit [sunnybrook.ca/research](http://sunnybrook.ca/research).

## Behind the Scenes With Tamara Birkenheier



**Bio basics:** Senior legal counsel for Sunnybrook Research Institute (SRI) and Sunnybrook. Worked at Mount Sinai Hospital prior to joining Sunnybrook in 2011. Completed her law degree at the University of Toronto and undergraduate study at Queen's University in Kingston, Ont. Born and raised in Scarborough, Ont. Lives in Toronto's Beaches area with her husband and three daughters.

### What drew you to Sunnybrook?

After taking some time off with my kids, I wanted to go back into the academic and hospital setting. I did enjoy my time at Mount Sinai. This opportunity arose by word of mouth, and Catherine Rosebrugh, our general counsel, had just started here. Prior to 2011, Sunnybrook didn't have an in-house legal department. Catherine was looking for additional people to join the team, so I came on board. It was perfect timing and it all worked out.

### What is different about working in a hospital legal office?

You're much more involved in the business side of it. You're part of a team, not just providing legal services for a client. You're there to help make sure things can move forward smoothly. It's an interesting environment to work in. There are a variety of issues that come up.

### How large is the legal team?

There are four lawyers, a paralegal, a law clerk and an articling student for Sunnybrook as a whole.

### What are some of your responsibilities?

I do a lot of work for SRI. There are a lot of contract negotiations. Any contracts that are related to research flow through the legal department. There are three of us in the department that oversee negotiations such as clinical trial agreements, funding agreements, intellectual property and technology licensing. In addition, we work closely with research finance; the human research protections program, which includes research ethics; and clinical trial services.

We also work very closely with the privacy office for research-related and corporate privacy issues that arise. People may have a question but aren't sure where to go so they call legal. There are a host of questions that come up, maybe a business decision or an ethical matter. Every contract that's signed at the institution goes through legal. We have over a thousand contracts that go through on an annual basis. It's a very busy place.

### What do you like most about your job?

The variety of things that come up. Every day is a little different. You have your game plan of what you want to do for the day, then a question is thrown at you that needs to be answered and your day changes.

For a longer transcript visit [sunnybrook.ca/research](http://sunnybrook.ca/research).

# Trainees' Post: for Students and Postdocs

## Reflections of a postdoc as one chapter ends and a new one begins

As a newly christened PhD, **Dr. Aws Abdul-Wahid** joined the lab of Sunnybrook Research Institute (SRI) senior scientist **Dr. Jean Gariépy** as a postdoctoral fellow. Charged with developing the lab's vaccine program, Abdul-Wahid has spent several years making a therapeutic vaccine that restricts tumour growth and unleashes the immune system's defenses to prevent the spread of cancer. The vaccine handcuffs a molecule called carcinoembryonic antigen (CEA), a tumour marker for cancers of the colon, rectum, pancreas, stomach, lung, breast and ovaries. Expression of CEA affects aggressiveness of the disease. "We applied the same logic we use for the flu vaccine to present a vaccine that raises the patient's immune system to block the molecule from doing what it's supposed to do, thereby stopping circulating cancer cells from ever seeding at secondary sites to prevent onset of metastasis," says Abdul-Wahid.

He showed the vaccine works in preclinical models; Abdul-Wahid says he is now ready to pass on the torch for the next phase: clinical testing. Having tied up loose ends in the lab, he is moving to Ottawa to take up a position at Health Canada in the Marketed Health Products Directorate. Here, he shares with **Alisa Kim** reflections on his training and what he will miss most about SRI.



**Dr. Aws Abdul-Wahid (far left) enjoys a dinner out with his lab mates. Left to right: Dr. Marzena Cydzik, Aaron Prodeus, Nicholas Fischer, Mays Alwash and Dr. Jean Gariépy. [Photo courtesy of Dr. Aws Abdul-Wahid]**

### When did you sense it was time to move on?

It wasn't that I sensed it as much as us bringing the work to its natural conclusion. I knew it was time to move on the moment we got into an agreement, with the help of MaRS Innovation, with VBI Vaccines Inc. I believe VBI is the perfect partner, looking at their direction and who's at the helm. I think this is what we need to push this forward into the clinic, hopefully to the benefit of people with cancer.

### What will you be doing in your new position?

I was hired by Health Canada as a scientific reviewer. I will be reviewing data on biologics, vaccines and biotechnology products to ensure their safety and efficacy.

### How did your training at SRI help you get this job?

I never had exposure to cancer research, let alone metastasis. These are topics I learned about in this lab. I started this vaccine program at Princess Margaret Hospital and further developed it at SRI, which provided me with the right environment to expand its scope. At SRI, it's a different culture, and I think the ability to talk to people from different branches of science is something I picked up here. Also, at SRI we are more proactive in dealing with industry, which gave me that additional element that I would never have been able to acquire had I worked anywhere else. That, in addition to the science that we do, made it all possible.

### What have you learned about doing good science from Dr. Gariépy?

One thing I love about Jean is his outlook, which is in stark contrast to my PhD supervisor, who always said to work exclusively on one thing, finish it, shelve it and move onto the

next thing. Jean, on the other hand, is not afraid to tackle a side question while you're still working on the first one. That side question is not necessarily something parallel; it could be completely unrelated. His ability to 'dance' across different disciplines is the biggest influence on me.

The second thing is the ability to communicate ideas. Scientists are not always effective in reaching wider audiences with their work. This is not so with him. I'm glad I got to learn from his ability to concisely and clearly put ideas into writing, and to have people from different walks of science, or life, even, appreciate what is going on.

### What will you miss most about the lab?

One thing I will definitely miss is the interaction with the people I have been working closely with for so many years. We all work on different projects, and every project requires different expertise. Our group fosters interaction and dialogue that forces us to think analytically. That interaction is something I'll dearly miss.

The environment is something else I will miss. I'm referring particularly to the ease of access to all of the facilities. For example, running to S wing [the research building] to do preclinical work, or going down the hall to use the flow cytometers. This access is something I'm going to miss a lot. Sometimes not all things are under the same roof.

Then there's the office I've been sitting in since 2012. It has such a gorgeous view. My officemate Aaron and I stare out the window just thinking whenever we're trying to put together a study or discussing experiments, gazing at the air traffic, the birds or the sunset. That is something I will miss a lot.

# Applause

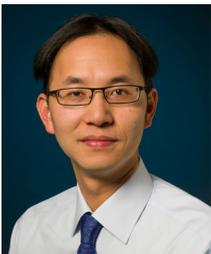
Recognizing the scientific and scholarly achievements of SRI faculty and trainees



**Dr. Nathan Herrmann**, an associate scientist in the Hurvitz Brain Sciences Research Program, was appointed the Richard Lewar Chair in Geriatric Psychiatry at Sunnybrook and the University of Toronto. Herrmann practises, teaches and studies mental health in older adults. Areas of expertise include dementia, geriatric depression and suicide.



**Dr. Kullervo Hynynen**, director of and senior scientist in Physical Sciences, received the 2016 Visionary Award from the Focused Ultrasound Foundation. The award recognizes his pioneering work in therapeutic ultrasound and dedication to advance the field.



**Dr. Dennis Ko**, a scientist in the Schulich Heart Research Program, was recognized with a mid-career investigator award from the Heart and Stroke Foundation of Ontario. The award will support his research on the use of health services to improve the identification, prevention and management of cardiovascular diseases.

## Making the Top 10

The Canadian Cancer Society (CCS) announced its Top 10 Research Impact Stories of 2016. Each year the organization selects high-impact publications that demonstrate the breadth of cancer research funded by CCS in the country.



A clinical trial co-led by **Dr. James Perry**, a clinician-scientist in the Odette Cancer Research Program at Sunnybrook Research Institute, and colleagues, was chosen as one of the Canadian Cancer Society's Top 10 research stories of 2016. It found older patients with glioblastoma who received chemotherapy with a short course of radiation lived about twice as long as those who only received radiation. The research aims to change

how glioblastoma is treated in elderly patients globally.

The Canadian Cancer Trials Group (CCTG) is working to improve survival in elderly patients with this incurable form of brain cancer. As a neurologist, Perry is working with the cooperative oncology group to carry out clinical trials in cancer therapy, supportive care and prevention across Canada and internationally. The CCTG is one of the national programs and networks of the Canadian Cancer Society Research Institute.

## Two Win Prestigious Graduate Scholarship

Doctoral students **Abdikarim Abdullahi** and **Trisha Roy** were each bestowed with the Vanier Canada Graduate Scholarship from the Canadian Institutes of Health Research. The esteemed achievement is administered on behalf of Canada's three granting agencies: the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council of Canada, and the Social Sciences and Humanities Research Council of Canada. The program aims to attract and retain world-class doctoral students. Each recipient will receive \$150,000 over three years.



Abdullahi is a second-year PhD student in the lab of **Dr. Marc Jeschke**, a senior scientist in the Trauma, Emergency & Critical Care Research Program. Abdullahi is studying glucose control and metabolic changes in liver and fat tissue after a burn injury to help improve quality of life for severely burned patients.



Roy is a surgical resident and third-year PhD student co-supervised by **Dr. Graham Wright**, director of the Schulich Heart Research Program, and **Dr. Andrew Dueck**, an associate scientist in Physical Sciences. She is using MRI to understand the plaques that form in the arteries of people with peripheral arterial disease, a condition that restricts circulation to the legs and feet.

## An Auspicious Start



In June 2016, **Dr. Sean Nestor** defended his PhD thesis after training in the lab of **Dr. Sandra Black**, director of the Hurvitz Brain Sciences Research Program. He received the Young Investigator Award from the International Society of Vascular, Cognitive and Behavioural Disorders at the organization's meeting held Oct. 12–15, 2016 in Amsterdam, Netherlands. He was recognized for his research into whether increased cerebrovascular disease burden

is linked to greater disruption of grey matter networks in the brain in normally aging people and those with dementia.

Read the full story at [sunnybrook.ca/research](http://sunnybrook.ca/research).

# What's On

January 6, 2017

## The Sunnybrook Research Prize

9 a.m.–2 p.m.

McLaughlin Lecture Theatre, EG 61

February 10, 2017

## 2<sup>nd</sup> Annual Clinical Impact Through Innovation Expo

8 a.m.–1 p.m.

McLaughlin Auditorium, EG 18

February 22, 2017

## Education Research Unit & Practice-Based Research Seed Grant Awards and Celebration

2–4 p.m.

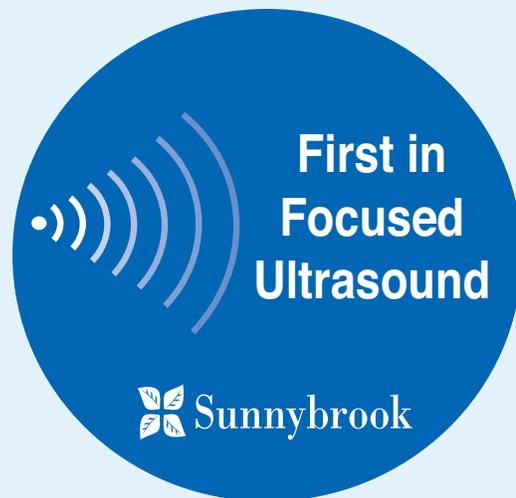
M6 Atrium

March 15–16, 2017

## 15<sup>th</sup> Annual Imaging Network Ontario Symposium

Double Tree Hilton

London, Ont.

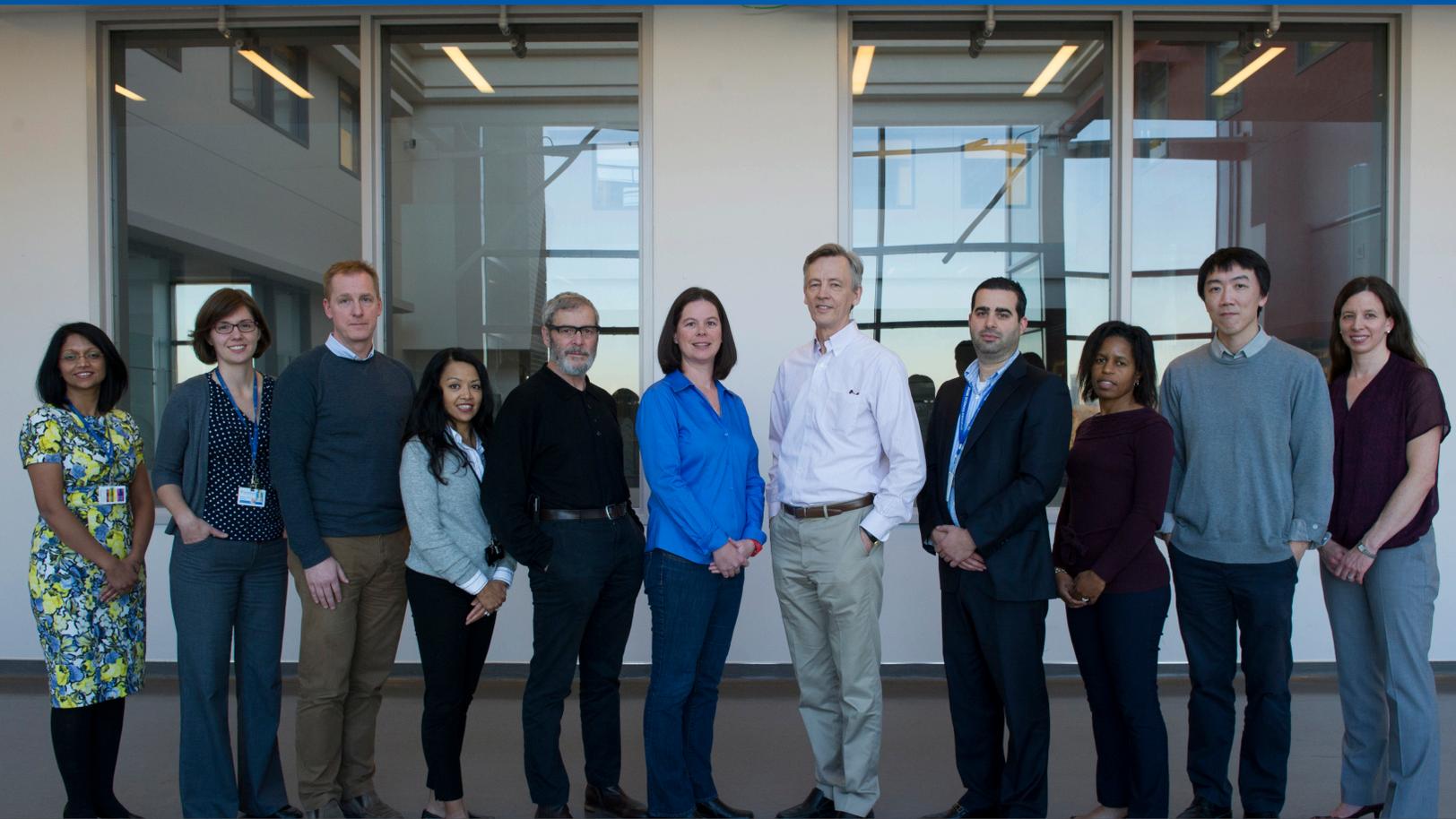


Editor: Stephanie Roberts

Writers: Eleni Kanavas, Alisa Kim, Stephanie Roberts and Betty Zou

*Nexus* is published by the office of communications, Sunnybrook Research Institute: [sunnybrook.ca/research](http://sunnybrook.ca/research).

We welcome your suggestions. Please send them to Eleni Kanavas at [eleni.kanavas@sri.utoronto.ca](mailto:eleni.kanavas@sri.utoronto.ca).



Meet some members whose research led to Sunnybrook's designation as a Centre of Excellence in focused ultrasound (FUS). From left to right: Dr. Elizabeth David, Dr. Meaghan O'Reilly, Dr. David Goertz, Ruby Endre, Dr. Michael Schwartz, Dr. Isabelle Aubert, Dr. Kullervo Hynynen, Dr. Nir Lipsman, Dr. Nadia Scantlebury, Dr. Yuexi Huang and Allison Bethune. Read the full story on page 3, and visit the website to learn more about FUS research: [sunnybrook.ca/research/fus](http://sunnybrook.ca/research/fus). [Photo: Kevin Van Paassen]