

**WINTER 2009** 



FINGERS ON THE PULSE: Schulich heart program research day features newest in cardiac care

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## Sunnybrook Research Institute Grows Up

By Stephanie Roberts

One of the most exciting capital projects at Sunnybrook Research Institute (SRI) is the construction of two new floors for research on M6 and M7 of the hospital, part of a four-floor addition that includes a new home for the women and babies program on M4 and M5. The centrepiece of the skyward expansion for SRI is the Centre for Research in Image-Guided Therapeutics, made possible by a grant from the Canada Foundation for Innovation (CFI) through its Research Hospital Fund (RHF).

Over the past six months, several milestones have been achieved. In April, the Board of Sunnybrook voted unanimously to accept the award, thereby giving the Centre its unqualified support. Four months later, in August, SRI finalized the award with the CFI, a process that entailed satisfying the CFI on all fronts that SRI can carry out the research as proposed, to the budget agreed. On August 28, the CFI issued the final award agreement to SRI, reaffirming a total contribution of \$74.6 million: \$57.4 million to build the centre, and \$17.2 million to help run it.

"Being awarded the grant was the first great achievement. Finalization is the next most significant one—it makes the award real as it heralds the flow of money," said Kevin Hamilton, director of strategic research programs at SRI.

Construction has been progressing rapidly. The first phase, to build and fit-out M4 and M5, is ahead of schedule. This means that the tender date for M6 and M7 can be advanced, as can



fit-out on these floors. Not only will this enable an earlier finish overall, it means that between-floor work (for example, fitting the drain and waste pipes that serve M6) will be done before the women and babies program moves in on September 12, 2010.

Design and equipment-planning meetings of M6 and M7 are ongoing, an exercise involving 21 user groups and 90 faculty and staff members from SRI, who among them have attended more than 400 meetings in six months.

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# **New and Noteworthy**

### **SMRC** database

Sunnybrook Medical Research Community (SMRC) is a new initiative that brings together Sunnybrook Research Institute's cancer clinician-scientists and scientists in a mutually beneficial, collaborative virtual space. The platform for this effort is a secure, user-friendly and searchable database designed to help facilitate the discovery of new research directions. Community members will have exclusive access to researcher names, research interests and expertise, tumour banks, archived tissues, tools and equipment, biopsy samples, stem cells, patient samples and data sets, and other shareable resources.

For more information or to join SMRC, e-mail **smrc@ sri.utoronto.ca** or visit **smrc.sunnybrook.ca**.



## **Editor's Scratch Pad**

As you'll see from reading this edition of *Nexus*, the last for 2009, it's been a busy few months leading from autumn into winter at Sunnybrook Research Institute. As the cover feature details, planning for new research facilities on M6 and M7 is ahead of schedule. In the coming months, I'll continue to update you on progress, as I know many are eagerly anticipating the move. Moreover, if you have a question about the construction, submit it to **sroberts@sri.utoronto.ca**, and I'll answer it in the next edition of the newsletter.

In the news department, several faculty members have had success in recent grant competitions, SRI has created an integrated office of research finance, and cancer and molecular and cellular biology researchers have created an online database that will enable scientists to share resources and information confidentially.

Looking ahead, *Inventing the Future of Health Care*, SRI's annual research magazine, will hit the streets in January 2010. The aim is to showcase the hottest research at Sunnybrook, and help readers connect the dots from discoveries in the lab to innovations in care. Through the stories we tell, we want to show them why they should care about health research, and how SRI scientists are making a difference.

As ever, the greatest challenge was fitting it all into just 48 pages, as the breadth of high-impact research happening here is truly remarkable. This year, we elaborate on the linked themes of outreach and collaboration, emphasizing that discoveries are not made in isolation; indeed, they are only achievable through partnership with other research institutes in Toronto and all over the world, with trainees and students, with funding sponsors, and with research and clinical colleagues in countries as far away as Africa.

When I talk to researchers about winter, I don't hear many complaints (apart from the odd commuting issue, notably for those brave souls on bicycles). Instead, they say winter is a great time to hunker down and get things done—a posture worth adopting.

### Continued from page 1 Sunnybrook Research Institute Grows Up

Hamilton is leading the planning for SRI, working with Sam Marafioti, vice-president of corporate planning and development at Sunnybrook, and his team. Final designs will be signed-off by year's end, a major feat, but not the capstone.

From now until March 2010 the architects will draw up detailed designs, and construction documents will be prepared to go to tender. Included in this will be the tender for the RHF-associated space in S wing, to build a vivarium on S4 and S5, as well as the Toronto Angiogenesis Research Centre. In April 2010, interior construction will begin in each of M and S wings, with completion projected for November 2011.

Once done, M7 will house mainly wet-bench labs, including the current good manufacturing practices facility, SRI's first chemistry lab and the Centre for Molecular and Cellular Response and Repair. Also on the top floor will be a device development laboratory, the Advanced Regenerative Tissue Engineering Centre, and the Centre for Flow Cytometry and Scanning Microscopy.

On M6, the Breast Cancer Research Centre will comprise onehalf of the floor; clinical research labs and offices, including the clinical research and neurointervention centres, and the imageprocessing laboratory, will make up the other one-half.

Additional research facilities being built are on the ground floor of S wing and the seventh floor of C wing, both set to be finished in summer 2010, and in the basement of the Odette Cancer Centre. On S ground, there will be an imaging facility with a 7-T magnetic resonance (MR) imaging system and a computed tomography scanner. C7 will house an imaging research pathology lab. In T basement, the 3-T MR high-intensity focused ultrasound suite, the "twin" to a suite located at Thunder Bay Regional Health Sciences Centre, is nearing completion. It will be used for clinical trials and discovery research in cancer.

"We are not just building space for research. By investing in this infrastructure with partner funding support, we are ensuring that our researchers have the space and tools they need to invent tomorrow's health care today," said Dr. Michael Julius, vice-president of research at Sunnybrook. "With this expansion, we also enhance our capacity to recruit the world's most forward-thinking scientists and other highly skilled personnel."

While the bulk of the funding comes from the CFI, Ontario Innovation Trust is also supporting construction costs. Moreover, the capital campaign of Sunnybrook Foundation is raising funds for research infrastructure.

To read more about the Centre for Research in Image-Guided Therapeutics or any of the large-scale projects at SRI, visit **www.sunnybrook.ca/research**.

Enjoy, along with all the delights of the season.

-Stephanie Roberts

## News @ SRI

### Sunnybrook Research Institute welcomes its new face of finance

In partnership with the chief financial officer of the hospital, Sunnybrook Research Institute (SRI) has created an office of research finance that integrates into one shop all grant-accounting functions at SRI,



from investigator-led Canadian Institutes of Health Research grants, to institutional-level Canada Foundation for Innovation (CFI) grants. Grace Cheng has been hired as the inaugural director of the office.

"I am pleased to welcome Grace to the SRI family. Her portfolio is fundamental to the continued success of the research institute, and will help ensure we have the strongest possible financial reporting and oversight function," said **Dr. Michael Julius**, vicepresident of research at Sunnybrook.

Over the last five years, SRI has increased its grant-derived revenue nearly fourfold. That, along with the institute's success in the CFI's Research Hospital Fund competition, has meant that finance-related functions have grown in number and complexity. In particular, the audit and reporting processes associated with these grants have become more complex.

"I'm looking forward to leveraging my finance and accounting background in the area of research, a field in which I am very interested," said Cheng.

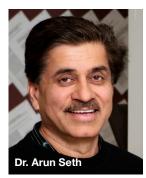
Cheng is a certified public accountant. In her last position, she worked as a manager at Ernst & Young, where a primary role was to oversee all aspects of audit.

She said she finds the world of research fascinating. "People here are so passionate about their research. It's different from other companies I've worked for. Science itself is so intriguing, and it's interesting to see how devoted people here are to their work."

## **Cancer Biologists Secure Funding**

The Canadian Institutes of Health Research awarded grants to two cancer researchers at Sunnybrook Research Institute (SRI) in its March 2009 funding competition.

**Dr. Jorge Filmus** will receive \$614,115 over five years to study glypicans, which are proteins linked to cancer growth. **Dr. Arun Seth** will get \$340,026 over three years to investigate a protein that suppresses the growth of breast tumours. Both researchers are senior scientists in SRI's discipline of molecular and cellular biology and professors at the University of Toronto.



Filmus's lab recently discovered that glypican-5 stimulates the growth of a rare softtissue sarcoma called rhabdomyosarcoma, a malignant cancer that starts in muscle cells and invades connective tissues, mainly in infants, children and adolescents. Filmus hopes to develop a targeted therapy that inhibits glypican-5 and which, unlike chemotherapy, is not toxic to healthy cells.

Seth and his lab will investigate the treatment potential of the protein IGFBP7. They've developed an effective mouse model of breast cancer for the study that closely resembles the metastatic breast cancer seen in humans; it develops from primary breast tumour tissue, not cell lines, and spreads to bone and other organs about 80% of the time. Using this model, the researchers will inject the protein directly into tumours or administer it systemically in mice, to see if the cancer slows down.

### 'Virtual Common Room' Lets SRI Cancer Researchers Connect

Cancer researchers at Sunnybrook Research Institute (SRI) can now share scientific resources and expertise thanks to an online database called Sunnybrook Medical Research Community (SMRC). A joint initiative of the Odette cancer research program and the discipline of molecular and cellular biology, the database was conceived as a way of facilitating collaboration by enabling members to search for and locate users with particular research interests.

"It's very important to come up with ways to allow clinical researchers and basic science researchers to communicate—to find out what other people are doing, and how it links to their own research," says **Dr. Richard Wells**, director of the Odette cancer research program. "[The database] is a way of bringing people together who have common interests, but who may not know that yet."

Katie Pizzuto, a summer student in the lab of **Dr. Dan Dumont**, director of the discipline of molecular and cellular biology at SRI, led the development of the project. Pizzuto is in her second year at McMaster University. "Managing the project has given me an excellent opportunity to improve my leadership skills, communication skills, and experience life at a leading hospital and research institute," says Pizzuto of her studentship at SRI.

Designed to ease exchange of information and resources, the database is secure and user-friendly. In addition to being able to find human resources, users can learn who is using which research tools, such as equipment, animals, patient datasets, biopsy samples and archived histological tissues.

"I'm hoping that we'll see connections start to be made very soon. I think if we can get the word out there that this resource exists, then people will be eager to benefit from it," says Wells.

The database is accessible via SRI's Intranet. It is password-protected and available only to members of SMRC. The Web address is: **smrc.sunnybrook.ca**.

# **TOOL KIT: ExAblate 4000**

The ExAblate 4000 from InSightec is a magnetic resonance imaging (MRI)-guided highintensity focused ultrasound system that enables noninvasive brain surgery and therapy.

The system consists of a mobile patient table and a helmet-shaped array of adjustable transducers, which collectively focus sound waves inside the skull to disrupt or ablate (destroy) cells by elevating their temperature. The device works inside an MRI scanner, images from which are used to guide therapy and provide immediate feedback on treatment progress.

Under the guidance of **Dr. Kullervo Hynynen**, director of imaging at Sunnybrook Research Institute (SRI) and holder of the Canada Research Chair in Imaging Systems and Image-Guided Therapy, scientists at SRI will use high-intensity ultrasound to eliminate deep-brain tumours, cure pain resulting from damage to the nervous system and dissolve blood clots in stroke patients. They will also use low-frequency sound waves to disrupt the blood-brain barrier and enable drug delivery for brain cancer, Alzheimer's disease and other neurological conditions.

As the only site in the world with both high- and low-frequency MRI-guided ultrasound for the brain, SRI's researchers are uniquely positioned to translate this technology to patient care. They plan to begin clinical trials over the next few months. "We can really do a lot of good if we can get this system working for patients," says Hynynen.

The Canada Foundation for Innovation financed SRI's purchase of the ExAblate 4000.



Dr. Kullervo Hynynen, director of imaging at SRI (centre), demonstrates how to use the ExAblate 4000

## **CV: Dr. Diane Nam**



**Bio basics:** Associate scientist in molecular and cellular biology and the Holland musculoskeletal research program; orthopaedic surgeon at Sunnybrook since January 2009. Completed clinical fellowship in orthopaedic upper extremity and trauma at Sunnybrook, and a research fellowship in the immune modulation of fracture healing at SickKids. Master of science in pharmacology and bachelor of music in performance (violin), both at the University of Toronto. Two children, aged two and six years.

### What is your main research interest?

The molecular and cellular aspects of fracture healing with respect to the immune system. Not all fractures heal properly; I'm interested in finding out why, and what we can do to modify that process.

### What are some typical reasons that fractures don't heal well?

There could be many factors, some of which are related to the patient and others that are related to the nature of the injury or fracture pattern itself. For instance, patients with compromised immune systems have a decreased ability to heal. Smoking and infection also have adverse effects on bone healing. However, highenergy injuries and complex fractures are also at higher risk for impaired healing. Other times, we just don't have a clear reason.

### What's the goal of your research?

Five per cent to 10% of patients with fractures don't heal properly. If we can understand why, at the molecular level, we may be able to improve outcomes for patients by modulating key pathways involving the immune system, potentially through diet, molecular activators or other pharmaceuticals. This could result in speeding up the healing time or even allow the healing of all fractures. The mechanism between the immune system and bone biology has been an emerging field in the last five years, and with SRI's immunology expertise and Sunnybrook's volume of trauma, the interaction here between clinicians and researchers makes it an ideal place to do this research.

### Will you pursue your interest in music?

Not in the near future, but I hope my children will enjoy it as I have. I love music, but I've always been interested in medicine. Hopefully, I can return to it later when I have a bit more time.

# Your brother Rob is also a surgeon at Sunnybrook and a scientist at SRI. Is there something in your background or makeup that explains your drive?

Not really; we didn't plan it this way but it's nice to know he's just down the hall . . . especially when I forget my wallet at home.

## PEOPLE @ SRI

### **Newly Appointed:**

- Dr. Brian Cuthbertson, CHSS, TECC (senior scientist)
- Dr. Andrew Dueck, CHSS, cardiac (associate scientist)
- Dr. Benjamin Goldstein, CIB, brain sciences (scientist)
- Dr. Masoom Haider, imaging, cancer (associate scientist)
- Dr. Bradley MacIntosh, imaging, brain sciences (scientist)
- Dr. Samira Mubareka, CIB, veterans and community (scientist)
- Dr. Diane Nam, MCB, musculoskeletal (associate scientist)
- Dr. Giuseppe Papia, CHSS, cardiac (associate scientist) Dr. Peggy Richter, CIB, brain sciences (associate scientist)
- Dr. Richard Swartz, CIB, brain sciences (scientist)

## State-of-the-Heart Research

### Fourth annual research day showcases the latest in cardiac care

By Denise de la Cruz



hospitalizations and risk factors at this year's Schulich heart program research day

On November 25, 2009, over 100 students, researchers, clinicians and industry partners flocked to Harrison Hall for the fourth annual Schulich heart program research day at Sunnybrook Health Sciences Centre. Researchers in the Schulich heart program and quest speakers from England, the U.S. and Israel discussed topics related to this year's theme: stateof-the-art cardiac disease management.

Welcoming guests were Dr. Barry McLellan, president and chief executive officer of Sunnybrook, and Dr. Brian Gilbert, chief of the Schulich heart program. Both emphasized the importance of the transformative research happening at Sunnybrook, and how it is shaping the future of health care.

Dr. Jack Tu, a scientist in clinical epidemiology at Sunnybrook Research Institute (SRI), delivered the opening keynote lecture: an overview of national trends in cardiovascular deaths, hospitalizations and risk factors. Tu focused on acute myocardial infarction (AMI), heart failure and stroke, from a series of findings of the Canadian Cardiovascular Outcomes Research Team, of which he is a steering committee

member, published in the Canadian Medical Association Journal this summer.

Tu, who holds the Canada Research Chair in Health Services Research, reported a significant decrease in mortality, hospital admissions and in-hospital case-fatality rates between 1994 and 2004; he credited better prevention and treatment of heart disease as the reasons. Tu also noted trends in risk factors for cardiovascular disease in Canada including differences based on age, sex and socioeconomic status. He concluded his presentation by stating that further prevention, treatment and national surveillance of cardiovascular disease are required since it is still the leading cause of death in Canada.

The rest of the day was divided into three parts, each focused on specific areas of cardiac research. The first was the investigation of AMI and heart failure, featuring a keynote lecture by Dr. Marie Schroeder from the University of Oxford, who spoke on the role of noninvasive assessment of metabolism in failing hearts. The second part of the day centred on the pharmaceutical management of heart conditions with a lecture by Dr. A. Michael Lincoff of the

Cleveland Clinic about adjunct pharmacotherapy in heart attacks. The last part of the day was on the analysis of electrophysiology and minimally invasive interventions for cardiac disease. Dr. Guy Amit of Ben-Gurion University spoke on T-wave alternas in arrhythmia assessment.

## "The talks inspire new ideas for research and patient care."

-Dr. Graham Wright, director of the Schulich heart research program

Dr. Graham Wright, director of the Schulich heart research program at SRI, said he was impressed by the research showcased, and moved by the discussions in the question-and-answer sessions and during the breaks: "They demonstrate how the talks inspire new ideas for research and patient care."

Wright was also struck by the size and diversity of the audience. "I was encouraged to see the expanding interest of Sunnybrook's clinical care community in the research activities of the program. I think it reflects the growing integration of the clinic and research in the true spirit of an academic health sciences centre," he said.

The future looks bright for heart research at Sunnybrook. According to Wright, "Last year, we heard an invited talk on percutaneous valve replacement; clinicians at Sunnybrook have now started performing this procedure. I think the realization of the Centre for Research in Image-Guided Therapeutics with space on M6 and M7, combined with the next phase of development of a state-of-the-art cardiovascular acute care unit and intervention suites. all slated for completion within the next two years, will dramatically accelerate our capacity to translate emerging ideas into better patient outcomes."

# **TRAINEES' POST**

## For Students by Students Message control: how to present research results at a conference

Most graduate students will never have to present their research in a global forum. Some, however, are thrust before hundreds of scientists expecting a cohesive presentation of new findings—a daunting challenge. "One always speaks badly when one has nothing to say," wrote Voltaire. Having something to say, alas, doesn't mean speaking well.

Doctoral student Génève Awong and postdoctoral fellow Dr. Ross La Motte-Mohs study T cell development in the lab of Sunnybrook Research Institute (SRI) senior scientist **Dr. Juan Carlos Zúñiga-Pflücker**. Awong recently presented her research in Amsterdam at the International Workshop on Humanized Mice, and at the 2008 ThymUS conference in Puerto Rico. La Motte-Mohs has given dozens of talks near and far in his eight years at SRI. Here, they share what they've learned about how to present.



### How do you prepare for a presentation?

**Awong**: For me, all my slides have to be clear and uncluttered. And I try to tell a story: I put the slides in a certain order that I think people will follow. Then, when presenting, I try to make sure everything I say is accurate, by choosing words carefully. You can say something one way and it can end up with a meaning different from what you intended, so you have to be precise. Those are the key things for conveying the message.

La Motte-Mohs: I agree. It's also important to first figure out the story you want to tell, and have supporting slides that focus on that particular story. Another thing to consider is your target audience. How specialized is their background knowledge? Are they a group of 500 or 10? Will they expect an interactive talk or a short presentation followed by questions and answers? But I think the key thing in any presentation is making sure you know how to get from one slide to the next—the segue. Everything that's on the slide you can look at and go from there, but you have to link slides to move the story forward. That's more useful than memorizing your data or exact wording.

### What shouldn't people do when presenting?

**Awong:** Talk too fast, or flip slides quickly. Sometimes people try to present too much information, and it becomes hard to process. They tell too many stories about their project instead of choosing just one and focusing on it.

La Motte-Mohs: Quality is better than quantity, so focus on one project that has a cohesive story. I also find it's important to discuss a central problem that the research addresses, and then tailor your story around it. And there's a very simple formula to do that: state the major problem or question, your hypothesis and methods, and then show your data. Conclude with a summary and discuss implications.

### What about dealing with stress?

La Motte-Mohs: I think one of the easiest ways to alleviate nerves is to focus on the first five slides, and figure out what to say to lead into the talk. Having confidence about those slides helps the rest fall into place. And, practise. Physically stand in a presentation room, move the slides and use a laser pointer. Time yourself.

Awong: In Amsterdam, I was nervous. My first couple of slides, I was a little shaky, but once I started talking about my data, it was natural, because I know my data and I was just saying what's there, what I've seen. Then I got into it.

### Do you have strategies for answering audience questions?

La Motte-Mohs: It's important to listen to what people are saying, and the best way to do that is to keep silent until they're done asking. Especially because sometimes they give you a way out in their question. They might say, "Did you consider this hypothesis . . . ?" and expound on it, providing an answer. Some questions you just can't answer; and for those, you shouldn't invent something that could be wrong. I've seen people do that, and it calls their data into question.

Awong: The Q&A period can be a little scary for a student, when it's an audience mainly of scientists and you don't know what they're going to ask. If you don't know the answer, it's fine to say that and suggest discussing it further after the talk. But often the questions are beneficial because they force you to think about something new—they offer an outside point of view and you may get an idea for an experiment.

# **APPLAUSE**



### Dr. Amy Cheung Ministry of Health and Long-Term Care Career Scientist Award

## Dr. Amy Cheung was recognized by the Ontario government with a Career Scientist award. The five-year award from the health ministry supports the province's top health services researchers early in their careers by enabling them to devote 75% of their time to research. Cheung was one of only six successful applicants, of the 32 that applied. The award will enable her to advance her research into improving the quality of care and health outcomes for young people aged 16 to 24 years with depression.



### Dr. Greg Czarnota Ministry of Research and Innovation Early Researcher Award

Dr. Greg Czarnota, an imaging scientist in the Odette cancer research program, received an Early Researcher Award from the Ministry of Research and Innovation. The program helps promising researchers early in their careers to build their research teams. The award, worth \$100,000 over five years, is matched with \$50,000 from SRI. Czarnota will use the funds to study the effects of a new treatment for cancer that combines ultrasound and radiation.



### Dzana Dervovic Lady Tata Memorial Trust International Award for Research in Leukemia

The Lady Tata Memorial Trust, a U.K.-based organization that funds leukemia research internationally, awarded Dzana Dervovic a £19,000 grant (the equivalent of about C\$34,000) to further her research into T cell development. Dervovic, a molecular and cellular biology doctoral student in the lab of SRI senior scientist Dr. Juan Carlos Zúñiga-Pflücker, is studying ways to foster the selection and expansion of T cells in vitro for use in immunotherapy, to prevent and treat leukemia and other cancers.



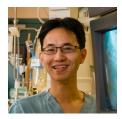
### Dr. Robert Fowler Heart and Stroke Foundation of Ontario Clinician Scientist Award

Dr. Robert Fowler received a phase two Clinician Scientist award from the Heart and Stroke Foundation of Ontario. Fowler will receive \$55,000 per year for three years, along with a 50% match from SRI, in support of his research on preventing blood clots in sick patients and his evaluation of commonly prescribed clot-preventing medications.



### Dr. David Gladstone Heart and Stroke Foundation of Ontario Clinician Scientist Award

Dr. David Gladstone also received a phase two Clinician Scientist award from the Heart and Stroke Foundation of Ontario. The award assists individuals in becoming independent investigators in the fields of cardiovascular or cerebrovascular research. It will support Gladstone's research into improving the detection and treatment of atrial fibrillation (irregular heartbeat) following mini-stroke and stroke.



### Dr. Dennis Ko Heart and Stroke Foundation of Ontario Clinician Scientist Award

The Heart and Stroke Foundation of Ontario also awarded Dr. Dennis Ko, a cardiologist and researcher in the Schulich heart research program, a phase two Clinician Scientist award. Ko will use the funds for his research on evaluating and improving the quality of care and outcomes of percutaneous coronary intervention—a procedure used to treat coronary artery disease—in Canada.



### Dr. Don Redelmeier Tier 1 Canada Research Chair in Medical Decision Sciences

Dr. Don Redelmeier, director of the discipline of clinical epidemiology, has secured a renewal of his Tier 1 Canada Research Chair. The prestigious award, which recognizes the country's top researchers, is worth \$1.4 million—\$200,000 per year for seven years. One of Redelmeier's research interests is motor vehicle safety, particularly the relationship between driver error and traffic-related deaths. The aim of this research is to reduce traffic fatalities by studying how chronic medical diseases and errors in reasoning contribute to major trauma.



On November 2, 2009, Sunnybrook launched the \$470 million Campaign for Sunnybrook, the largest fundraising campaign in the hospital's history. Held on the seventh floor of the hospital's M wing, the two-day event featured interactive stations, or "vignettes," that highlighted Sunnybrook's innovative and life-saving work in selected program areas of focus and in research. The occasion also marked the celebration of the Centre for Research in Image-Guided Therapeutics. The breakfast event, presided over by Sunnybrook president and CEO Dr. Barry McLellan, recognized scientists and staff through whose dedication the Centre was born, and the support of government and community partners. Here, some memorable moments from the event.

### Editor: Stephanie Roberts Contributors: Denise de la Cruz, Alisa Kim, Jim Oldfield

Photography: Doug Nicholson

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Korosh Kianizad, a PhD student in the lab of Dr. Juan Carlos Zúñiga-Pflücker, shows a Sunnybrook volunteer how to make a stem cell in a Petri dish at the research vignette, which featured building an immune system from scratch, and Sentinelle Medical Inc., a spin-off success story from SRI

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