

2021 Research & Innovation Annual Report

2021.research.utoronto.ca

Presented by:

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and Strategic Initiatives

April 27, 2022



University Rankings & Awards

The University of Toronto's Rankings and Impact

#1

in Canada by the
top-ranking
metrics worldwide

*(THE, U.S. News, and
QS World Report)*

#2

among North
American Public
Universities

*(Times Higher Education World
University Rankings 2022)*

#4

among globally
ranked universities
for number of
publications (2016–
2020) in the top 10
percent of journals

(Web of Science 2022)

#18

worldwide,
tied with University
College London

*(Times Higher Education World
University Rankings 2022)*



U of T Rankings in the Most Prominent Global Rankings Systems

Ranking	2021-2022	2020-2021	2019-2020
1. National Taiwan University Ranking	3	3	4
2. U.S. News Best Global Universities Rankings	16	17	18
3. Times Higher Education World University Rankings	18	18	18
4. Academic Ranking of World Universities	22	23	24
5. QS World University Rankings	26	25	29

U of T 2021-2022 Major Field Ranking Results

In the top 5 by major field

2021-2022	Field	World Ranking
NTU	Medicine	3
NTU	Social Sciences	5
THE	Clinical, Pre-clinical & Health	5

In the top 15 by major field

2021-2022	Field	World Ranking
NTU	Life Sciences	12
QS	Life Sciences & Medicine	13
THE	Arts & Humanities	15

In the top 30 by major field

2021-2022	Field	World Ranking
THE	Law	16
QS	Arts & Humanities	17
THE	Education	17
QS	Social Sciences & Management	18
QS	Engineering & Technology	18
QS	Natural Sciences	18
THE	Psychology	19
THE	Computer Science	24
THE	Life Sciences	25
NTU	Natural Sciences	26
THE	Engineering & Technology	26
THE	Physical Sciences	27
THE	Business & Economics	28

Publications in the Top 10% Most Highly Cited Publications (2016-2020)

Top 5 Global Institutions by Publications

Global Ranking

1	Harvard University
2	University of Oxford
3	Stanford University
4	University of Toronto
5	University of Cambridge

U of T Top 10 Fields by Publications

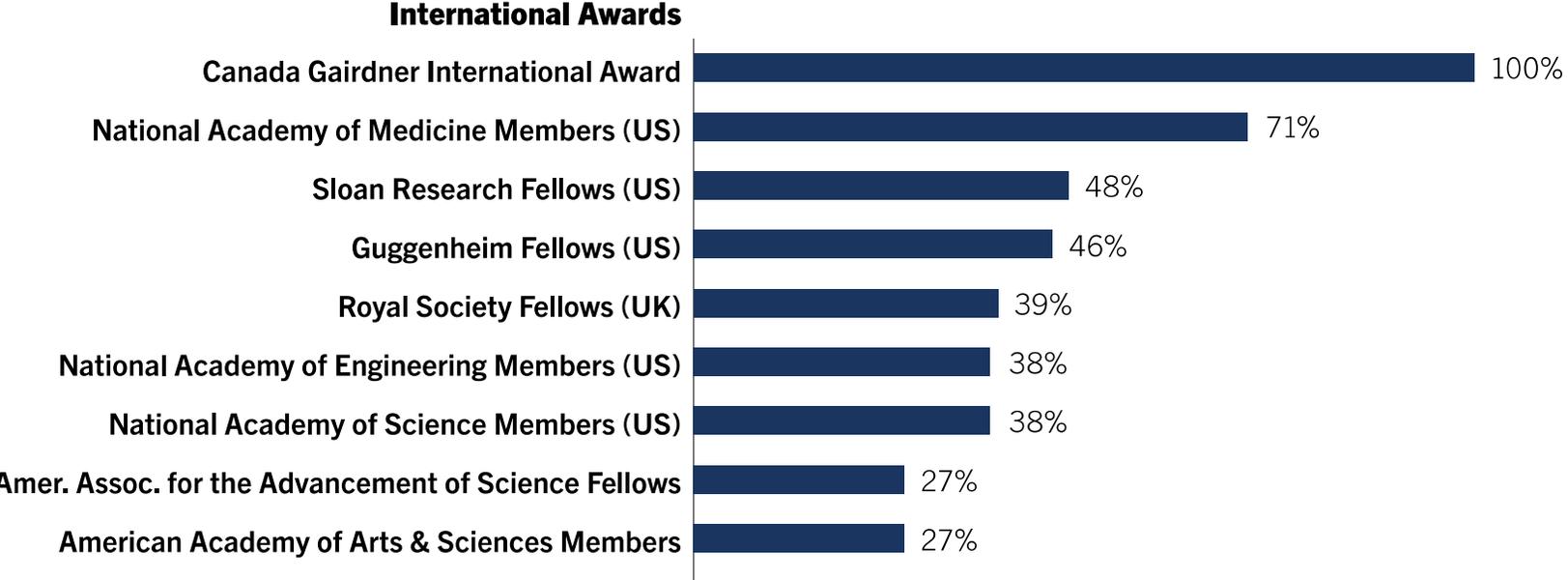
Global Ranking

2	Clinical Medicine
4	Psychiatry/Psychology
6	Arts & Humanities Neuroscience & Behavior Social Sciences
9	Molecular Biology & Genetics

Among the Canadian U15 universities, there are our universities ranked among the Top 100 globally, in the order of **U of T**, UBC, McGill and Alberta.

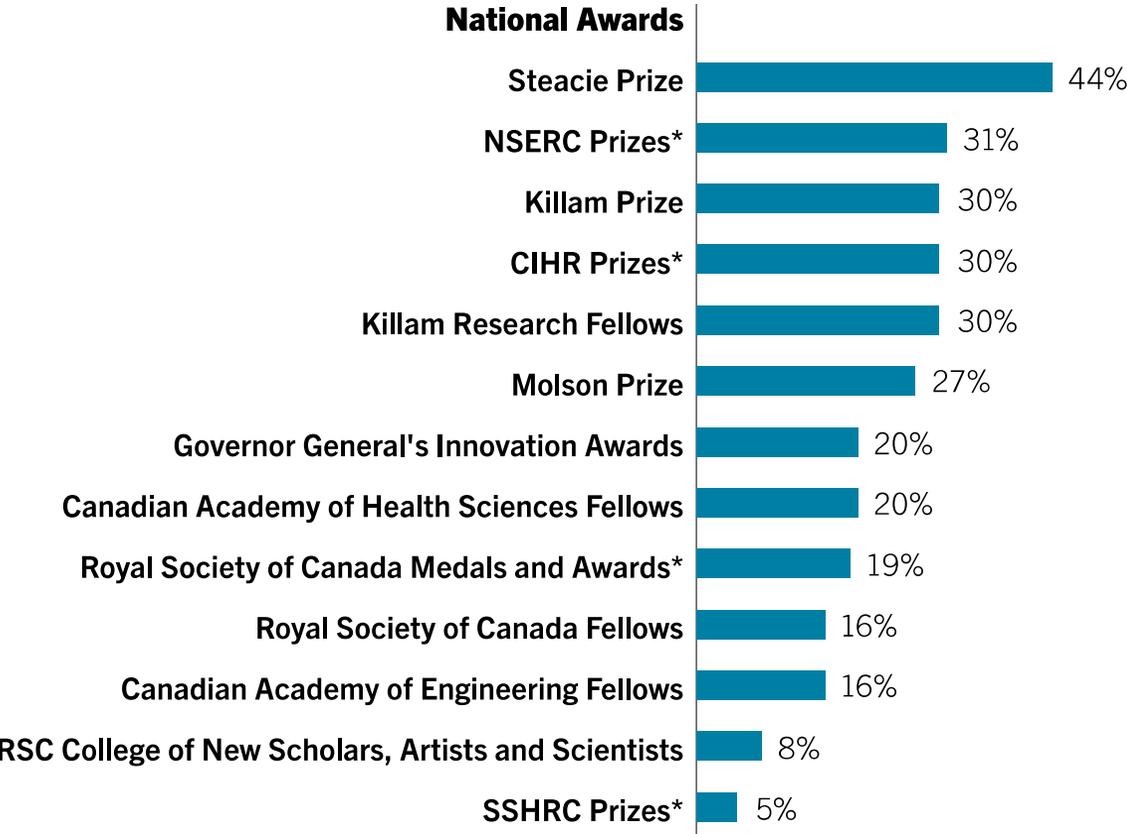


Major Awards & Honours – U of T Market Share Among Canadian Universities (2020-2021)



U of T faculty won **more than 125** international and major national awards in 2021

Major Awards & Honours – U of T Market Share Among Canadian Universities (2020-2021)



In 2021, U of T faculty members won national Gold Medals for research from both NSERC and SSHRC.



**University Professor
Sajeev John**

Department of Physics

NSERC Gerhard Herzberg
Canada Gold Medal for
Science and Engineering



**University Professor
Lynne Viola**

Department of History

SSHRC Gold Medal for
Achievement in Research

2022 President's Impact Award Winners



Barbara Fischer

Associate Professor, Teaching Stream,
John H. Daniels Faculty of Architecture,
Landscape, and Design

Executive Director/Chief Curator,
Art Museum at the University of Toronto

For her exceptional contributions to curatorial theory, history, and practice enabling Canadian and international audiences to better understand and learn from contemporary art and artists.



Douglas Sanderson

Associate Professor, Faculty of Law

For the profound impact that he has made on issues relating to the relationship between Indigenous Peoples and the Settler State, which have contributed to advancing Indigenous rights at the University, in the Province of Ontario, and throughout Canada.



Levente Diosady

Professor Emeritus, Department of Chemical Engineering and Applied Chemistry,
Faculty of Applied Science and Engineering

For the development of technology enabling the double fortification of salt with iron and iodine, improving the health of millions of people in developing countries.



Donald Redelmeier

Professor, Department of Medicine,
Temerty Faculty of Medicine

Senior Scientist, Sunnybrook
Research Institute

For science contributing to fewer traffic crashes worldwide, including new laws in all Canadian provinces and territories against using a cellular telephone while driving.



Kang Lee

Professor, Department of Applied Psychology and Human Development, Ontario Institute for Studies in Education

For sustained impacts of his scientific discoveries on childhood dishonesty on legal practices, clinical diagnosis and treatment of atypical children, and methodological innovations for healthcare and applied research.



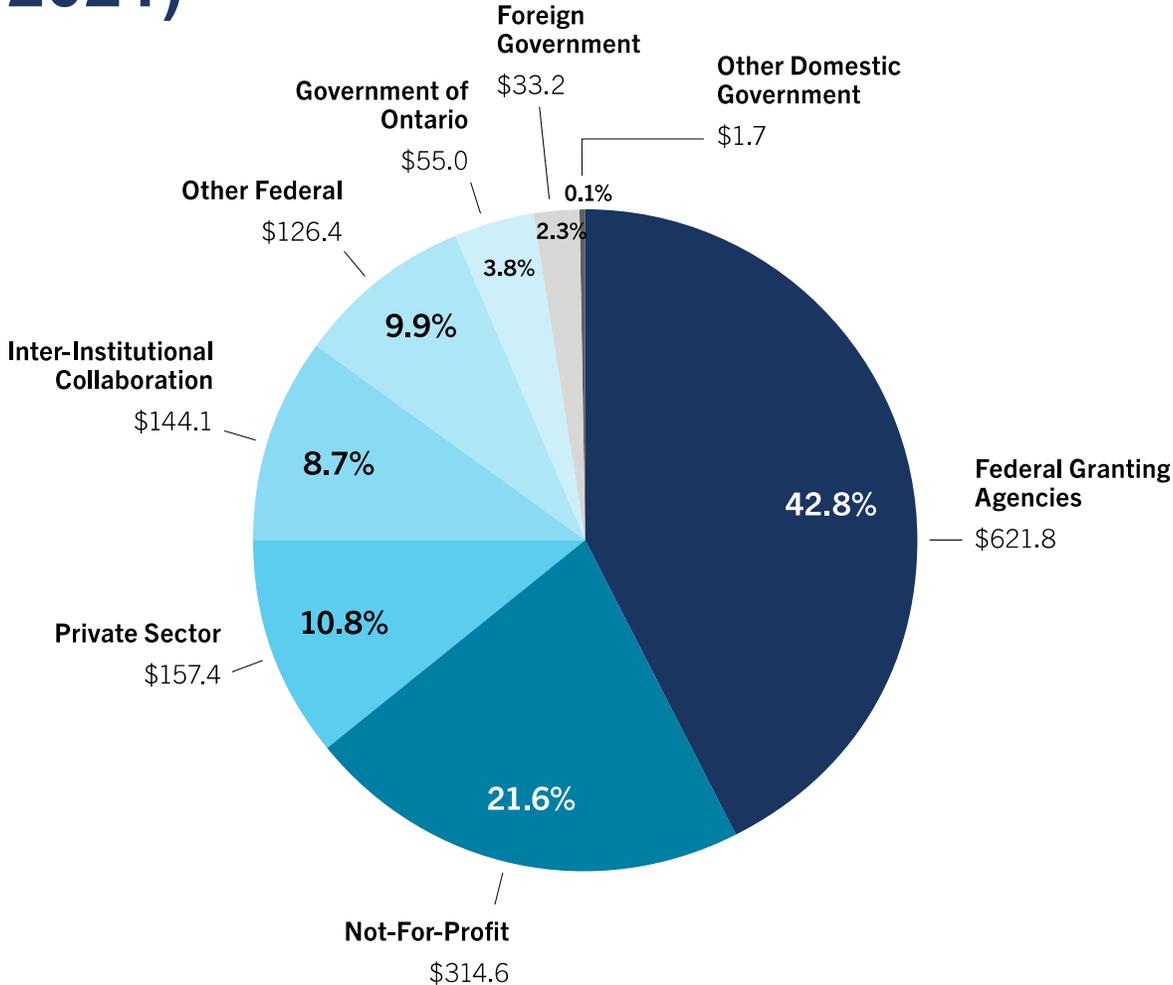
Adalsteinn Brown

Dean, Dalla Lana School of Public Health

For his leadership in health system improvement, performance measurement and health emergency planning and response, which has transformed the decision-making process in Ontario.

Research & Innovation Funding

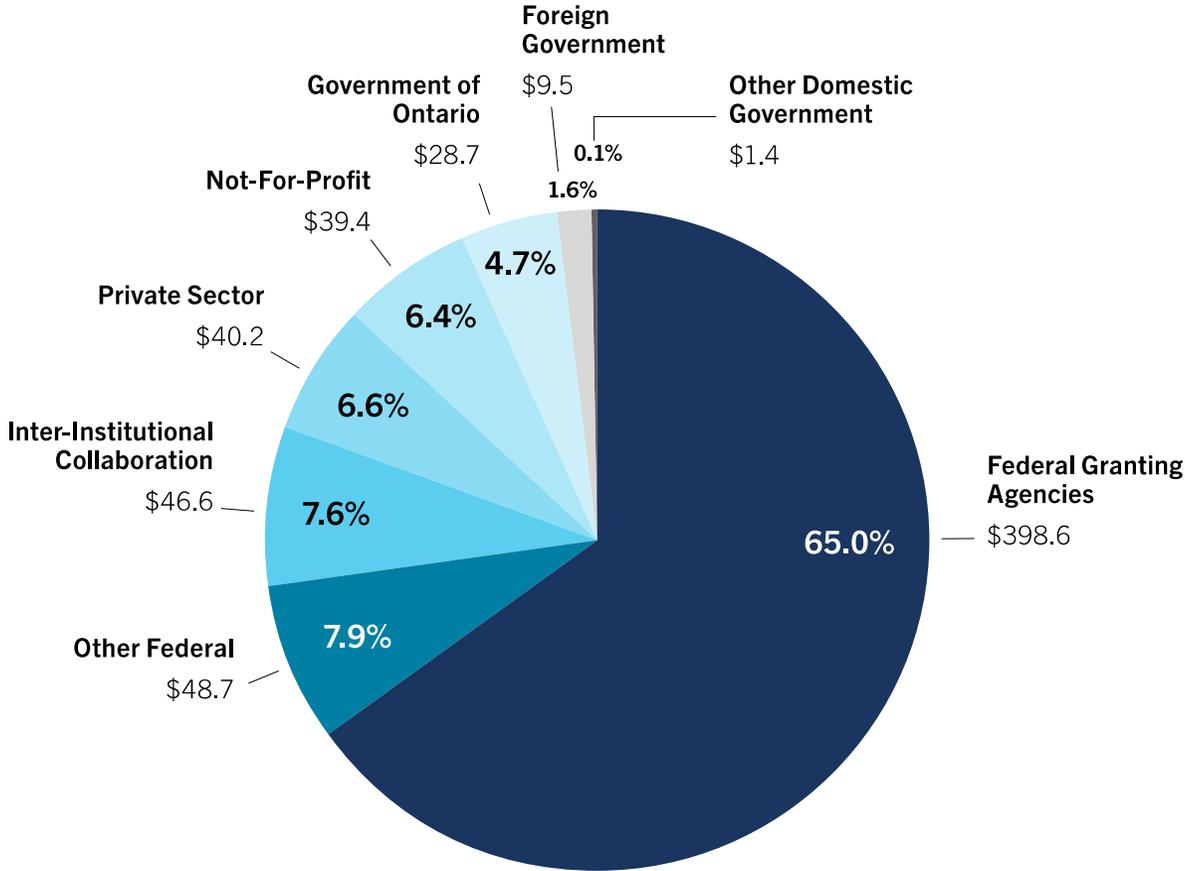
Research Funds Awarded to U of T and Partner Hospitals by Sector (2022-2021)



Total Funding
\$1.45 billion



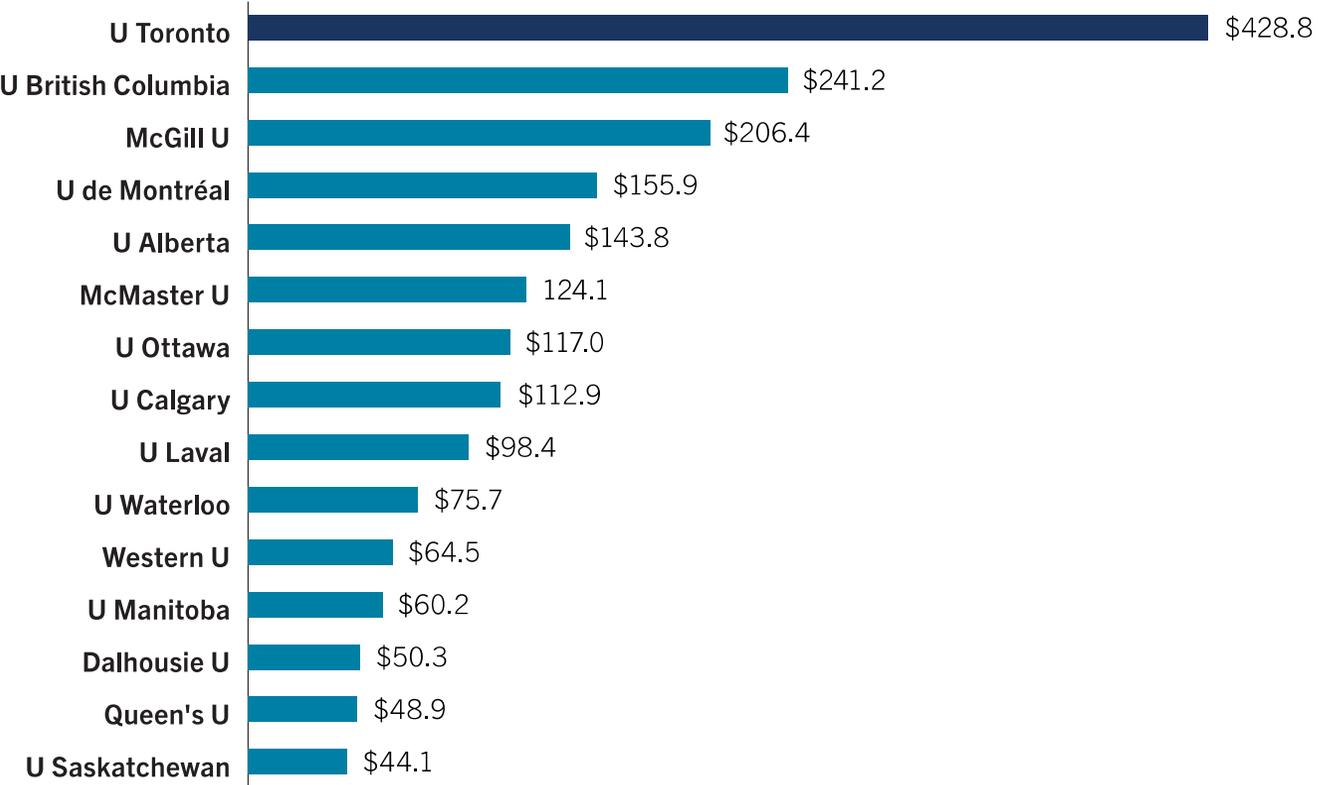
Research Funds Awarded to U of T by Sector (2022-2021)



Total Funding
\$613.2 million

Tri-Agency Funding to U15 Universities (2020-2021)

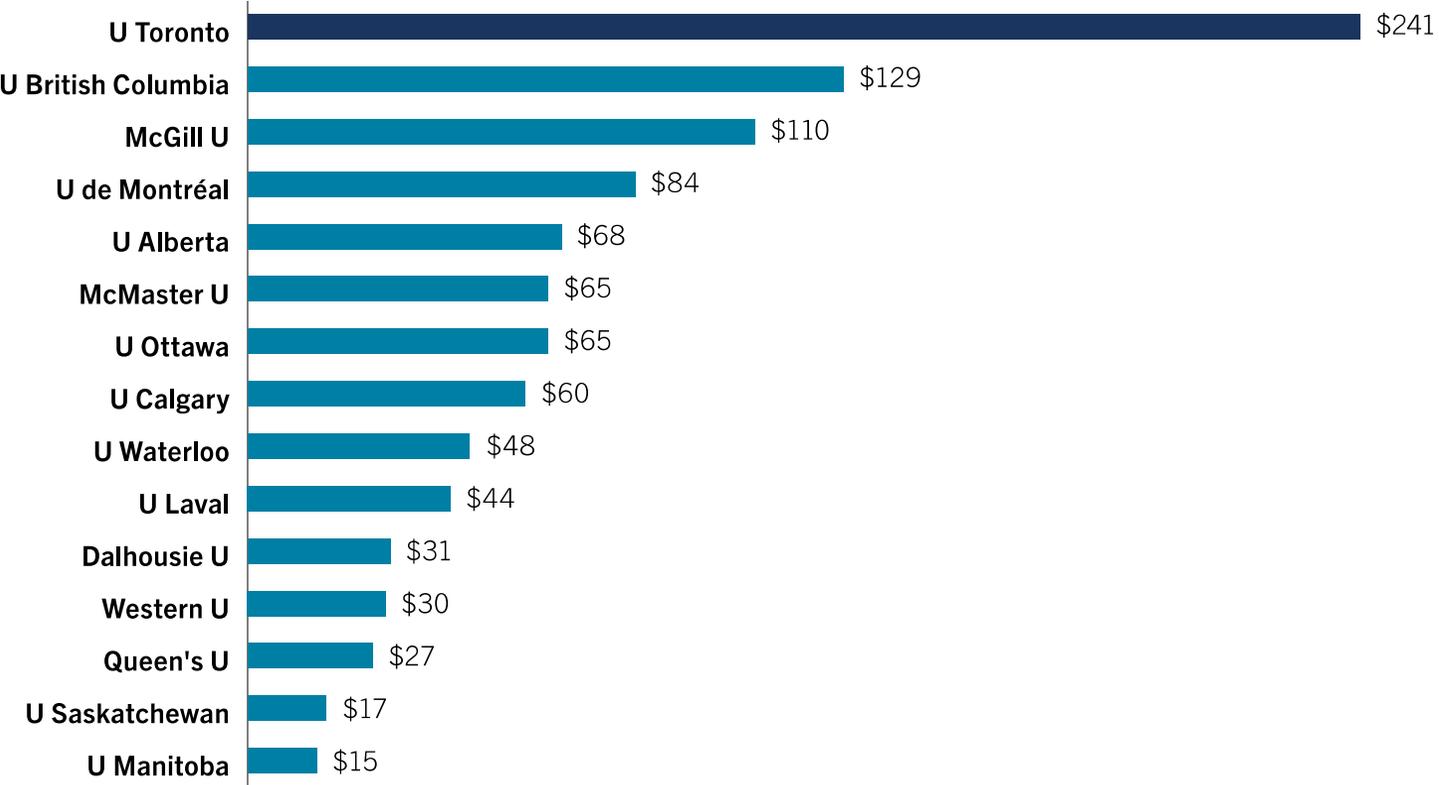
U15 Universities



16.4%
of the country's
Tri-Agency funding
(2020-2021)

Canada Foundation for Innovation (CFI) Funding to U15 Universities (2015-2016 to 2020-2021)

U15 Universities



\$60 million

in funding from
the Canada
Foundation for
Innovation (CFI)

(2020-2021)

Connaught Fund Amounts Awarded (2020-2021)

Program	Amount Awarded Connaught Expendable	McLean Fund	Inventions Revenue	I'Anson Fund	# of Awards
Global Challenge Award	\$1,212,227	–	–	–	5
New Researcher Award	\$1,018,556	–	–	–	54
Innovation Award	\$500,000	–	–	–	10
McLean Award*	\$62,500	\$62,500	–	–	1
Graduate Scholarship	\$1,172,140	–	–	–	122
UTEST	–	–	\$150,000	–	21
Community Partnership Research Program: Indigenous	–	–	\$447,527	–	9
Community Partnership Research Program	–	–	\$495,026	–	5
Covid Special Initiative	–	–	–	\$150,000	2
	\$3,965,423	\$62,500	\$1,092,553	\$150,000	229

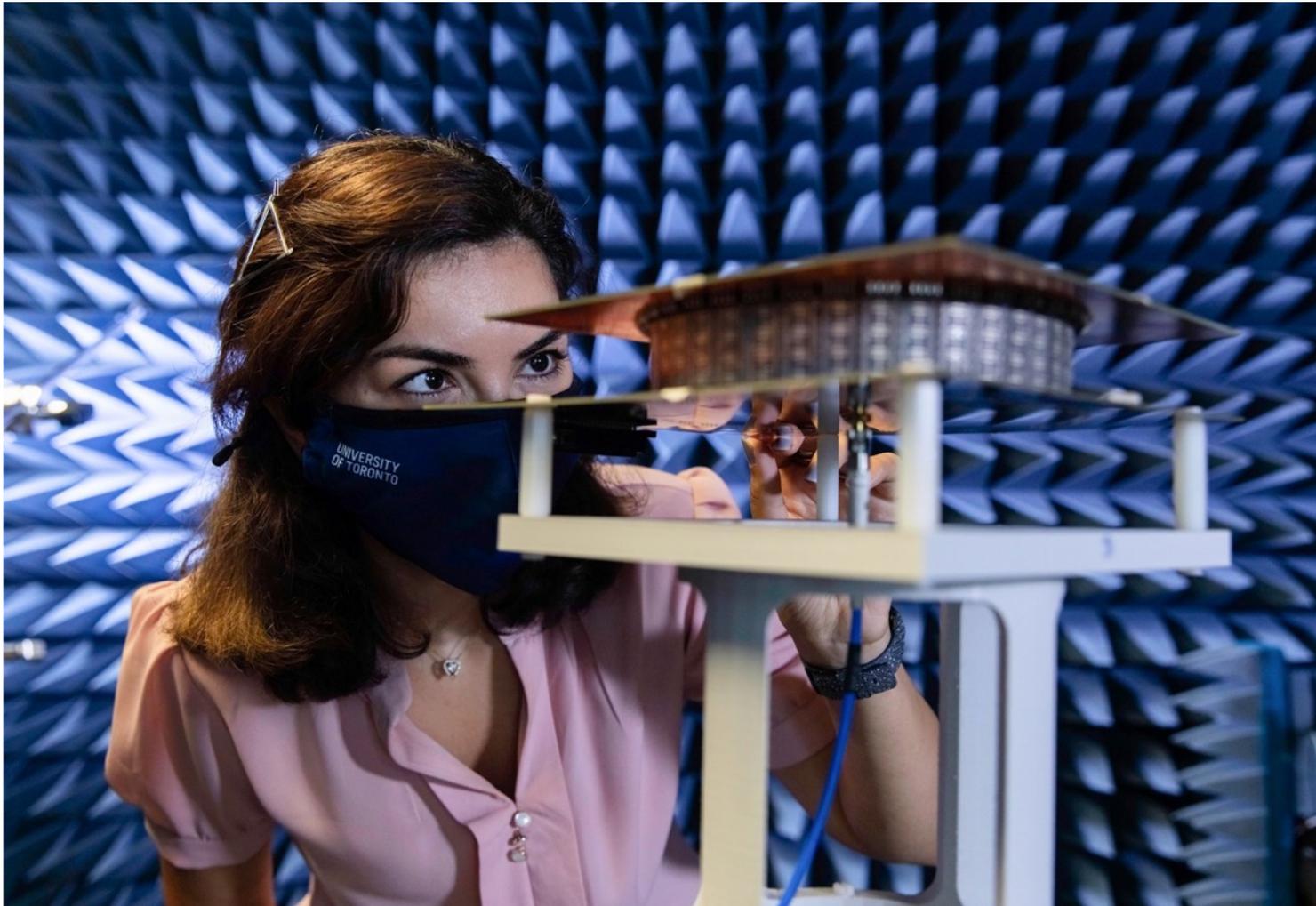
Total funding to research
projects overseen by the
Connaught Committee:

\$5,270,476

*Income earned by Connaught Fund
for 2020-21: \$4,251,260.*

**Required match to the McLean
Fund investment*

Canada Research Chairs



The **Canada Research Chairs (CRC) program** enables U of T to attract and retain the best and most promising researchers from around the world.

U of T holds

330

Canada Research Chairs (CRCs), more than any other Canadian university and 138 more than our nearest peer

(Tri-Agency Institutional Programs Secretariat 2020–2021)

Research Partnerships & Collaborations

Research Partnerships & Collaborations



Research partnerships with industry, not-for-profit, community and other organizations expand the collaborative networks available to U of T researchers and facilitate access to essential materials, data, and resources for research and training opportunities.

During the past decade, U of T has worked with

over 600

different industry partners of all sizes.

Community Partnerships 2021 SSHRC Partnership Grants



Care Economies in Context: Towards Sustainable Social and Economic Development

Led by Professor Ito Peng, Department of Sociology, this project will map and measure all paid and unpaid elements of the Care Economy in Canada and seven other countries spanning four global regions and representing both the Global North and South.



Mobilizing Justice

Led by Professor Steven Farber, Department of Geography, UTSC, this project will conduct a national survey of those experiencing transport poverty and use it to develop transportation equity standards, evaluation tool kits, and community-centred transportation planning processes.

International Research Partnerships

In 2020-2021, U of T received:

\$26.5 million

in corporate sponsored research from international companies

More than \$960,000

in funding supports for

60

joint international research projects led by U of T faculty in collaboration with researchers at other universities



COVID-19-Related Funding

COVID-19 Research Funding	FY 19–20	FY 20–21	FY 21–22 to date	Total
COVID-19-specific Programs	26,083,655	80,526,737	7,631,558	114,241,950
U of T-led Toronto COVID-19 Action Fund	–	\$10,465,402	–	\$10,465,402
Ontario Rapid Research Fund (Ontario Together Fund)	\$1,122,000	–	–	\$1,122,000
Canada Foundation for Innovation COVID-19 Exceptional Opportunities Fund	\$2,450,000	\$2,450,000	–	\$4,900,000
Federal and Provincial COVID-19 Rapid Research Response	\$1,116,715	\$4,293,892	\$77,575	\$5,488,182
Other COVID-19-related Research	\$1,283,732	\$2,559,434	\$1,252,058	\$5,095,224
All Funded Research Related to COVID-19	\$27,367,387	\$83,086,171	\$8,883,616	\$119,337,174

U of T COVID-19 Publication Statistics

Researchers investigating COVID-19 produced:

- **Over 1,500** publications in life science, physical sciences, social sciences and humanities
- These publications garnered **over 40,000** citations
- **54%** of these publications included international collaborations
- **17%** were in the social sciences and humanities
- The research involved nearly **400 principal investigators** and required over **650 funded research agreements**

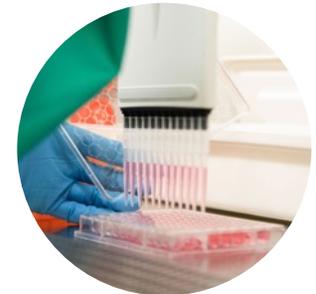
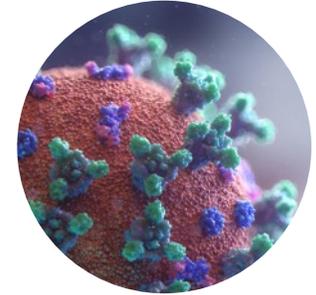
In number of COVID-19-related publications, U of T ranks:

1st

in Canada

5th

globally in number of publications among academic institutions, ahead of the University of Oxford and Johns Hopkins University



Pandemic-Focused ISIs

Institutional Strategic Initiatives (ISIs) has launched two pandemic-focused initiatives to prepare the University to combat future pandemics, train the next generation of health professionals, and advance health security in Canada and around the globe.



INSTITUTE FOR PANDEMICS



Innovation & Entrepreneurship



UNIVERSITY OF
TORONTO



**U of T is a leader in turning
research into products,
services, companies and jobs.**



An Innovation and Entrepreneurship Powerhouse

400+

teams supported in 2021 by U of T Entrepreneurship Community

Over 1,500

members of U of T community have registered for U of T's IP Education Program

Members of the U of T entrepreneurial community have launched

620+

venture-backed companies, and created

9,000+

jobs in the past 10 years



Launch of the Black Founders Network



BFN Black
Founders
Network

**Supporting Black founders,
creating more Black-led
businesses and celebrating
Black Excellence.**

New Institutional Strategic Initiatives (ISIs)



The Critical Digital Humanities Initiative (CDHI) equips scholars with technical and design expertise and fosters collaborations that deepen our understanding of power, culture, and social justice. From philosophy to history, law, literature, and more, we rely on the humanities to understand ourselves and our values, address questions of justice, and envision a more equitable world. Yet today, social media, digital surveillance, and other advanced technologies are reshaping the production and circulation of knowledge and power in our society, creating new forms of inequality and disinformation that skirt our laws and confound our best intentions.

CLIMATE POSITIVE ENERGY

One of the newest ISIs, the Climate Positive Energy Initiative links researchers developing social, scientific, technical, economic, and policy solutions around a common goal: supporting Canada and the world to achieve net-negative carbon emissions by 2050. This goal must be achieved while mitigating inequities in access to energy and the consequences of its production. Universities must lead this effort as this multifaceted challenge demands a broad interdisciplinary approach that fully considers the technical, political, human, and societal factors that pose barriers to reaching emission targets.

New Institutional Strategic Initiatives (ISIs)



The Data Sciences Institute (DSI) is a multidisciplinary hub for data science activity at U of T. The DSI provides the leadership and capacity to catalyze the transformative nature of data sciences across all disciplines in fair and ethical ways, and solve some of society's most complex and pressing problems. The DSI enhances and capitalizes on U of T's established data science leadership in a city renowned for its data science expertise.

Engagement & Impact



UNIVERSITY OF
TORONTO

DEFY
GRAVITY

Equity, Diversity, & Inclusion in Research & Innovation

The University of Toronto is committed to inclusive excellence in the pursuit of its academic mission because an equitable, diverse and inclusive environment contributes to original, significant and ground-breaking research across the University.



Research Supports for Students from Underrepresented Groups



- **The Community of Support** is a collaborative initiative enabling students who are Indigenous, Black, Filipino, economically disadvantaged, or who self-identify with having a disability to join and receive support at any stage of their academic research journey.
- The program matches trainees with research faculty at U of T.
- Medicine by Design will be the first to pilot this partnership initiative through an undergraduate internship program for trainees from underrepresented groups in Summer 2022.

Indigenous Initiatives

U of T is dedicated in its efforts to be a place deserving of Indigenous community members.

Indigenous initiatives led by VPRI aim to develop an interconnected and collaborative network of researchers, with review panels and funding streams to ensure research is aligned with Indigenous principles and values. These include:

- **The Indigenous Research Network (IRN)**
- **Connaught Indigenous Research Network Review Panel**
- **Connaught Indigenous Funding Stream**



VPRI by the Numbers



VPRI Serving the U of T Community



Research Funding

In 2021, our offices facilitated the work of:

2,600

principal investigators

By engaging with:

900

sponsors

340

private sector partners

1,400

funding programs

And administering:

4,200

new funding applications

\$560M

in funding awarded

9,200

research funds

VPRI Serving the U of T Community



Innovation & Entrepreneurship

180

invention disclosures

74

priority patent applications

39+

licensing and option agreements

290

commercialization projects

VPRI Serving the U of T Community



Oversight & Compliance

31

external audits

8,355

financial reports and related oversight

1,700

human ethics protocols

98

animal lab space assessments

598

animal use protocols

16,160

people trained in both EHS and OHS programs

1,357

lab inspections conducted (mix of in-person and virtual)

2,510

worksite assessments

11,214

occupational health assessments

VPRI Serving the U of T Community



Research Training & Resources

18,863

visitors to the CRIS website

662

events promoted to support the Research & Innovation community

171

Events and Workshops events directly supported by CRIS

209

new resources, videos and facilitation tools added

48

Research Roundup and

5

CRIS Compass issues published

VPRI Serving the U of T Community



Strategic Research Tools and Analytics

10,000+

visits to the
Research &
Innovation
Dashboards

11,000

researchers
profiled in
DiscoverResearch

1.4M

publications
automatically
uploaded for our
researchers from

25+

verified data
sources



Thank You!

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