



Your Impact in Action

LUNENFELD-TANENBAUM
RESEARCH INSTITUTE

Spring 2024



Left to right:
Drs. Susanna Mak,
Anne-Claude
Gingras and Daniel
Schramek.

Thank you.

As the newly appointed Director of the Lunenfeld-Tanenbaum Research Institute, I am honoured to lead this remarkable institution and continue the legacy of groundbreaking research that you have helped to support.

We are embarking on an exciting new chapter at the LTRI. Earlier this year, I appointed two exceptional individuals as inaugural Deputy Directors: Dr. Susanna Mak for Clinical Research and Dr. Daniel Schramek for Discovery Research. Both are true trailblazers, known for their groundbreaking work and commitment to pushing boundaries. Historically, our discovery and clinical research arms have been separate as LTRI's initial mandate was to focus on discovery research, while clinical research took place within individual clinical departments. Drs. Mak and Schramek will help us weave them together, creating a powerful research ecosystem that will profoundly enhance our ability to drive innovation in our areas of care.

Their combined expertise will drive collaboration across Sinai Health's portfolio, forging ties between discovery research and

patient-oriented research across Sinai Health's two hospitals, Mount Sinai Hospital and Hennick Bridgepoint Hospital.

To further drive innovation, we will also recruit ten new investigators over the next five years, representing an unprecedented expansion of our talent pool. Dr. Schramek will play a pivotal role in recruitment, ensuring a strategic and inclusive selection process that attracts exceptional researchers from around the world.

None of this would be possible without your generous support. The LTRI relies heavily on philanthropic contributions to cover operating costs and provide essential resources to our researchers. Your investment is crucial for sustaining scientific progress and making life-changing discoveries. Thank you.

As we usher in a new era of collaboration and innovation at the LTRI, I hope you share in my excitement for the possibilities ahead.

*Dr. Anne-Claude Gingras
Director, Lunenfeld-Tanenbaum Research Institute
Vice President, Research, Sinai Health*



Dr. Gingras recently joined Sinai Health Foundation Board Member, Catherine Murray, for a fascinating Sinai Fireside conversation about what distinguishes the LTRI from its peers and her compelling vision for its future. [Watch now.](#)

A visionary new leader: Dr. Anne-Claude Gingras

Following an extensive global search, Dr. Anne-Claude Gingras assumed the roles of Vice President of Research at Sinai Health and Director of the Lunenfeld-Tanenbaum Research Institute (LTRI) in August 2023. Holding the prestigious Canada Research Chair in Functional Proteomics and serving as a Senior Investigator at LTRI, she brings unparalleled expertise. As a full professor in the Department of Molecular Genetics at the University of Toronto and co-director of the Network Biology Collaborative Centre, Dr. Gingras's research focuses on studying signalling pathways in cells and advancing quantitative proteomics technologies. Her pioneering work has led to the discovery of new protein complexes and signalling components, enhancing our understanding of cancer and rare diseases. She also played a pivotal role in Canada's COVID-19 response by developing innovative high-throughput and functional serology assays that have helped keep track of population immunity.

300

scientists, clinician
scientists and
trainees

11

fellows in the
Royal Society
of Canada

15

Canada Research
Chair holders

15%

of LTRI's annual
budget comes
from philanthropy,
covering costs
not funded by the
government



Dr. Susanna Mak: Bridging discovery and clinical research

Dr. Susanna Mak, a Senior Clinician-Scientist at the LTRI and Director of the Mecklinger and Posluns Families Cardiac Catheterization Research Laboratory at Mount Sinai Hospital, is keen to foster more connections across Sinai Health's clinical and discovery research programs.

"Every clinician here is proud of our clinical programs," said Dr. Mak, a pioneering integrative heart and lung researcher who has been at Sinai Health since 2004. "We've always punched above our weight in providing exemplary care and leveraging our unique patient populations to develop patient-centered research programs. We now have an exciting opportunity to bridge discovery, translational, and clinical research and strengthen our hospital's legacy of life-changing innovation."

She will also leverage her deep knowledge as Director, Division of Cardiology, Department of Medicine, University of Toronto, to build strategic partnerships with the university and interdisciplinary teams.

"Dr. Mak is somebody who has had a leadership position at the University of Toronto leading one of the largest divisions within the Department of Medicine. And she's somebody that can think broadly about how to forge new relationships between the clinical researchers that are busy with their clinical practice and discovery

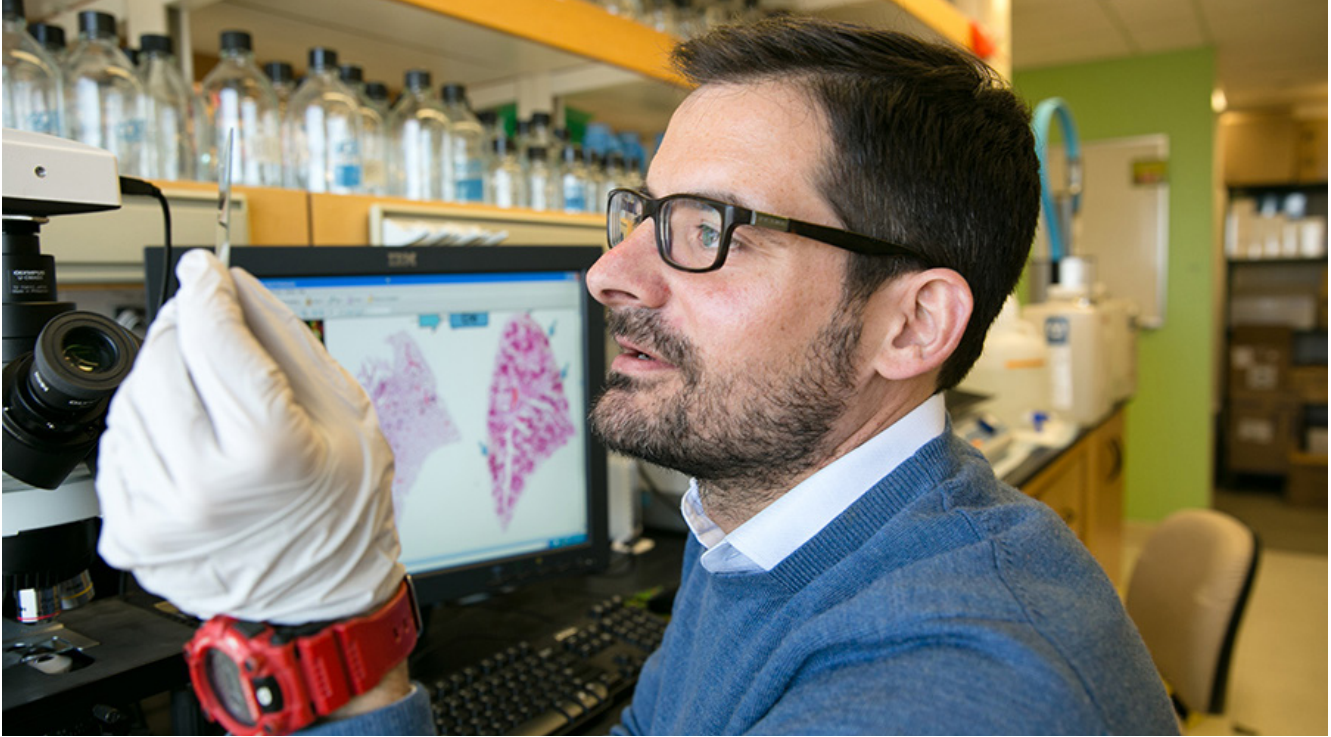
researchers," explains Dr. Anne-Claude Gingras. "And, of course, she has an amazing track record of doing research of the highest caliber."

Dr. Mak's research addresses critical gaps in our understanding of cardiovascular health, especially in women. Despite heart disease being the leading cause of death globally for both sexes, women have historically been underrepresented in cardiovascular research, leading to significant knowledge gaps and increased risks.

Dr. Mak's recent findings show that, while both sexes are affected in comparable numbers, nuances emerge in how the disease presents itself, particularly in relation to reproductive aging.

"From the time a woman first becomes reproductive, we're in our reproductive portion of our life. Some of the hormones during that time actually protect women somewhat from things like vascular disease," says Dr. Mak. "This is why as we grow a bit older, men experience things like coronary artery disease a little bit earlier than women do, because they don't have that protection. But when women become perimenopausal they lose some of those protective hormones."

Along with recognizing and rectifying past shortcomings in women's cardiovascular health research, Dr. Mak is a powerful advocate for increased representation and understanding in future studies.



Dr. Daniel Schramek: Driving discovery

Dr. Daniel Schramek stands at the forefront of cancer research, revolutionizing our understanding of the disease and offering new avenues for targeted treatment. Now stepping into his new position as Deputy Director of Discovery Research at the LTRI, one of his top priorities will be the recruitment of top talent.

“Recruitment at this level is unprecedented for the LTRI and an incredible opportunity to shape the direction of our research,” said Dr. Schramek, who holds the Canada Research Chair in Functional Cancer Genomics and the Tony Pawson Mount Sinai 100 Chair. “We want to cast a wide net to attract the brightest minds from all over the world. At the same time, we need to be strategic in terms of expertise we want to bring in to continue to build on our areas of strength and maximise impact for patients, while upholding the principles of equity, diversity and inclusion.”

As an international researcher who has trained in several countries, Dr. Schramek is keenly aware of the challenges new investigators face in adapting to a new research ecosystem. He will oversee the establishment of a personalized mentorship support system that helps new hires successfully integrate, empowering them to explore bold new ideas while navigating the

challenges of starting their research programs. The environment at the LTRI uniquely supports risk-taking, a factor crucial to his own success. Dr. Schramek’s research leverages functional genomics technologies to understand how tumours develop. Genomics is the study of our genes – the blueprint that dictates how our cells function. But functional genomics takes it a step further, delving into how these genes actually behave and interact within living organisms.

Dr. Schramek is renowned for developing a powerful technique that has enabled the investigation of multiple cancer genes simultaneously in a living animal, a feat previously unimaginable. This pioneering method not only distinguishes critical mutations but also holds diagnostic and therapeutic implications, identifying potential targets for precise treatment strategies – which can translate into tangible benefits for patients.

It’s like having a treasure map that guides doctors to the precise weak points in cancer cells, making treatments more effective and potentially less harmful to healthy tissues. In essence, Dr. Schramek’s work isn’t just about studying cancer – it’s about empowering us to fight it more effectively, one gene at a time.

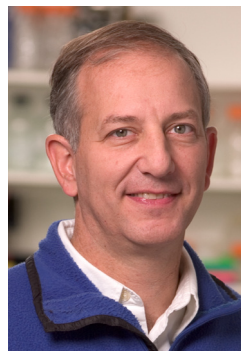
Leading the way: LTRI researchers recognized among top cited globally

Four distinguished researchers from the LTRI were named among the world's top-cited scientists by Clarivate, a leading data analytics company in academic publishing, in their 2023 Highly Cited Researchers list. Highly cited researchers represent a mere one in 1,000 among the global scientific community, as per Clarivate's criteria. These individuals demonstrate exceptional influence and impact in their respective research domains, spanning universities, research institutes and commercial organizations.



Dr. Bernard Zinman, a recently retired clinician-scientist renowned for his groundbreaking work on diabetes, has been consistently featured among the world's most-cited researchers since 2014. His focus on diabetes complications,

new therapies, and Indigenous community health has earned him international acclaim, recently culminating in the Order of Canada recognition.



Dr. Steven Gallinger, a prominent surgical oncologist, has dedicated years to unraveling the genetic underpinnings of gastrointestinal cancers. His work on genetic testing and tumour banks has

significantly advanced our understanding of cancer predisposition and treatment response prediction.



Dr. Daniel Drucker, also an Officer of the Order of Canada, has dominated the top-cited rankings since 2018. His pioneering research on GLP-1 has revolutionized type 2 diabetes and obesity treatments, contributing to the

development of breakthrough drugs that have helped millions of patients around the world.



Dr. Anne-Claude Gingras, a leader in quantitative proteomics, explores the intricacies of protein interactions within cells. Her recent contributions include examining the brain's protein diversity and developing a serology test for COVID-19 immunity

assessment, demonstrating her team's agility in addressing pressing public health challenges.

Your support of the LTRI enables our scientists to stand at the global forefront of discovery and transform health care – thank you.

Our community fueling breakthroughs

Events play a pivotal role in advancing groundbreaking research at the LTRI, serving to raise both funds and awareness. While the events highlighted below showcase the impact of community support, they are just a snapshot of the many initiatives undertaken annually by our community.



Raptors for Research

With the enthusiastic involvement and generosity of almost 600 participants, Toronto's leading 3-on-3 basketball event raised over \$750,000 for research in March 2024. Securing the championship title was TorQuest Partners, while the outstanding fundraising efforts of the top team, Metropia, raised an impressive \$100,000 in support of the LTRI.



Mount Sinai Classic

Golfers converged at Magna Golf Club for the 29th Mount Sinai Classic, presented by Equitable Bank and Peerage Capital Partners, in August 2023. Postponed due to rain in June, the event was well worth the wait, surpassing its \$800,000 fundraising goal. With approximately \$13 million raised over nearly 30 years, the Classic has facilitated groundbreaking discovery by providing stable funding for operations and the recruitment of leading-edge researchers.



Duck & Dodge

The fifth annual Duck & Dodge tournament, held in January 2024, raised more than \$112,000 for neurofibromatosis type 1 (NF1) research. With a mission to combat NF1 and improve patient lives, the event was fueled by the dedication of Claire and Craig Rankine, inspired by their son Jonathan. The dodgeball tournament has already contributed over \$500,000 to discovery research, signaling hope for future breakthroughs.



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