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Cover art by **Emily Eybergen**, biomedical illustrator and animator, UTM Biomedical Communications class of 2T4

To see more of Emily's work, please visit www.eevisuals.ca.

Artist's Statement: This cover takes us on a journey through a series of "research islands" designed to highlight some of the projects currently underway at UTM. I have used a section of Erindale Park and the Credit River as a backdrop for these islands. Each one tells a story. Some of the visuals I have included reflect the work of the 2023 recipients of the Annual Research Prizes as well as this year's Research Excellence Award winner.

### STATEMENT ON ACKNOWLEDGEMENT OF TRADITIONAL LAND

We wish to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island, and we are grateful to have the opportunity to work on this land.

# A Message from the VP Research

he University of Toronto Mississauga (UTM) continues to be a thriving campus, generating research discoveries, innovation, and new knowledge from an impressive breadth of fields and collaborations that bridge many disciplines. The leading faculty and outstanding staff and students at UTM contribute to U of T's standing as one of the world's top twenty universities, distinguished by our researchers' unique range of expertise. U of T is one of eight universities to rank in the top 25 globally in 34 fields of research. We rank in the top 50 globally in 48 fields, more than any other university on earth.

Researchers continue to have high scholarly outputs and secure significant research funding each year, with grants supporting pioneering work in the humanities, natural and life sciences, and social sciences. Strategic projects such as the Black Research Network, Critical Digital Humanities Initiative, Robotics Institute, Centre for Medicinal Chemistry, and Novo Nordisk Network for Healthy Populations empower our researchers and benefit the people, communities, and economies we serve. UTM also hosts a wide range

"With a new year underway, our office is putting plans into action, with our strategic pillars at the foundation of everything we do. We look back at the building blocks and successes of 2023, more enthusiastic than ever before about what's to come."

of research programs that address regional and global research questions, from studying pressing environmental issues to developing a more holistic understanding of child development. Initiatives such as the Centre for Urban Environments; Centre for Child Development, Mental Health, and Policy; Centre for South Asian Critical Humanities; and the Centre for NonLinear Analysis and Modeling are sites of groundbreaking crossdisciplinary research and training. Furthermore, UTM is involved in a number of cross-divisional research initiatives, including the Data Science <u>Institute</u>, the <u>Mobility Network</u>, and the <u>Climate</u> Positive Energy Initiative. Beyond this are the many other dedicated researchers who are hard at work across the UTM campus, conducting top-tier research in our labs, our libraries, and our communities.

The Office of the Vice-Principal, Research (OVPR) plays a foundational role in aiding research excellence through state-of-the-art core facilities, internal funding programs, and staff and faculty expertise. Our mission is to provide a comprehensive suite of high-quality services, resources, and knowledge in support of this enterprise. These investments and resources, coupled with the research infrastructure expansions taking place across our campus, have established UTM as a leading centre of creativity, discovery, and positive social change.

Our vision is to support, promote, and inspire the research, scholarship, and creative activity of our community and to enhance UTM's research reputation and profile. With this vision in mind, in fall

2023 we launched the OVPR's inaugural Strategic Framework, a guide that is both structured and agile, enabling us to adapt our planning as the research practices and needs of our community evolve.

With a new year underway, our office is putting these plans into action, with our strategic pillars at the foundation of everything we do. We look back at the building blocks and successes of 2023, more enthusiastic than ever about what's to come. To reflect the expanded scope of the research office, the OVPR will be rebranded to the Office of the Vice-Principal, Research and Innovation (OVPRI) by mid 2024.

It is my pleasure to share with you Synergy, our Annual Report for 2023. I invite you to read through the following pages, where you'll learn about the various people, supports, innovations, and activities that shaped UTM's research enterprise this past year.

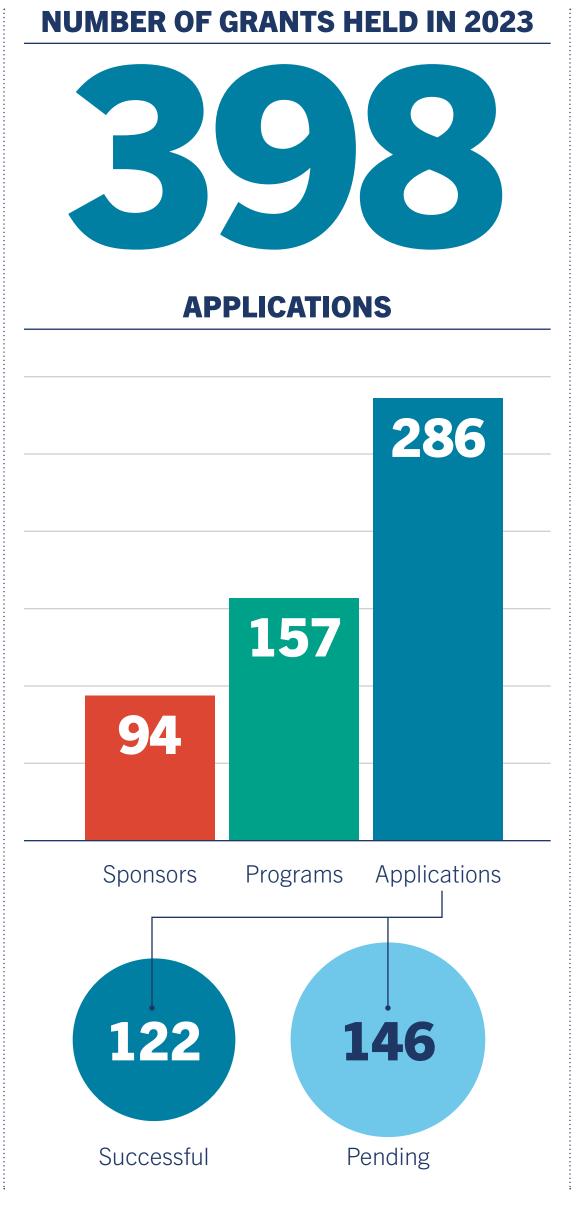
### **G.W.K Moore, PhD**

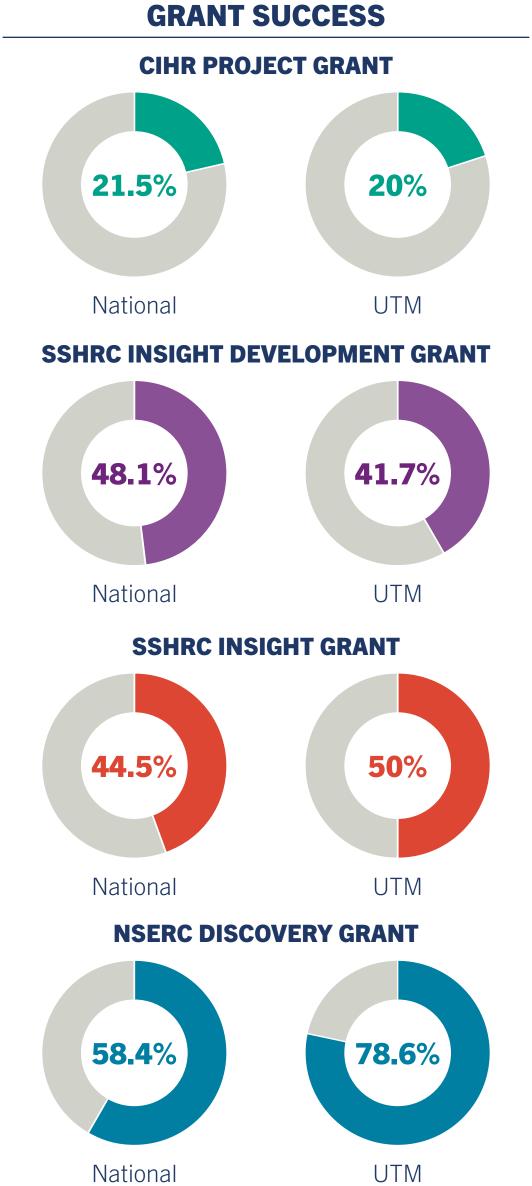
Vice-Principal, Research Distinguished Professor of Theoretical Geophysics of Climate Change Department of Chemical and Physical Sciences



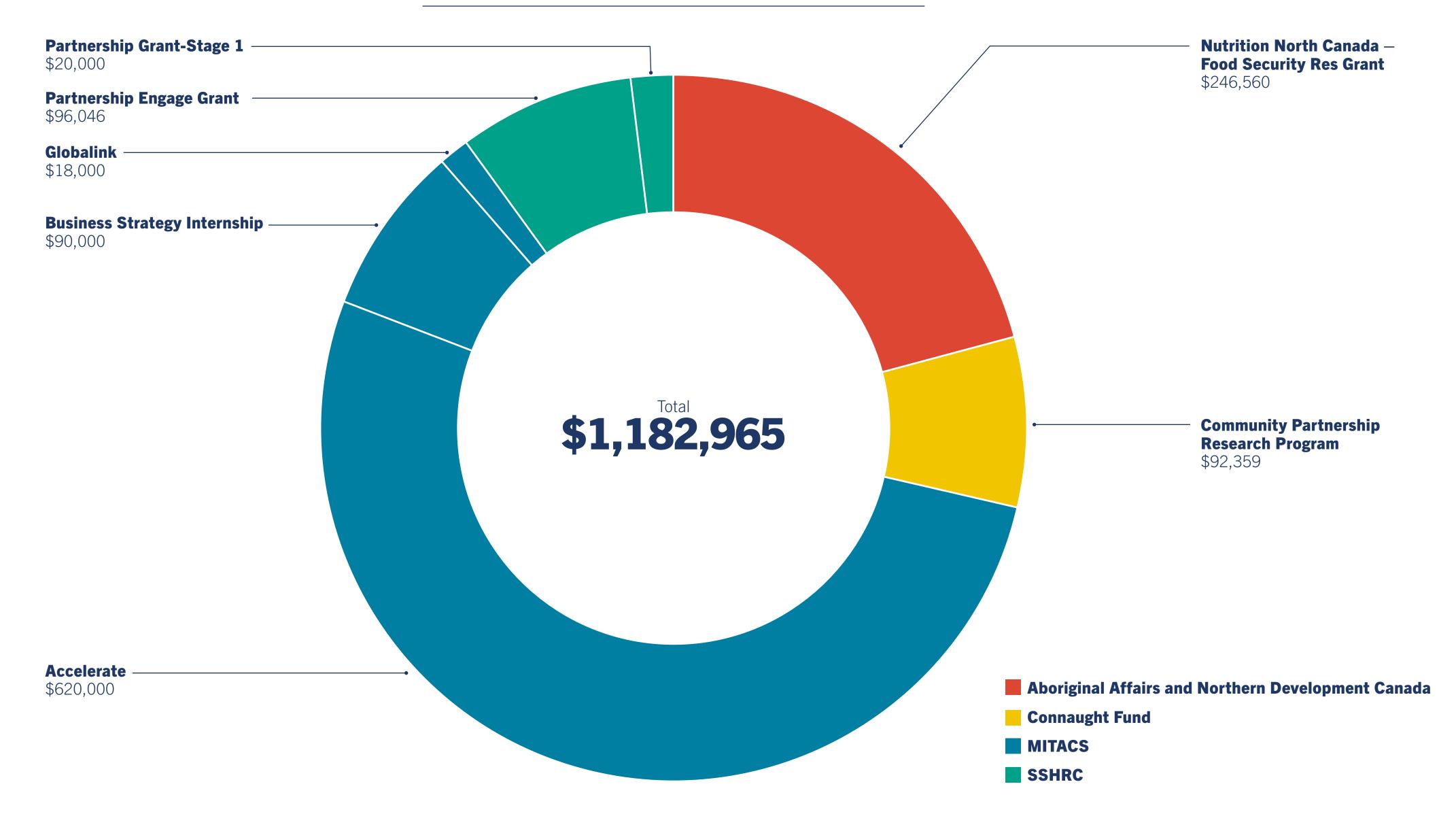
## Funding

### **TOTAL RESEARCH FUNDING RESEARCH FUNDING BY SOURCE Connaught Fund Private** \$331,415 \$718,391 **Other** \$116,737 **Research and Academic Sector** \$67,400 **Not-for-profit Sector** \$1,414,698 **Ontario Provincial Govt.** \$816,419 \$15,951,676 Federal Govt., Other \$2,091,845 **Federal Granting Agencies** \$10,394,771





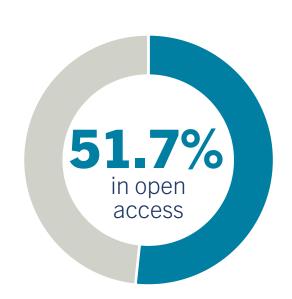
### **PARTNERED RESEARCH FUNDING AWARDED IN 2023**



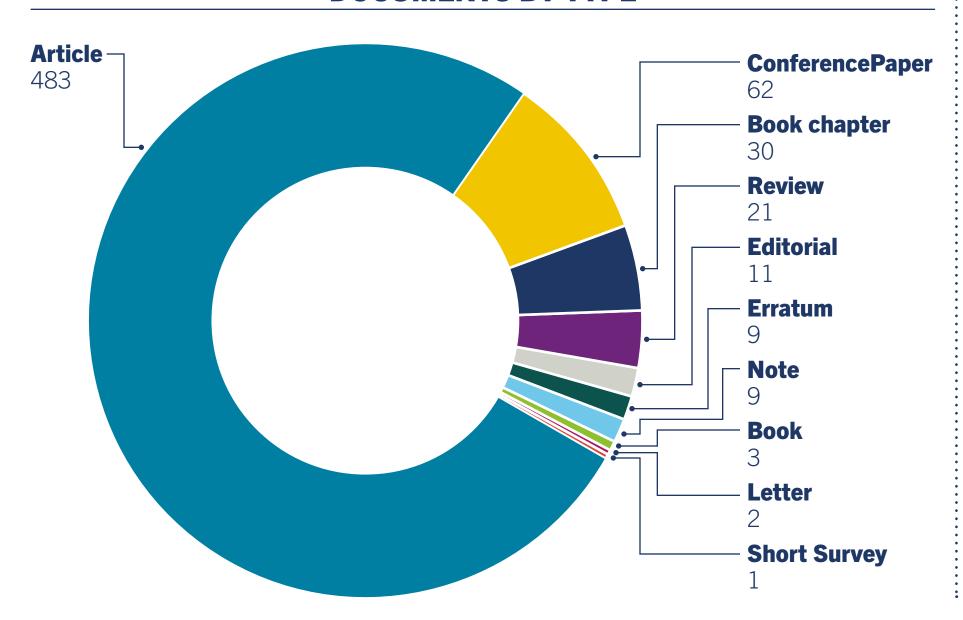
### **Publications**

### **OUTPUT SUMMARY**

**SCHOLARLY OUTPUT** 

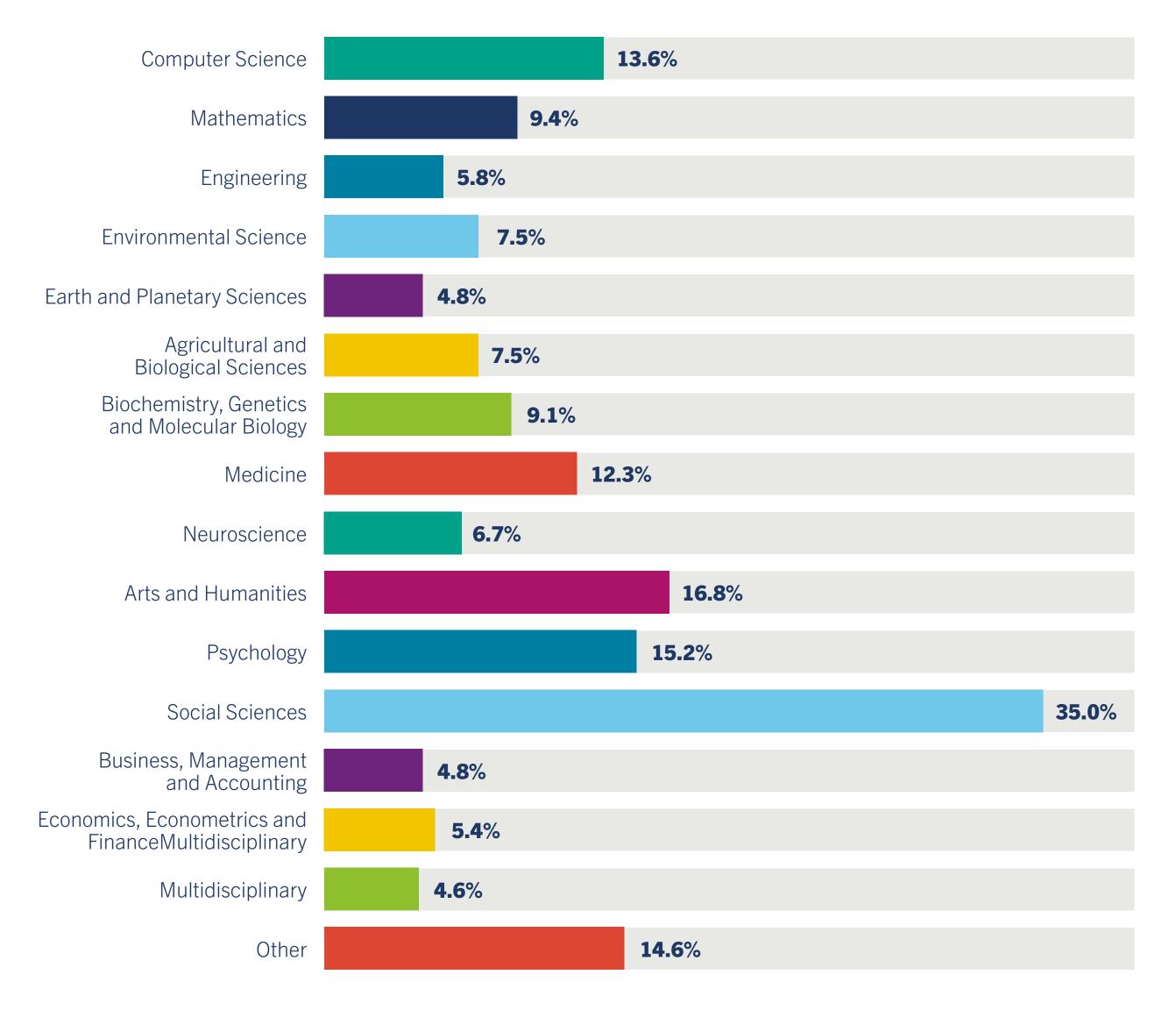


### **DOCUMENTS BY TYPE**

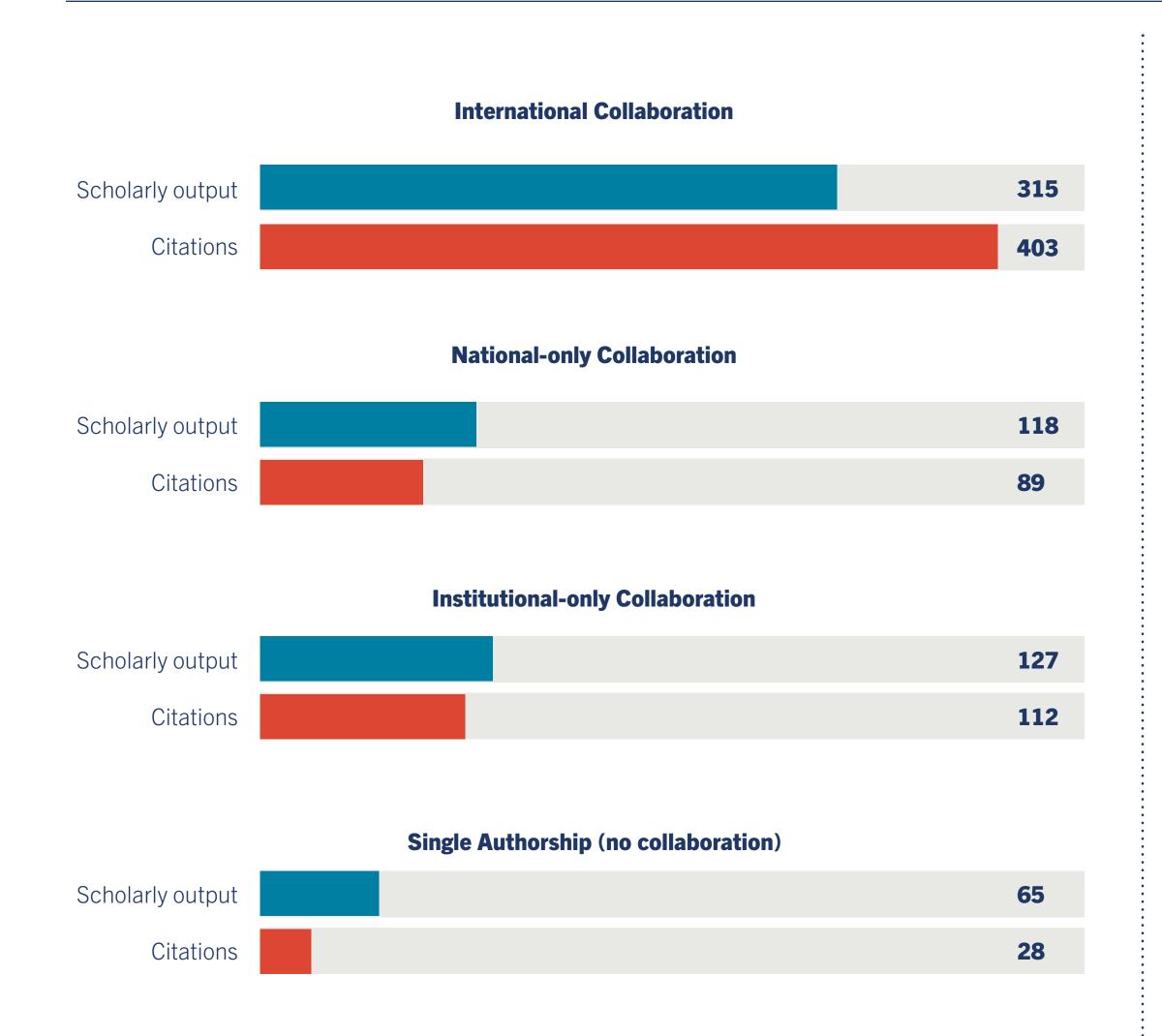


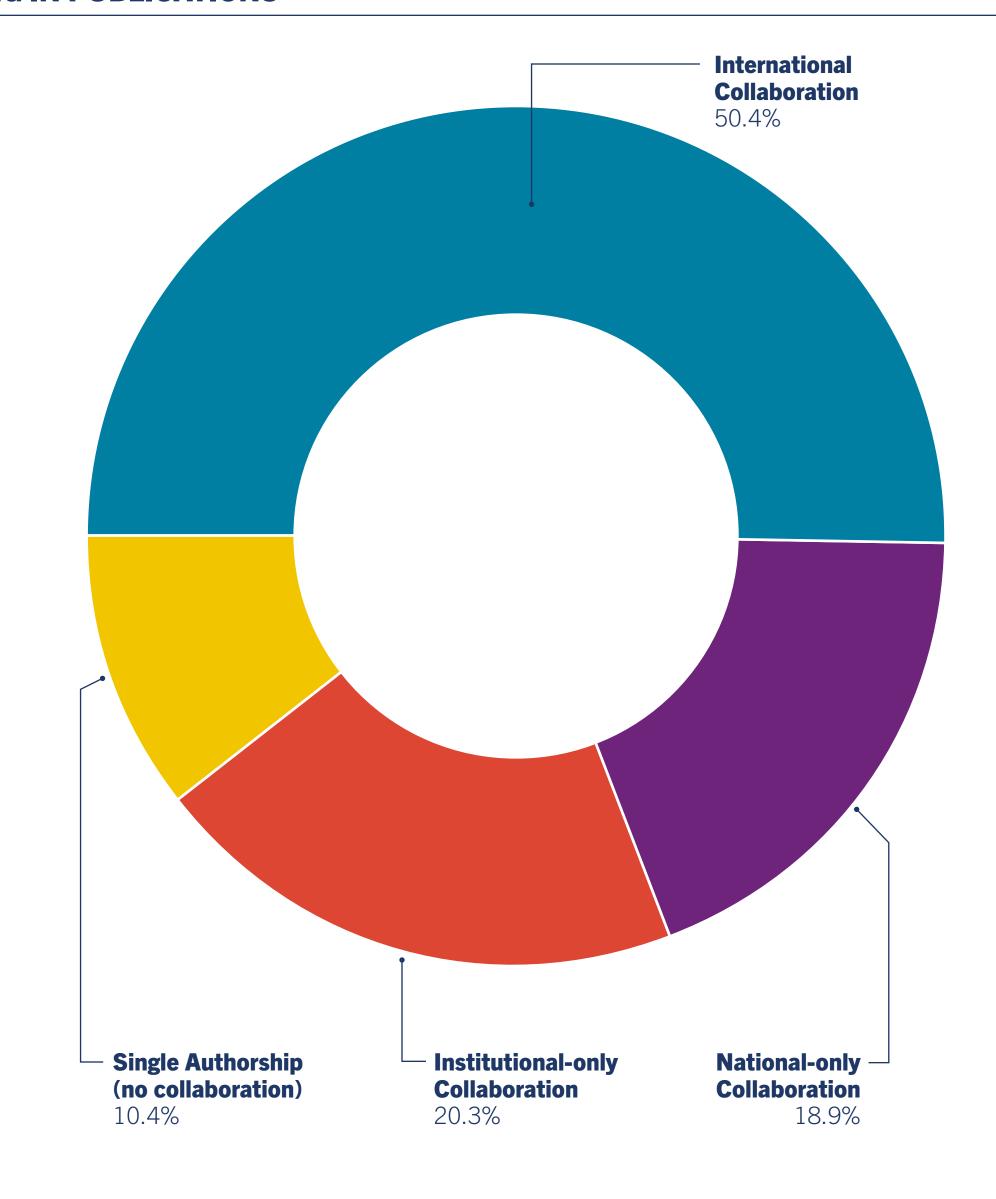
### **SUBJECT AREAS AND KEY PHRASES**

### **PUBLICATION SHARE BY SUBJECT AREA**

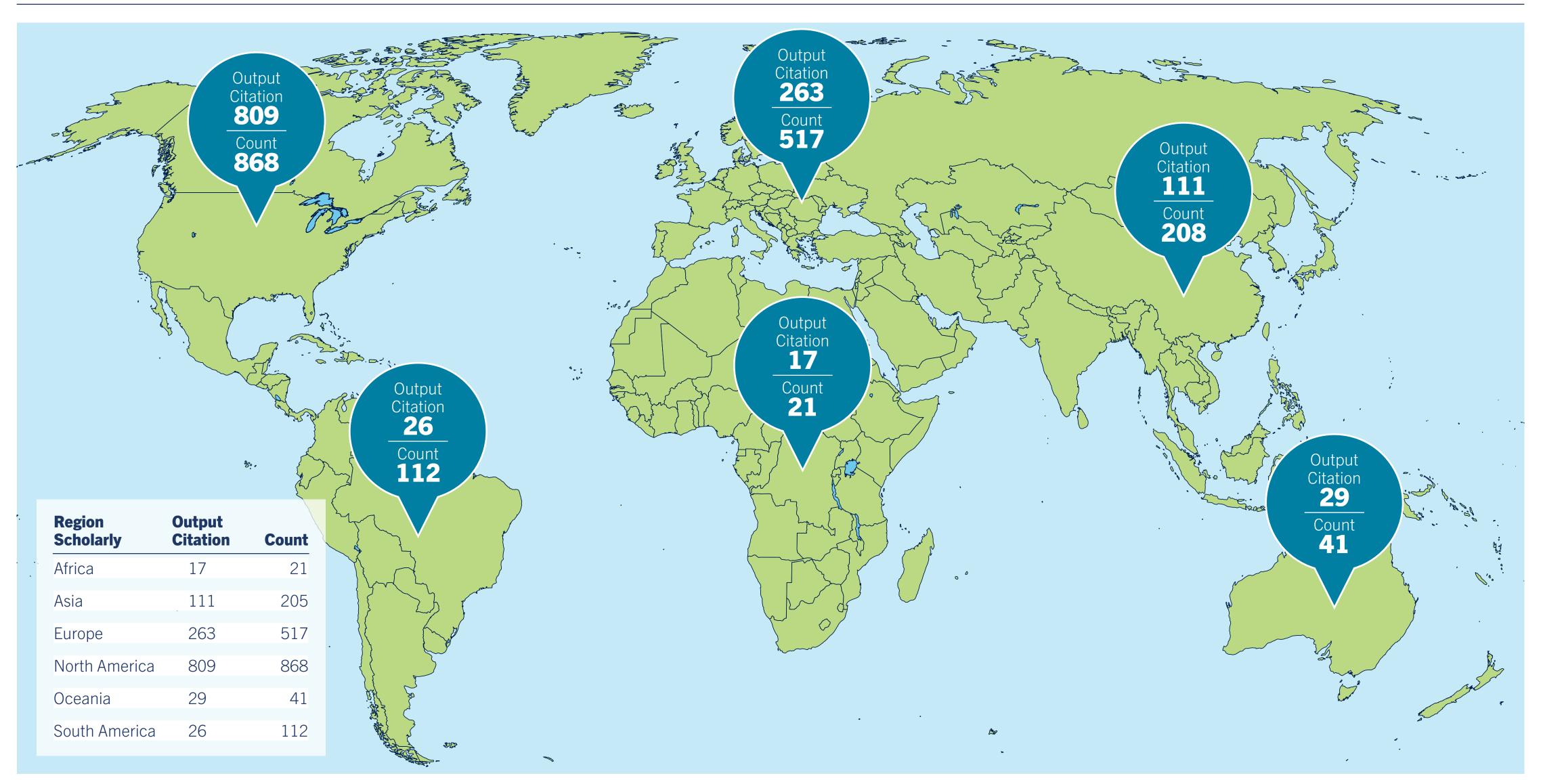


### **COLLABORATIONS RESULTING IN PUBLICATIONS**





### **UTM FACULTY PUBLICATIONS RESULTING FROM INTERNATIONAL COLLABORATIONS IN 2023**



University of Toronto Mississauga ———— Office of the Vice-Principal, Research

### 2023 Annual Report — **10**

### Awards and Honours

### **3M National Teaching Fellowship | 3M Canada / Society** for Teaching and Learning in Higher Education

Kenneth Derry, Associate Professor, Department of Historical Studies

### **Academic Research with Real-world Impact: Highly commended | Financial Times**

Sonia Kang, Professor, Department of Management

### **Alexander von Humboldt Professorship | Alexander von Humboldt Foundation**

Tina Malti, Professor, Department of Psychology



Tina Malti, Professor, Department of Psychology, received the prestigious honour of being named the first child psychologist in the award's history to receive the Alexander von Humboldt Professorship at Leipzig University — Germany's highest research

distinction. Professor Malti is an internationally leading expert in children's mental health research specializing in the complex dynamics of violence involving and affecting children. She is the director of the <u>Laboratory for Social-Emotional Development and Intervention</u> and the founding director of the Centre for Child Development, Mental Health, and Policy. She will serve as the director of the Leipzig Research Center for Early Child Development (LFE) from 2023 to 2027.

### **Annie Jump Cannon Award American Astronomical Society**

Marta Bryan, Assistant Professor, Department of Chemical and Physical Sciences

### **Annual Research Prize | University of Toronto Mississauga**

Nicole Charles, Associate Professor, Department of Historical Studies

### **Annual Research Prize | University of Toronto Mississauga**

David Samson, Associate Professor, Department of Anthropology

### **Annual Research Prize | University of Toronto Mississauga**

Lauren Schroeder, Associate Professor, Department of Anthropology

### **Balsillie Prize for Public Policy | Writers' Trust of Canada**

David Samson, Associate Professor, Department of Anthropology

### **Best Paper Award | Entrepreneurship and Regional Development: An International Journal**

Tara Vinodrai, Associate Professor, Institute for Management and Innovation

### **Best Paper Award in Planning and Entrepreneurship American Collegiate Schools of Planning**

Tara Vinodrai, Associate Professor, Institute for Management and Innovation

### **CHA Teaching Awards — Excellence in Teaching with Primary Sources | Canadian Historical Association**

Kevin Coleman, Associate Professor, Department of Historical Studies

### **Desmond Morton Research Excellence Award University of Toronto Mississauga**

David Wolfe, Professor, Department of Political Science

### **Distinguished Contributions to Accounting Literature Award | American Accounting Association**

Yue Li, Professor, Institute for Management and Innovation



Yue Li, Professor, Department of Management, was selected by the American Accounting Association for the Distinguished Contributions to Accounting Literature Award for his research papers, coauthored with Peter Clarkson, Gordon Richardson,

and Florin Vasvari, that address the ongoing debate in environmental accounting on the financial benefits of sustainability initiatives and the relationship between voluntary disclosure and corporate environmental performance. This recognition, awarded by the largest accounting association in academia, marks the first time a Canadian team has received this honour since the award's inception.

### **Distinguished Professor in Theoretical Geophysics** of Climate Change | University of Toronto

Kent Moore, Vice-Principal, Research and Professor, Department of Chemical and Physical Sciences (announced in 2023, 2024 appointment)

### **Distinguished Professor of Geographies of Disability** and Ableism Award | University of Toronto

Ronald Buliung, Professor, Department of Geography, Geomatics and Environment (announced in 2023, 2024 appointment)



This award will support my collaboration with Caribbean feminists in the region and help in the dissemination of our work through public

curatorial and exhibition initiatives."

— **Nicole Charles**, Assistant Professor, Department of Historical Studies | Recipient of the 2023 Annual Research Prize in the Humanities

### **E.A.** Robinson Teaching Excellence Award for Senior Faculty **University of Toronto Mississauga**

Tyler Evans-Tokaryk, Professor, Institute for the Study of University Pedagogy

### **James L. Clifford Prize American Society for Eighteenth-Century Studies (ASECS)**

Terry F. Robinson, Associate Professor, Department of English and Drama

### **John Carlin Roder Distinguished Professor in Behavioural Neuroscience | University of Toronto**

Robert Gerlai, Professor, Department of Psychology

### **Journal of Geological Education Outstanding Paper Award Journal of Geological Education**

Lindsay Schoenbohm, Professor, Department of Chemical and Physical Sciences

### Martin Seymour Lipset Best Book Prize | American Political **Science Association, Canadian politics section**

Alison Smith, Associate Professor, Department of Political Science

### **New Horizons in Mathematics Prize | Breakthrough Prize**

Michael Groechenig, Associate Professor, Department of Mathematical and Computational Sciences



Michael Groechenig, Associate Professor, Department of Mathematical and Computational Sciences, was awarded the prestigious New Horizons Prize in Mathematics by the Breakthrough Prize Foundation for his groundbreaking

contributions to the theory of rigid local systems and applications

of p-adic integration to mirror symmetry and the fundamental lemma. The Breakthrough Prize Foundation recognizes the world's top scientists, and the New Horizons Prize is one of the most distinguished honours for early to mid-career mathematicians.

### Royal Society of Canada, Fellow | Royal Society of Canada

Robert Gerlai, The John Carlin Roder Distinguished Professor in Behavioural Neuroscience Psychology, Department of Psychology (announced in 2023, 2024 appointment)



Robert Gerlai, Professor, Department of Psychology, was elected as a Fellow of the Royal Society of Canada, a distinction reserved for outstanding individuals who have made exceptional contributions to various branches of learning and Canadian public

life. This prestigious recognition underscores Professor Gerlai's pioneering work in neurobehavioral genetics and his pivotal role in the global rise of the zebrafish as a core neuroscience model.

### Royal Society of Canada, Member, College of New Scholars, **Artists and Scientists | Royal Society of Canada**

Nicholas Rule, Vice-Principal, Academic and Dean, Office of the Dean



Nick Rule, Vice-Principal, Academic and Dean, was appointed to the Royal Society of Canada College of New Scholars, Artists and Scientists. This prestigious recognition honours early to mid-career researchers who have demonstrated

exceptional accomplishments and left significant impact in their field. Through his exploration of accuracy and bias in interpersonal perception and nonverbal behavior, Professor Rule sheds light on the profound influence that individuals' impressions of each other exert on crucial social, political, judicial, and business outcomes.

### **Sloan Research Fellowship | Alfred P. Sloan Foundation**

Sushant Sachdeva, Associate Professor, Department of Mathematical and Computational Sciences

### Sloan Research Fellowship | Alfred P. Sloan Foundation

Duncan Dauvergne, Assistant Professor, Department of Mathematical and Computational Sciences

### **UTM Teaching Excellence Award for Junior Faculty University of Toronto Mississauga**

Karen Woodall, Assistant Professor, Department of Anthropology



This recognition of my research is an honour and inspires me to continue pushing the analytical boundaries of traditional palaeoanthropology."

— **Lauren Schroeder**, Associate Professor, Department of Anthropology I Recipient of the 2023 Annual Research Prize in the Sciences

## Ganada Research Chairs



**Loren Martin** Associate Professor, Department of Psychology Tier 2 CIHR CRC in Translational Pain Research,



**Jennifer Adese** 

Associate Professor, Department of Sociology Tier 2 SSHRC CRC in Métis Women, Politics, and Community, 2020–2025



**Sonia Kang** 

Professor, Department of Management Tier 2 SSHRC CRC in Identity, Diversity and Inclusion, 2019-2024



**Rhonda McEwen** 

2015-2025

Professor, Institute of Communication, Culture, Information and Technology Tier 2 SSHRC CRC in Tactile Interfaces, Communication and Cognition, 2016–2026



**Maria Hupfield** 

Assistant Professor, Departments of English and Drama and Visual Studies Tier 2 SSHRC CRC in Indigenous Digital Arts and Performance, 2019-2024



**Vincent Kuuire** 

Associate Professor, Department of Geography, **Geomatics and Environment** Tier 2 SSHRC CRC in Immigrant Well-being and Global Health, 2019-2024



**John Ratcliffe** 

Professor, Department of Biology Tier 2 NSERC CRC in Neuroethology, 2015-2025



**Marc Johnson** 

Professor, Department of Biology Tier 2 NSERC CRC in Urban Environmental Science, 2018-2028



Neda Maghbouleh

Associate Professor, Department of Sociology Tier 2 SSHRC CRC in Migration, Race, and Identity, 2019-2024



Iva Zovkic

Associate Professor, Department of Psychology Tier 2 CIHR CRC in Behavioural Epigenetics, 2019-2024

# Research Partnerships and Innovation



I was in Grade 12 and still had no idea what I wanted to do after high school. ABE helped me realize that I wanted to go into science."

— **Amanda Huynh**, fourth-year Honours Biology student, University of Ottawa | ABE alumna







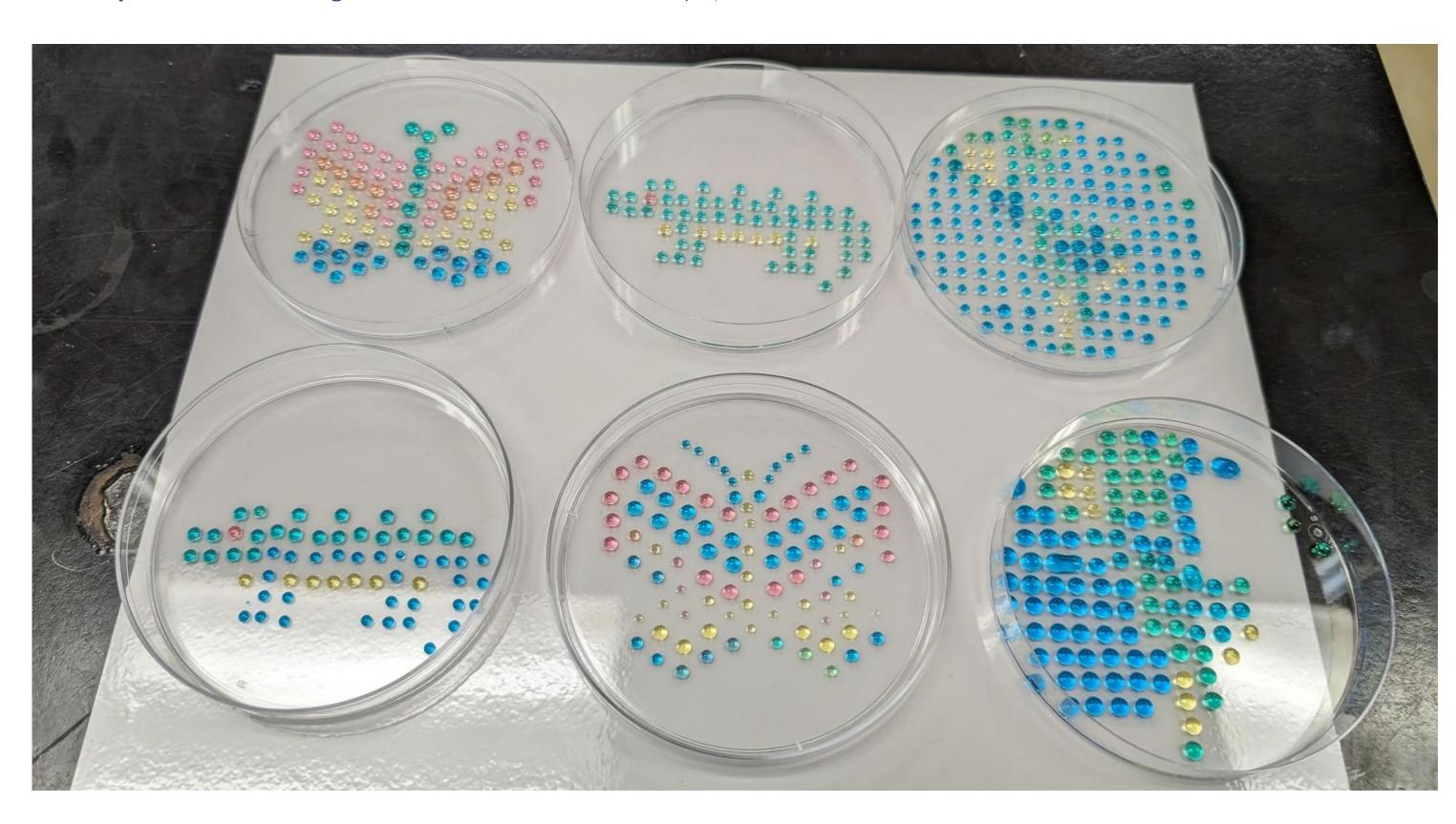
### **City of Mississauga**

In June 2023, UTM's Vice-President and Principal Alexandra Gillespie, along with U of T President Meric S. Gertler, signed a memorandum of understanding (MoU) with the City of Mississauga, represented by Mayor Bonnie Crombie. The MoU represents a joint commitment to, over the next 5 years, grow the collaborative partnership that exists between UTM and the City of Mississauga. As part of the agreement, several innovation and research strategic

priorities common to both entities will be propelled forward. For instance, UTM faculty and students will connect with city experts and city data to expand research opportunities, identify sources of funding, and connect the city with research across the tri-campus. Both Mississauga and UTM also aim to continue growing our community's startup ecosystem through entrepreneurship enablers IDEA Mississauga, SpinUp, and ICUBE.

### **Amgen Biotech Experience (ABE) at UTM**

ABE Canada is now fully operational in two locations: UTM in Mississauga and Carleton University (ABE@CAR) in Ottawa. Together, the two sites reached more than 1000 students across 24 schools in the fall 2023 semester and are on track to reach 1500 more in the winter 2024 semester. Teachers have used the ABE curriculum to supplement their core Biology classroom topics, as after-school or lunchtime enrichment club activities, or as end-of-



The team in the OVPR office offers valuable support to the Network for Healthy Populations, our partners, and our programs. Their office facilitates important partnership discussions and guides the necessary processes to ensure these partnerships are both reciprocal and generate impact. The OVPR team supports the Network to navigate the university landscape, leverage tools and resources, and consider opportunities for growth and collaboration. We're thankful for the guidance the OVPR team provides and look forward to future learning opportunities."

— Tiffany Bartlett, Director of Research Programs, Operations and Partnerships

term cumulative practical exams to engage students in hands-on experiments that demonstrate the central dogma of biology.

Additionally, ABE@CAR is working with researchers at Carleton University to collect unused equipment, providing local Alternate Program sites with pipettes that teachers can use with their students year-round. Working on small, patterned grids, the students use liquid food dye droplets to create pictures, as both an exercise in mindfulness and a way to familiarize them with science equipment.

#### **Novo Nordisk Network**

It was a fulsome year for the Novo Nordisk Network for Healthy Populations (NHP). In 2023, the NHP launched its 2023/2024 Graduate Award Program, welcomed a 12-person student cohort for the 2023 Summer Student Program and put out a call for 2024, and hosted a series of Education Seminars. The virtual sessions serve to showcase research and innovation, mobilize knowledge, share experience, and create a venue to build and foster cross-disciplinary collaboration between Network members. Attendees can also receive Continuing Medication Education (CME) credits for their participation.

Following an application call for their 2022/2023 program, the Network awarded three Catalyst Grant Awards, each of which supports evidence-informed programs, interventions, approaches, or evaluations that have shown promise in other contexts and align with the NHP's mission. This past June they launched their 2023 Catalyst Grant program, which is focused on building and supporting collaborative, community-driven research projects that are a year in duration. Following a three-stage process designed to support applicants, interested teams will submit project proposals by April 1, 2024.

# Internal Support



ince 2015, UTM has introduced several internal funding opportunities to address gaps in faculty funding and support. These mechanisms are provided by the OVPR and help support researchers across the campus.

Program	Recipients	Amount
Black, Indigenous, and Racialized Scholar/Research Grant Program	6	\$59,805
Bridge Funding Program	20	\$240,000
First Book Manuscript Workshop Competition	1	\$4037.50
Outreach, Conference and Colloquia Fund	7	\$31,991
Pedagogical Research Fund	6	\$50,000
Research Infrastructure Support Program	7	\$288,500
Research Planning Grants	3	\$28,000
Research and Scholarly Activity Fund (RSAF)	24	\$235,170
Tri-Council Postdoctoral Fellowship Top-up Program	5	\$54,000
U of T Provost's Postdoctoral Fellowship Program	2	\$25,200
UTM/Jackman Humanities Institute Annual Seminar	2	\$15,000
UTM Annual Research Prize	3	\$6,000
UTM Postdoctoral Fellowship Award	4	\$300,00
UTM Postdoctoral Fellowship Travel/Conference Grant	12	\$6,000
UTM Working Groups	2	\$6,000
XSeed	3	\$75,000

### First Book Manuscript Workshop Competition







n May, we welcomed Indigenous researchers from the University of Queensland in support of Robin R. R. Gray, Assistant Professor in the Department of Sociology and recipient of the 2022–2023 First Book Manuscript Workshop Competition. Professor Gray is an Indigenous scholar whose research centers primarily on the politics of Indigeneity in settler colonial contexts such as Canada, USA, New Zealand, and Australia. Her book manuscript, entitled Rematriation: Paradigms for Indigenous Futurity, foregrounds Indigenous laws, ethics, and protocols and uses an Indigenous feminist lens to analyze the poetics and politics of Indigenous return and the implications for Indigenous nationhood.

The First Book Manuscript Workshop is for faculty completing their first monograph and is designed to provide specific and expert feedback to help the faculty member revise their manuscript for publication. It funds an external specialist reader to read the manuscript and provide supportive feedback in a small seminar environment of 6-8 faculty.

This year's workshop was hosted by the OVPR and CDRS in collaboration with the Office of Indigenous Initiatives. Joining us from the University of Queensland was Dr. Aileen Moreton-Robinson, an external reader who led the seminar, along with her colleagues Dr. Bronwyn Fredericks, Deputy Vice-Chancellor (Indigenous Engagement) and Dr. Tracey Bunda, Indigenous Professor of Education in the Office of the Deputy Vice-Chancellor (Indigenous Engagement). Fredericks and Bunda joined as auditors, hoping to ascertain whether the University of Queensland could undertake a similar workshop to support Indigenous early-career academics.

In addition to participating in the workshop, which was held in UTM's Collaborative Digital Research Space (CDRS), Dr. Moreton-Robinson delivered a lecture entitled "Being in and of Country: the complexity of Aboriginal gender in an Australian context," at the Jackman Humanities Institute (JHI).

### Support



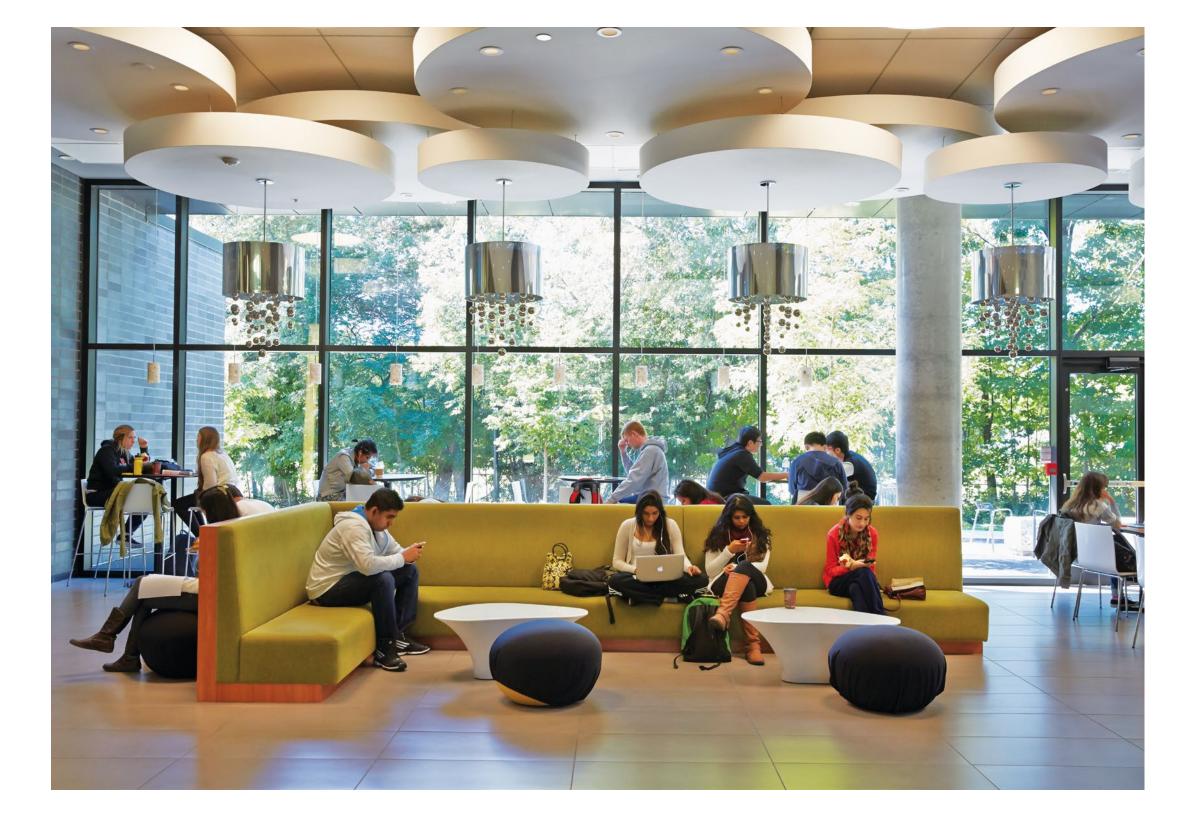
### Our Team at the OVPR

his year brought several staffing changes to our office. With **Jessica Lapp** on leave, we welcomed **Kate Steinmann** to the team in February as Strategic Research Development Officer (SRDO). Kate joins our SRDOs in providing guidance to faculty researchers and supporting their research goals.

When Senior Research Associate Elisa Tersigni went on leave in January, **Tia Sager** stepped in to fill the role in the Collaborative Digital Research Space (CDRS), developing new infrastructure and creating a robust suite of programming that supports collaborative and innovative humanities, arts, and social science research.

Raquel De Souza took on a new position as Director of Partnerships and Innovation and is responsible for supporting our community through strategic and research partnerships and fostering a culture of entrepreneurship at UTM through SpinUp.

We also introduced three new team members to the OVPR, each of whom helps provide experienced and dedicated support. Lubna Abu-Jazar joined us in November as UTM's New Science Building



Research Facilities Manager. Lubna oversees the day-to-day operational needs for the New Science Building core and research spaces, as well as SpinUp, U of T's new venture hub.

In December, **Tracy McCook** joined the team in the Vivarium as the new Animal Care Facility Supervisor, and we finished 2023 preparing to welcome **Shaun Young**, our new Manager of Research Administration and Operations, in 2024. Shaun works closely with OVPR leadership, internal stakeholders, and external partners to establish strategic, operational, and programmatic direction for current and future flagship research initiatives.

Throughout my graduate studies at UTM, I relied heavily on the OVPR imaging facility for my experiments. The instrumentation and training available proved to be very helpful. Even more, I truly appreciated and am thankful for the exchange of knowledge, willingness to assist, and advice regarding experiments from the OVPR staff as well as fellow users."

— Karishma Kailass, PhD, Recent UTM graduate, Department of Chemical and Physical Sciences

### Team Members

The expertise of the Growth Facilities staff has been instrumental in getting my research program off the ground here at UTM. They've supported diverse plant resources that have enabled us to carry out high-throughput phytopathology assays and recently helped prepare a successful instrumentation grant that enabled essential upgrades to out-of-date equipment." — Marcus M. Dillon, Assistant Professor, Department of Biology

### **LEADERSHIP**

#### **Kent Moore**

Vice-Principal, Research Distinguished Professor of Theoretical Geophysics of Climate Change, Department of Chemical and **Physical Sciences** 

### **Elspeth Brown**

Associate Vice-Principal, Research — Strategic Initiatives

Professor, Department of Historical Studies

### **Josh Milstein**

Associate Vice-Principal, Research — Facilities Associate Professor, Department of Chemical and **Physical Sciences** 

### **Payam Zahedi**

Director, Operations and Strategy

### **Raquel De Souza**

Director, Partnerships and Innovation

### **STAFF**

### **Stefanie Bernaudo**

Strategic Research Development Officer

#### **Veron Fernandes**

Office Administrator

### **Anastassia Pogoutse**

Strategic Research Development Officer

### **Tanya Rohrmoser**

**Communications Officer** 

### **Kate Steinmann**

Strategic Research Development Officer

### **Rong Wu**

Internal Competitions and Events Coordinator

### **Shaun Young**

Manager of Research Administration and Operations

### **SUPPORT LEADS**

#### **Lubna Abu-Jazar**

NSB Research Facilities Manager

### **Shawn Davis**

Veterinary Director, Vivarium

### **Robert Dick**

Craftsperson, Academic Workshop

### **Peter Duggan**

Supervisor, Academic Workshop

### **Kristina Han**

Site Coordinator, Amgen Biotech Experience at UTM

### **Kathryn Harris-Howard**

Senior Research Associate, Imaging Facility

### **Tracy McCook**

Animal Care Facility Supervisor, Vivarium

### **Dmitry Pichugin**

Senior Research Associate, Nuclear Magnetic Resonance Centre

### **Tia Sager**

Senior Research Associate, Collaborative Digital Research Space

### **Mirek Szreder**

Microelectronics Specialist

### **Vera Velasco**

Senior Research Associate, Growth Facilities

### Xin Zhao

Life Sciences Core Facilities Manager, Life Sciences Core



# Our Strategic Framework

n October, our team launched the inaugural Office of the Vice-Principal, Research Strategic Framework a robust plan that we developed in collaboration with our community over a period of six months.

Throughout the process, we considered how best to foster new ideas; to identify, cultivate, and champion industry and public partnerships; and to expand knowledge sharing and storytelling efforts. Recognizing the need for flexibility, we designed the Framework to be both structured and agile, enabling us to adapt our planning as the research practices and needs of our community evolve.

The resulting Framework is built on five pillars that work in synergy to advance UTM's larger research goals:

- Strengthen Capacity
- **Equip Trainees**
- **Empower People**
- **Cultivate Partnerships**
- Share Knowledge

These pillars guide our thinking, our actions, and our interactions and reflect UTM's principles as a dynamic, inclusive, and innovative institution of higher learning. They are underpinned by two strategic enablers that steer our decision-making: embed inclusivity as a core value and integrate data and analytics as drivers.

Each year, the OVPR will review this strategy, assess priorities, and update the Framework as required. We invite our community to read through the document, which outlines our priorities, commitments, and ambitious plans. Your feedback will not only help shape the OVPR's path going forward, but that of UTM.



Strengthen Capacity



**Equip Trainees** 



**Empower People** 



Cultivate Partnerships



Share Knowledge

### Communications

ommunications was bustling in the Research Office this past year — and 2023 was all about launching new brands, products, strategies, and initiatives. With the help of UTM's graphic designer **Drew Lesiuczok**, we published the OVPR's first-ever Annual Report in early 2023, followed by our inaugural Strategic Framework in the fall. We led the rebrand of both the Interdisciplinary Science Program in Research and Entrepreneurship (INSPIRE) and the Collaborative Digital Research Space (CDRS); helped design the Funding and Awards Roundup, a new resource delivered monthly to faculty inboxes; and put together a comprehensive communications strategy for SpinUp, U of T's first wet lab startup incubator.

And now website visitors can more easily navigate our site: Working closely with the Strategic Research Development Officers, we published a suite of webpages and online resources to support researchers and potential partners, who can now easily access information on partnerships, honours and awards, funding opportunities, and the research process at UTM.

Throughout the year, we supported events and programming taking place campus-wide, designing materials for and promoting symposia, guest lectures, workshops, and more. As we settle into the "new normal" with a combination of virtual, in-person, and hybrid events, we continue to explore innovative ways to celebrate UTM researchers both online and on campus.

Our fifth strategic pillar — <u>Share Knowledge</u> — guides the year ahead, and we look forward to putting in place new strategies that will highlight the research taking place across UTM and beyond.

#### **WEBSITE**

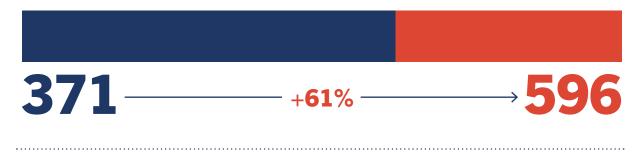
Page Views

Top Viewed Pages

- Summer Undergraduate Research Fair
  - Postdoctoral Fellowship Award
- University of Toronto Excellence Award

#### **NEWSLETTER**

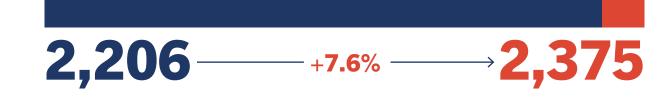
**SURGE Subscribers** 



Average Open Rate **54**%

#### TWITTER / X

Followers



**Impressions** 112.3K

### **INSTAGRAM**

Followers



**Impressions 29K** 

#### **LINKEDIN**

Followers



Impressions

5.9K

### 2023 Annual Report — **23**

# EVENTS

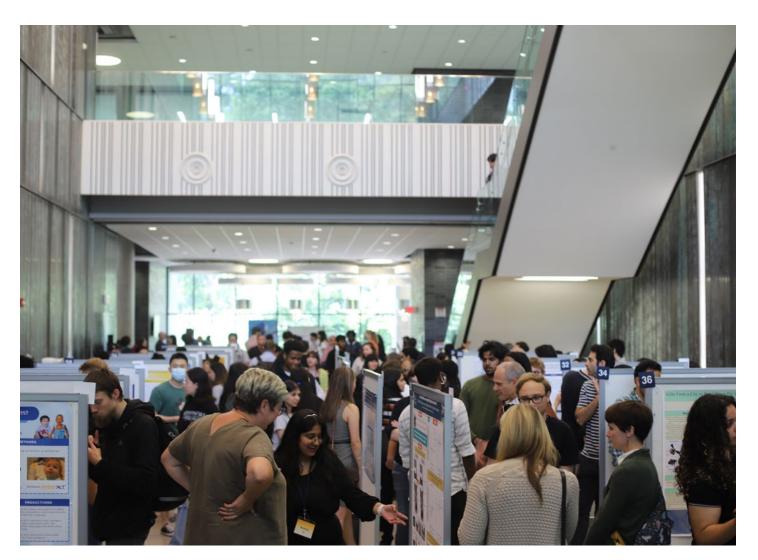
ur 2023 event schedule kicked off in January when we gathered online for the **Annual Research Excellence Lecture**, celebrating 2022 co-recipients Claudiu Gradinaru, Professor, Department of Chemical and Physical Sciences, and Yuhong He, Professor, Department of Geography, Geomatics and Environment.

Professor Gradinaru delivered a talk entitled "Shine On You, Crazy Molecule: What Do We Learn by Looking at (Bio)molecules One at a Time?" while Professor He shared her work in "Big Remotely Sensed Data for Vegetation Mapping." | Read the Q&A

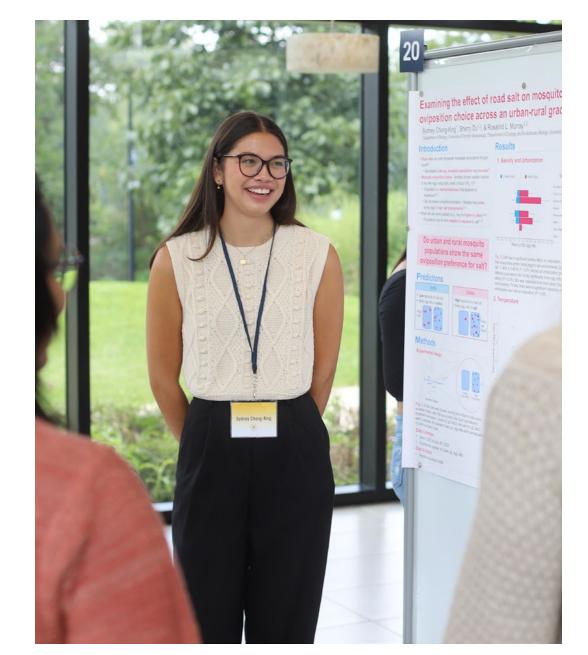
In August, we hosted our annual **Summer Undergraduate Research Fair** (SURF). Students from across disciplines filled the Instructional Building to share the research they'd conducted over summer. The lively on-campus event welcomed nearly 300 attendees and featured more than 100 posters and 16 oral presentations. This year's keynote speakers were Alison Syme, Associate Professor in the Department of Visual Studies and Psychology professor Christina Vanden Bosch der Nederlanden, both of whom spoke about their research and took questions from the audience. I Read the story

Moved from its typical spring spot, the **Annual Celebration of Books** took place in October. For the first time in recent years the event was

Summer Undergraduate Research Fair (SURF). Photo: Angelia Baccarella









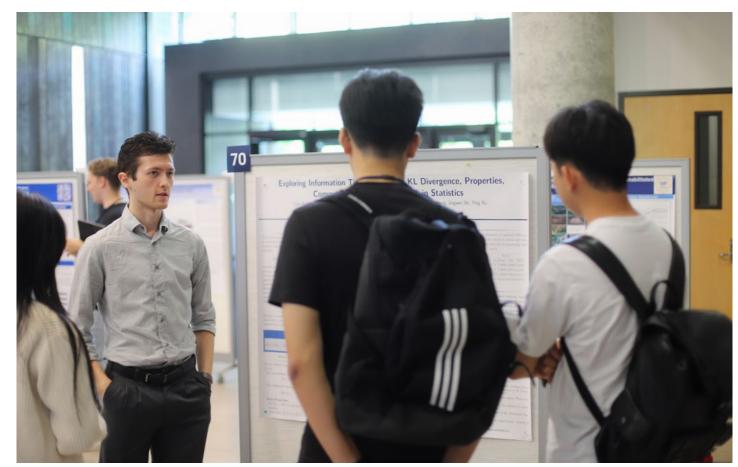
held on campus, with UTM's latest authors and editors gathering in the light-filled CDRS space to speak about their work. Co-hosted by our office and the UTM Library, the 2023 event featured 11 talks, 21 books from 13 departments, and included the work of 24 faculty members. More than 50 guests were in attendance, an audience comprising students, staff, faculty, and librarians. | Read the story

This year's 2023 Research Prize recipients were celebrated the following month at the **Annual Research Prize Symposium**, where we recognized the contributions of early-career researchers and scholars in the Humanities, Sciences, and Social Sciences. Nicole Charles from the Department of Historical Studies was awarded the research prize in the Humanities, and both recipients in the Social Sciences and Sciences came from the Department of Anthropology: David Samson was selected for his work in the Social Sciences, and Lauren Schroeder for her contributions to the Sciences. | Read the story

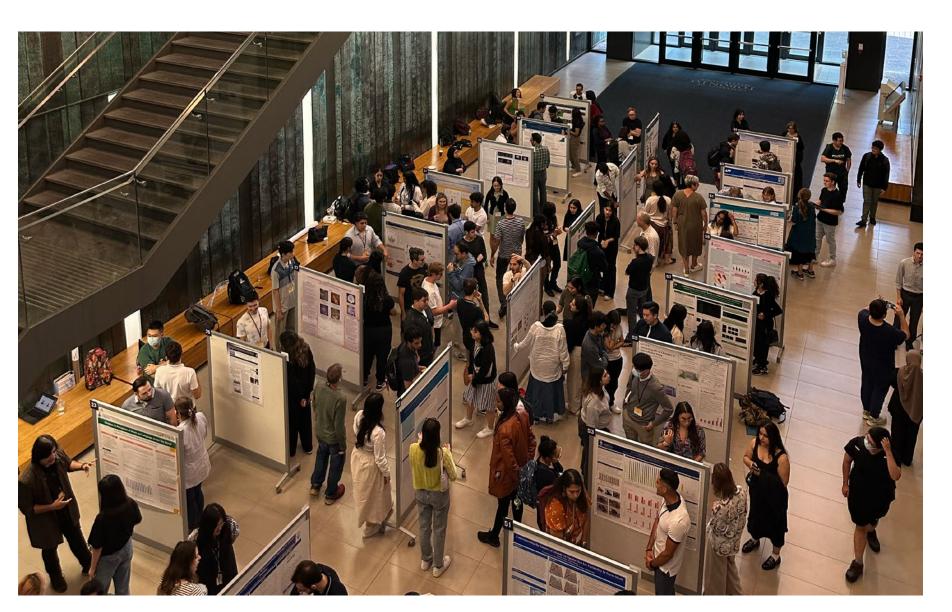
Desmond Morton Research Excellence Award recipient David Wolfe was celebrated at the Research Excellence Lecture in late November. Students and colleagues from across the University and beyond gathered at CDRS to listen to his thought-provoking lecture on the return of industrial policy, Canada's failed innovation strategy, and place-based development policy before enjoying a reception. I Read the story



Summer Undergraduate Research Fair (SURF) Photo: Angelia Baccarella



Summer Undergraduate Research Fair (SURF) Photo: Angelia Baccarella



Summer Undergraduate Research Fair (SURF). Photo: Angelia Baccarella



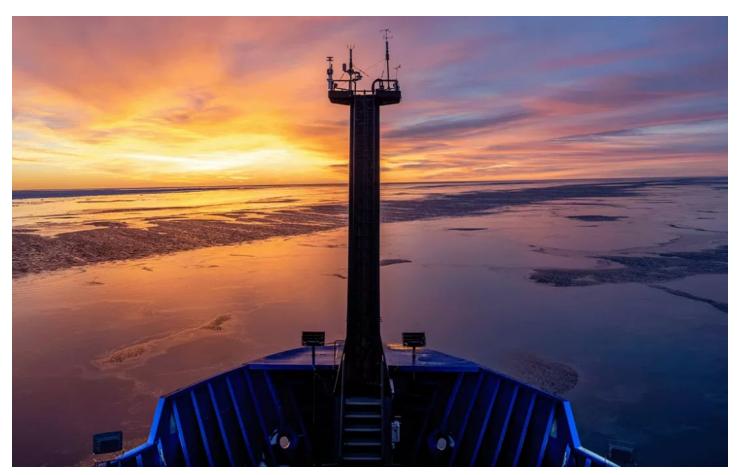
Desmond Morton Research Excellence Award recipient David Wolfe Photo: Angelia Baccarella

# Research Spotlight

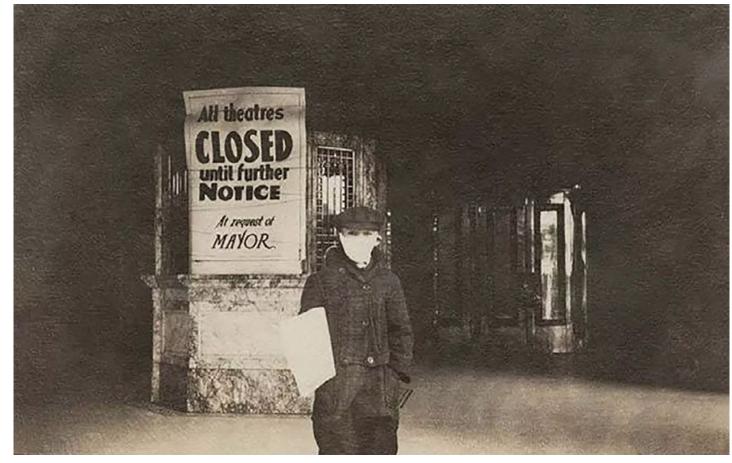
rom exciting scientific discoveries to new research on public housing, Toronto slang, and food insecurity in Canada's North, our researchers made headlines in 2023! Click through the images below to read just some of the stories coming from UTM this past year.



Amgen Biotech Experience at UTM, ABE@UTM Introduces Students to Scientific Discovery (Photo: Angelia Baccarella)



Professor Trevor Porter (Department of Geography, Geomatics and Environment) Arctic Cruise Takes Grad Student into New Territory (Photo: © Woods Hole Oceanographic Institution/Amanda Kowalski)



Professor Ruben Gaetani (Department of Economics), Pandemic Restrictions Don't Hamper Innovation (Photo: Seattle's Museum of History and Industry)



Professor Kent Moore (Department of Chemical and Physical Sciences), New Study Underscores Need to Protect 'Oasis of the Arctic' (Photo: DeAgostini/Getty Images)



Professor Trevor Porter, (Department of Geography, Geomatics and Environment), Tree Rings Help Solve Climate Puzzle (Photo: Christopher Daely/Getty Images)



Professor Marta Bryan, (Department of Chemical and Physical Sciences), <u>In Search of Other Worlds</u> (Photo: Getty Images)



Professor Derek Denis, (Department of Language Studies), Toronto's Unique Style of English (Photo: Nick Iwanyshyn)



Professor Terry F. Robinson, (Department of English and Drama), Centering the Study of Deafness in British Theatre (Photo: Drury Lane Theatre from Microcosm of London, 1808. Illustration held by the British Library)



Professor Shauna Brail, (Institute for Management and Innovation), Toronto Redevelopment Reinforces Need for Public Housing Funding (Photo: Rick Madonik/Toronto Star via Getty Images)



Professor Madeleine Mant, (Department of Anthropology), Study Shows Link Between Institutionalization, Hip Fractures and Death (Photo: St. Louis State Hospital in Missouri c. 1870. Courtesy of the Missouri Historical Society)



Professor **Tracey Galloway**, (Department of Anthropology), Food Insecurity in Canada's North (Photo: Tanya Talaga/Toronto Star via Getty Images)



Professors Shauna Brail and Tara Vinodrai, (Institute for Management and Innovation), Exploring the Sustainable Revival of Cities



Professor Rosalind Murray, (Department of Biology), How Bugs Get Busy: U of T Researchers Featured in CBC <u>Documentary</u> (Photo credit: [Bug Sex] Andrew Gregg)



Pandemic Posed Vocabulary Challenges for Preschoolers (Photo: Tima Miroshnichenko via Pexels)



Professor Jay Olson, (Department of Psychology), Smartphone Addiction Around the World (Photo: Erin Li via Pexels)



Professor Kevin Coleman, (Department of Historical Studies), The Complex Socioeconomic History of the Banana (Photo: Rafael Platero Paz)



Professor **David Samson**, (Department of Anthropology), **Dreams Vary Across Cultures and Environments** (Photo: Blake Eligh)



Professor Alison Smith, (Department of Political Science), How Rent Banks Help Prevent Homelessness (Photo: Steve Russell/Toronto Star via Getty Images)

### Launching SpinUp, UTM's Startup Incubator

n June 2023, UTM Vice-Principal, Research Kent Moore and UTM Vice-President and Principal Alexandra Gillespie joined the mayor of Mississauga at the BIO 2023 convention in Boston to announce SpinUp, U of T's first wet lab startup incubator.

### What does entrepreneurship look like at U of T?

SpinUp joins U of T's <u>network of 12 accelerators</u>, which includes UTM's ICUBE. Over the past decade, this entrepreneurship ecosystem has supported 690 startups that have raised \$3 billion in investment capital and created over 9,000 jobs. Since 2017, U of T has supported more IP startups than any other North American University outside of MIT.

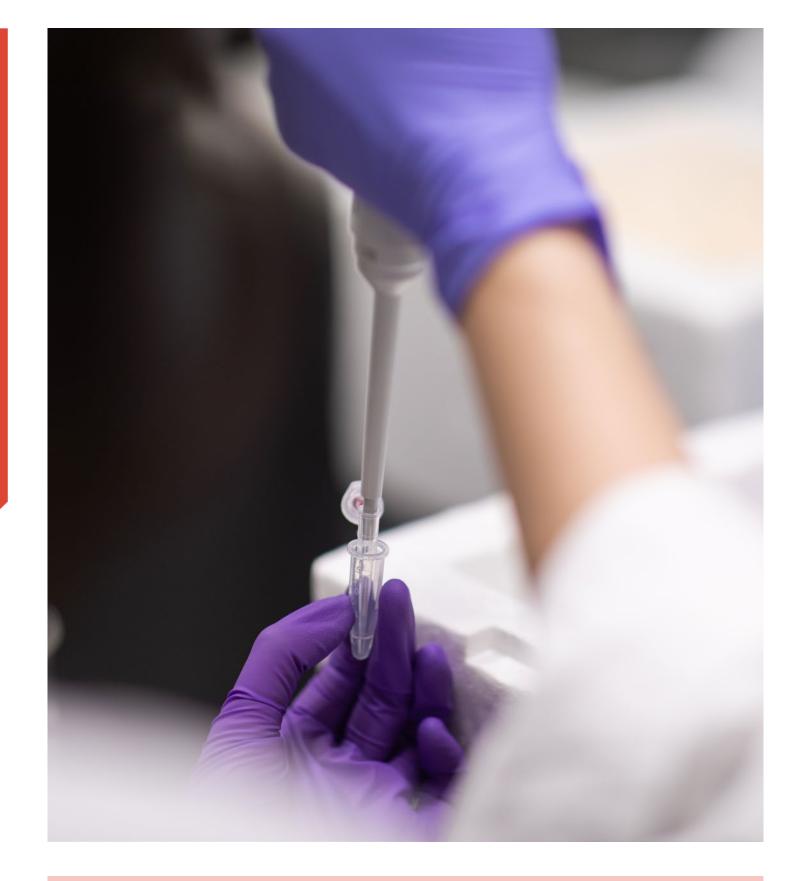
### Why was SpinUp created?

SpinUp, located within UTM's New Science Building, was created

by the OVPR to support early-stage, lab-based startups through affordable wet lab space and entrepreneurship programming while strengthening UTM's experiential education, research partnerships, research investment, and culture of innovation.

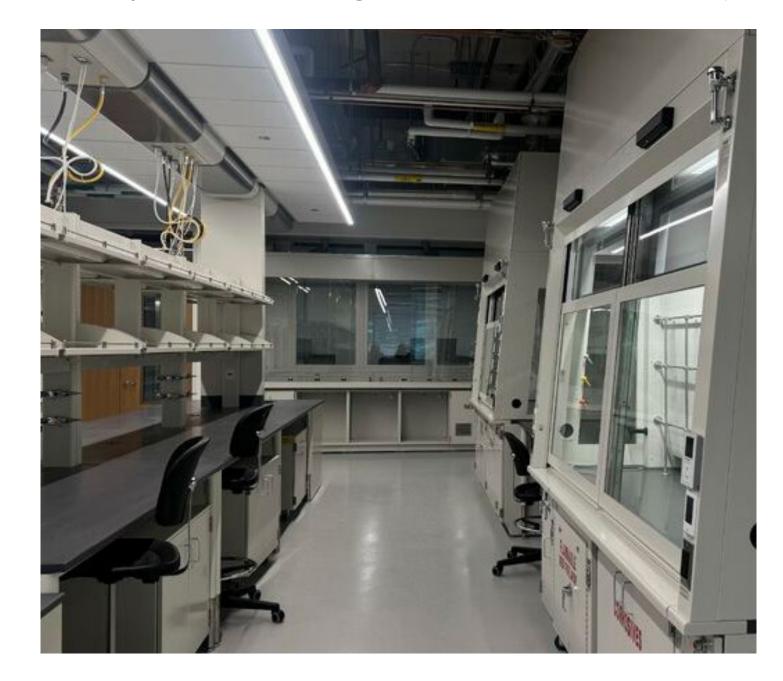
The initiative addresses a <u>critical gap in our innovation ecosystem</u> faced by early-stage entrepreneurs: access to wet lab space and the affordability of such spaces once they do become available. By accessing affordable coworking lab space at SpinUp, such founders can dedicate their limited capital to maturing their technologies and ultimately increase their chances of attracting enabling external investment.

SpinUp advances UTM's longstanding commitment to accelerating innovations in health and beyond. Alongside ICUBE, SpinUp further positions UTM as an innovation hub within U of T and a key member of our larger entrepreneurship ecosystem. It elevates U of T's global standing as a top 5 university business incubator, and number 1 in



Ardra is absolutely thrilled to join SpinUp — a hub where we'll put our commitment to provide novel ingredients to support sustainable food production. With SpinUp's cutting-edge lab facilities and invaluable entrepreneurship programs at our disposal, we're ready for a journey of progress in technology and product commercialization!"

— **Pratish Gawand** and **Mabel Wong**, Ardra Inc.





### What are the benefits to UTM researchers and trainees?

The OVPR is committed to incubating startups that have a vested interest in both interacting with UTM trainees for experiential education purposes and partnering with UTM researchers for research projects. To this end, SpinUp aligns well with three pillars of the OVPR's Strategic Framework:

1. Equip Trainees: SpinUp creates opportunities for internships, coop, and work-study terms with startups right on the UTM campus.



UTM trainees will learn about research commercialization, research and development, and industry through these experiential education tracks and/or by accessing SpinUp's entrepreneurship programming.

- 2. **Empower People**: SpinUp fosters a culture of innovation within UTM, increasing commercialization fluency within our community and, ultimately, encouraging new startups to emerge from UTM labs. This is facilitated by having an in-house incubator available on our campus as a resource for UTM's budding entrepreneurs.
- 3. **Cultivate Partnerships**: Through research partnerships with startups conveniently located on campus, UTM researchers can access NSERC Alliance, MITACS, OCI, and other funding sources to support their work. Further, all revenue generated through SpinUp



will be invested into UTM research, including new internal funding programs aimed at supporting partnered research projects.

### Who contributed to SpinUp's implementation in 2023?

The OVPR is incredibly grateful for the collaborative, creative, solutions-oriented work and contributions of various units across the University that, together, made SpinUp possible within a matter of months in 2023.

**At UTM, the following offices:** Office of the Chief Administrative Officer; Environmental Health and Safety; Equity, Diversity, and Inclusion; Student Affairs and Services; Office of Communications; Budget, Planning and Finance; Campus Safety; Facilities Management and Planning; Hospitality and Ancillary Services; Information and Instructional Technology Services; Office of Advancement; and Parking and Transportation Services.

Centrally: Innovations, Partnerships and Entrepreneurship Office (Division of the Vice-President, Research and Innovation); Office of University Counsel, Research Oversight and Compliance.

We sincerely thank the larger University community for its support and trust in this initiative.

### What's in store for SpinUp in 2024?

Our inaugural group of startups was selected in December 2023 through a rigorous adjudication process. This group will be announced in early 2024 and represents innovations in spaces ranging from drug development to cellular agriculture and materials science. The winner of our inaugural <u>Blue Ticket</u> competition is part of this group and will receive non-dilutive funding and mentorship from SpinUp supporter Merck.

We're thrilled to support the launch of U of T Mississauga's Blue Ticket program as the inaugural industry supporter. We're eager to work with innovators who share the same commitment to cuttingedge science, regardless of therapeutic area or modality, and are looking to make a meaningful impact on people's lives."

— Marwan Akar, President and Managing Director, Merck Canada



## Interdisciplinary Science Program in Research and Entrepreneurship (INSPIRE)

n June, top science students came to campus for the 2023 Interdisciplinary Science Program in Research and Entrepreneurship (INSPIRE), which was organized under the theme "21st Century Biophysical Techniques." Co-founded by Department of Chemical and Physical Sciences professors **Scott Prosser** and **Josh Milstein**, the competitive two-week program offers undergrads eyeing graduate school an opportunity to learn about the various career paths available to them in the life sciences.

Changes from the 2022 inaugural program included a dynamic roster of guest speakers, complemented by hands-on time in the labs of UTM's faculty researchers. One of the key aspects of the INSPIRE experience is the interdisciplinarity embedded in the program. Trainees from across the physical sciences worked together on various experiments, often out of their comfort zones and dependent on the knowledge and skills of their fellow students — some of whom may be pursuing different degrees.

At its core, INSPIRE helps students imagine a career in entrepreneurship. The team arranged for various entrepreneurs, academics, and startup founders from across the GTA biotech ecosphere to join the group as guest speakers. They spoke on a range of topics, offering valuable perspectives on everything from intellectual property and raising capital to translating research discoveries into a marketable product.

Coming in 2024: Now heading it its third year, INSPIRE has joined forces with SpinUp. <u>INSPIRE 2024</u> students will have a unique opportunity to interact closely with early-stage entrepreneurs innovating in the biotech, pharma, and agritech spaces, among others. Entrepreneurship programming will include networking opportunities with entrepreneurs, seminars, and a pitch competition.

INSPIRE is an excellent venue for students to be exposed to state-of-the-art modern biophysics along with careers in industry that the broader field applies to, and it provides them with a playground to delve deeper into exciting experiments."

— Ruby Sullan, Assistant Professor, Department of Physical and Environmental Sciences (UTSC) and Department of Chemistry (UTSG) | Guest Speaker, INSPIRE 2023







Office of the Vice-Principal, Research
Terrence Donnelly Health Sciences Complex
University of Toronto Mississauga
3359 Mississauga Road
Mississauga, ON, L5L 1C6

www.utm.utoronto.ca/vp-research



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