
Transforming health care for our patients, our community and the world.

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Welcome

The Research Hospital: The Hospital Transformed

Transformation is a current theme at UHN: we’re transforming our physical space through major projects including the Toronto Medical Discovery Tower and the Krembil Discovery Centre; we’re collaborating in the transformation of health care delivery in Ontario through the creation of the Local Health Integration Networks; and we’re leading the province in initiatives in patient-centred care, patient safety and infection control, and information management.

Transformation is especially evident in Research at UHN: from the astonishing breakthroughs of our stem cell program to the launch of state-of-the-art facilities in regenerative medicine and comprehensive imaging platforms to the creation of our new nanotechnology/medicinal chemistry cluster to the stellar success of our neuroscience program in treating depression using deep brain stimulation—UHN is pioneering the “hospital of the future” through its research today.

The recent announcement of $119.9M in funding from the Canada Foundation for Innovation’s Research Hospital Fund—the largest award in UHN’s history—is a testament to UHN's national leadership position and represents a significant contribution to our future capacity for innovation.

This type of transformation is only made possible through the excellence of our researchers, the commitment and expertise of our staff and the support of our partners in the government, community, private sector and the Toronto Academic Health Sciences Network. In this report we salute them all—

Robert S. Bell, MDCM, MSc, FRCSC, FACS
President and Chief Executive Officer
University Health Network

Christopher J. Paige, PhD
Vice President, Research
University Health Network
Research is Integral to UHN

Patient care is the direct inspiration for much of our research. Improving care and outcomes is our ultimate goal. UHN breakthroughs in basic, translational and clinical research affect the lives of people around the world.

<table>
<thead>
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<th>UHN: Size and Scope</th>
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<td><strong>Staff and Students</strong></td>
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<tr>
<td>Affiliate Scientists</td>
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</table>
UHN Research is a leading-edge biomedical and healthcare research organization with international stature and a partner of the University of Toronto. Our research institutes are home to 530 scientists and clinician scientists and nearly 2300 staff and trainees.
At UHN, research takes place in labs, clinics and offices throughout our three-hospital campus.

Princess Margaret
To conquer cancer is the goal of the Princess Margaret Hospital. In its research arm, the Ontario Cancer Institute (OCI) including the Campbell Family Cancer Research Institute, researchers use cutting-edge tools in genomics, proteomics, structural biology, molecular biology, biophysics and the behavioral sciences to assess and develop new methods of diagnosis and therapy.

Toronto General
Through its research, the Toronto General Research Institute (TGRI) fuels the excellent clinical care given at the Toronto General Hospital. TGRI's wide-ranging programs span fields such as cardiology, transplantation, immunology and autoimmunity, infectious diseases, tissue injury and diabetes.

Toronto Western
The innovative research programs at the Toronto Western Research Institute (TWRI) centre on the neural and vision sciences, musculoskeletal disease and urban and community health. Therapies for illnesses such as vascular malformations, Parkinson's disease, glaucoma, retinal degeneration and arthritis are assessed and applied at the Toronto Western Hospital.
In addition to research programs on-site, UHN has launched a preferred partnership strategy to leverage research expertise from around the world.

The first success of this program is the new Shanghai-Toronto Institute for Health Research, created jointly by UHN China and the Shanghai Institute for Health Sciences and the Shanghai Institute of Organic Chemistry (both of the Chinese Academy of Sciences). STIHR promotes collaborative programs in drug development and biomarker discovery.
Collaboration is an important component of our success. UHN's programs and centres bring a range of expertise and disciplines to bear on some of our most challenging health problems.

Centres are arrayed by cluster in areas of strategic importance identified by the institute:

**Stem Cells/Regenerative Medicine**
- Krembil Neuroscience Centre
- McEwen Centre for Regenerative Medicine
- Philip S. Orsino Cell Therapy Facility
- Research Program in Immune Tolerance and Transplantation
- Cancer Stem Cell Centre
- Temmy Latner Thoracic Surgery Research Laboratories
- Gerry and Nancy Pencer Brain Tumor Centre
- Wharton Head and Neck Centre

**Biomarkers/Systems Biology/Convergence Research**
- Arthritis and Autoimmunity Research Centre
- IBM Life Sciences Discovery Centre
- T. Robert Beamish Family Convergence Centre of Medical Discovery
- Centre for Global eHealth Innovation
- Arthritis Centre of Excellence
- Arthritis Community Research and Evaluation Unit
- Canadian Network for Improved Outcomes in Systemic Lupus Erythematosus
- The Centre for Prognosis Studies in Rheumatic Diseases
- Al & Malka Green Artists Health Centre

**Drug Development/Molecular Medicine**
- Robert & Maggie Bras and Family New Drug Development Program
- McLaughlin-Rotman Centre for Global Health
- McLaughlin Centre for Molecular Medicine
- Shanghai-Toronto Institute for Health Research
- Centre for Molecular Design and Preformulations

**Imaging**
- Spatio-Temporal Targeting and Amplification of Radiation Response (STTARR) Innovation Centre
- Peter Munk Cardiac Centre (including the Imaging, Intervention and Innovation, or I3, Centre)
- Biophotonics and Laser Biophysics Group
- Joey & Toby Tanenbaum Family Gamma Knife Centre
- Wright Cell Imaging Facility
The McEwen Centre for Regenerative Medicine at UHN includes fifteen scientists at five Toronto hospitals and the University of Toronto, working to accelerate the development of more effective treatments for conditions such as heart disease, diabetes, blood cell diseases, respiratory disease and spinal cord injury. In 2008 Centre director Dr. Gordon Keller announced a new R&D alliance with the private sector to develop a broad range of next generation stem cell technologies for the pharmaceutical industry—a partnership that significantly expands the impact of UHN’s research.
Transform

Partners are Key

Improving health care requires resources and intellectual capital. UHN’s relationships help us to maximize the impact of our work and achieve our ambitious goals for change.

University of Toronto and the TAHSN Hospitals
Through the Toronto Academic Health Sciences Network, UHN is fully affiliated with the University of Toronto and other Toronto academic hospitals who collectively undertake a broad range of scientific collaboration, advocacy and policy development.

UHN Foundations
Our three foundations – the Princess Margaret Hospital Foundation, the Toronto General & Western Hospital Foundation, and the Arthritis & Autoimmunity Research Centre Foundation – are valued partners in our research enterprise. Through active fundraising programs they contributed $20M towards the Research core budget in 2007/08.

Private Sector Partnerships
UHN seeks and welcomes partnerships with the private sector which advance our research into clinical applications to enhance patient care. UHN currently undertakes research, contract research and clinical trials with more than 230 organizations.

We have extensive infrastructure supporting clinical studies in-house, including ethics, biostatistics, contract negotiation and clinical education. Through the Technology Development & Commercialization office, UHN has deployed intellectual property protection and marketing expertise to take new discoveries down the development pathway.
With part of its campus centred on University Avenue, UHN is at the heart of Toronto’s “Discovery District” and in close proximity to partners in the Toronto Academic Health Sciences Network as well as the province’s government seat in Queen’s Park.
August 2007
New Partnership Accelerates Diabetes Research
UHN announced the formation of a partnership with the University of Toronto's Banting & Best Diabetes Centre (BBDC) that will be housed at Toronto General Hospital. The partnership will enhance diabetes education, research and patient care, and expand the search for a cure. The major research focus will be islet cell biology and stem cell research.

October 2007
Research STTARR Shines
UHN researchers and staff gathered for the official opening of the new Spatio-Temporal Targeting and Amplification of Radiation Response (STTARR) Innovation Centre. The Princess Margaret Hospital facility is home to multidisciplinary radiotherapy research supporting cellular, preclinical, and clinical research.

October 2007
TWRI Director Named to Prestigious Academy
Dr. Peter St George-Hyslop, Director of the Toronto Western Research Institute, was elected a member of the Institute of Medicine of the (US) National Academy of Science. The Institute of Medicine is a non-profit organization responsible for providing science-based advice in 17 topic areas including matters of biomedical science, medicine and health. Membership is kept to 1,600.

October 2007
OCI Researcher Honoured
Dr. Richard Hill won one of Canada’s top cancer research awards, the National Cancer Institute of Canada’s 2007 Robert L. Noble Prize sponsored by the Canadian Cancer Society, recognizing outstanding achievements in cancer research.

October 2007
Research Day A Science Booster
On October 29, 2007 UHN Research Day attracted nearly 400 participants to a full schedule of events. The day included oral sessions, networking with industry partners and a poster session. The keynote was given by Dr. Allen Cowley Jr. (Professor and Chairman, Department of Physiology, Medical College of Wisconsin) on genetic architecture of cardiovascular systems functions and hypertension.

At Research Day, UHN announced its trainees of the year: Christina Loh (lab of Dr. Joan Wither) and Ryan Doherty (lab of Dr. Cheryl Arrowsmith). The 2007 Inventor of the Year was also honoured: Dr. David Jaffray, Senior Scientist, Division of Biophysics and Bioimaging, Ontario Cancer Institute, was presented with this award for his creativity in bringing cutting-edge physics and engineering to the practice of imaging in the clinic.

November 2007
Stem Cell Pioneers Win New Jubilee Award
Stem cell pioneers and UHN researchers Drs. James Till, Ernest McCulloch and John Dick were honoured with National Cancer Institute of Canada’s new Diamond Jubilee award for their landmark contributions in the history of understanding cancer.
New Cancer Research Partnership
The Terry Fox Foundation announced the creation of the Terry Fox Research Institute—a virtual Canadian research institute dedicated to translational cancer research with nodes in British Columbia, Alberta, Ontario and Quebec. The new institute will launch national collaborative projects that will have near-term impact on patient care. Ontario Cancer Institute’s Dr. Robert Rottapel will lead the Ontario node of TFRI while Dr. Christopher Paige is a founding Board member.

UHN Researcher Recognized Internationally
UHN congratulates Toronto Western Research Institute Senior Scientist Dr. Andres Lozano for receiving The Order of Spain. Dr. Lozano—who was born in Spain—was recognized for his significant contributions to Parkinson’s disease and depression research.

TGRI Researcher Takes Top CIHR Prize
Dr. Peter Singer was the recipient of this year’s CIHR Michael Smith Prize in Health Research—Canada’s Health Researcher of the Year in the category of Health Services and Systems and Population Health Research.

Royal College Recognizes OCI Scientist
UHN congratulates Dr. Shereen Ezzat who was recently awarded the 2008 Royal College CSCI Distinguished Scientist Award. The award acknowledges Dr. Ezzat’s significant research contributions in endocrinology.

New Program Tests Anti-Cancer Drugs
Princess Margaret Hospital has been awarded a $3M U.S. National Cancer Institute Phase I grant headed by Senior Scientist Dr. Lillian Siu, co-Director of the Robert and Maggie Bras and Family Drug Development Program. This grant—which only two new applications were funded in this cycle—was awarded to expedite access to and evaluation of novel anti-cancer agents for patients; to optimize clinical trial design for new treatments; and to characterize the effects of new drugs on their targets.

Director Lauded with MERIT
Ontario Cancer Institute Director and Senior Scientist Dr. Benjamin Neel received a renewal of his MERIT award from the National Institutes of Health. The MERIT award is presented to experienced researchers who have demonstrated a long-term commitment to and success in research. Dr. Neel is the only researcher in Canada to hold this honour, and one of only 4 outside the US.

UHN Researcher Wins for Basic Cancer Research
Dr. John Dick has been awarded the American Association for Cancer Research’s GHA Clowes Memorial Award—one of the most prestigious awards within the international cancer research community—for his innovative contributions to uncovering the biological origins and development of human leukemia.
April 2008  
**Prestigious Award to OCI Researcher**
UHN congratulates Dr. Frances Shepherd as she received a prestigious Premier’s Summit Award in Medical Research. Dr. Shepherd was recognized for her substantial and distinguished ongoing contributions to the field of lung cancer. It follows her earlier Scientific Award from the International Association for the Study of Lung Cancer (IASLC) for her role in bringing together basic and clinical researchers to build one of the world’s foremost groups of translational researchers in lung cancer.

May 2008  
**Killam Prize Awarded to UHN Researcher**
Dr. Peter St. George-Hyslop received the prestigious Killam Prize—governed by the Canada Council for the Arts—for his seminal research into the causes and mechanisms of neurodegenerative diseases which have radically improved the understanding of the molecular mechanisms of Alzheimer’s disease.

June 2008  
**$120M Investment in UHN Research Platforms**
A historic funding announcement provided a $119.9M boost for UHN Research when the Canada Foundation for Innovation announced new funding for UHN’s Advanced Therapeutics Research Platform.

The award—the largest research award in UHN’s history—includes $92M in new funding towards construction projects at all three UHN institutes. It will fund sophisticated new equipment across seven research clusters including signaling, clinical studies, stem cells, medical imaging, immunity, biomarkers and drug discovery programs. A significant proportion of the funding will be used to establish research programs at the new Krembil Discovery Centre at TWH.

Dr. Christopher Paige led the project; Drs. Ben Neel, Claire Bombardier, Gordon Keller, David Jaffray, Pam Ohashi, Eleanor Fish and Emil Pai were theme leads.

The remaining funding constituted a contribution of nearly $28M in institutional operating funding related to the award.
Philip Branton (Chair), PhD, FRSC / MSRC
Scientific Director
CIHR Institute of Cancer Research

Victor Dzau, MD
President & CEO, Duke University Health System
The Chancellor for Health Affairs
Duke University Medical Center

Ralph Steinman, MD
Henry G. Kunkel Professor and Senior Physician
Rockefeller University

Hans Wigzell, MD, PhD
Professor, Microbiology and Tumor Biology Center
Karolinska Institute
### Staff and Students

<table>
<thead>
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<th>Category</th>
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<td>$92,000,000</td>
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</table>

### Research Council in Oncology

**Director, OCI:**
Benjamin Neel (Chair)

### Division Heads

**Applied Molecular Oncology:**
Fei-Fei Liu

**Biophysics & Bioimaging:**
Brian Wilson

**Cancer Genomics & Proteomics:**
Linda Penn

**Psychosocial Oncology & Palliative Care:**
Gary Rodin

**Signaling Biology:**
Mitsu Ikura

**Stem Cells & Developmental Biology:**
Robert Rottapel

**Clinical Research Unit:**
Padraig Warde (Medical Site Director)

### Clinical Representatives

**Sylvia Asa**
**Mary Gospodarowicz**
**Jonathan Irish**
**Malcolm Moore**

Centre for Research Education and Training: David Rose
Site Lead: Sarah Downey
Research Operations: Lisa Alcia
Vice President, Research: Christopher Paige

### Applied Molecular Oncology

**Senior Scientists**
Asa, Sylvia
Bristow, Robert
Ezzat, Shereen
Gallie, Brenda
Hedley, David
Hill, Richard
Liu, Fei-Fei
Moore, Malcolm
Squire, Jeremy
Tannock, Ian
Tsao, Ming-Sound

**Scientists**
Done, Susan
Kamel-Reid, Suzanne
Liu, Geoffrey

**Affiliate Scientists**
Trudel, Suzanne

**Biophysics & Bioimaging**

**Senior Scientists**
Chakrabartty, Avijit
Hunt, John
Jaffray, David
Sherar, Michael
Siewerdsen, Jeff
Vitkin, Alex
Wilson, Brian
Zheng, Gang

**Scientists**

Cancer Genomics and Proteomics

**Senior Scientists**
Arrowsmith, Cheryl
Gariépy, Jean
Pai, Emil
Penn, Linda
Privé, Gilbert
Rose, David

**Scientists**
Kislinger, Thomas
Raught, Brian
Schimmer, Aaron
Tillier, Elizabeth

**Affiliate Scientists**
Bradley, Grace
Gauthier, Mona

### Prevention

**Senior Scientists**
Boyd, Norman
Minkin, Salomon
Trichler, David
Till, James

**Affiliate Scientist**
Ritvo, Paul

**Psychosocial Oncology and Palliative Care**

**Senior Scientists**
Devins, Gerry
Gagliese, Lucia
Rodin, Gary

**Scientists**
Edelstein, Kim
Howell, Doris
Zimmermann, Camilla

Affiliate Scientists
Espen, Mary Jane
Stewart, Donna

Signaling Biology
Senior Scientists
Hakem, Razqallah
Ikura, Mitsuhiko
Jurisica, Igor
Khokha, Rama
Manoukian, Armen
Ohashi, Pam
Wouters, Bradley

Scientists
Cheung, Peter
Koch, Anne
Okada, Hitoshi
Stambolic, Vuk
Vaziri, Homayoun

Stem Cell and Developmental Biology
Senior Scientists
Barber, Dwayne
Dick, John
Iscove, Norman
Keller, Gordon
Mak, Tak
Medin, Jeffrey
Messner, Hans
Minden, Mark
Neel, Benjamin
Paige, Christopher
Rottapel, Robert
Schuh, Andre
McCulloch, Ernest

Scientists
Moghal, Nadeem
Ailles, Laurie

Clinical Research Unit
Members
Amato, Dominic
Baker, Michael
Barth, David
Bayley, Andrew
Bell, Robert
Bernstein, Lori
Bezjak, Andrea
Blackstein, Martin
Boerner, Scott
Bordeleau, Louise
Brade, Anthony
Brandwein, Joseph
Brien, William
Brierley, James
Brown, Dale
Burkes, Ronald
Catton, Charles
Catton, Pamela
Chang, Hong
Chen, Christine
Chen, Xueyu
Chetty, Runjan
Cho, John
Chung, Peter
Cil, Tulin
Clarke, Blaise
Cleary, Sean
Clemons, Mark
Crook, Juanita
Croul, Sidney
Crump, R Michael
Cummings, Bernard
D’Agostino, Norma
Darling, Gail
Dawson, Laura
de Perrot, Marc
Deheshi, Ben
Dinniwell, Robert
Dodge, Jason
Easson, Alexandra
Elliott, Mary
Escallon, Jaime
Evans, Andrew
Feld, Ronald
Ferguson, Peter
Ferguson, Sarah
Finelli, Antonio
Fleshner, Neil
Freeman, Jeremy
Fyles, Anthony
Gallinger, Steven
Geddie, William
Ghazarian, Danny
Gilbert, Ralph
Gladdy, Rebecca
Goldstein, David
Goodwin, Pamela
Gospodarowicz, Mary
Grant, David
Greig, Paul
Gryfe, Robert
Guha, Ab
Gullane, Pat
Gupta, Abha
Gupta, Vikas
Hodgson, David
Hofer, Stafan
Hogg, David
Hope, Andrew
Irish, Jonathan
Jewett, Michael
Keating, Armand
Kennedy, Erin
Keshavjee, Shaf
Kiehl, Tim-Rasmus
Kim, John
Knox, Jennifer
Krzyzanowska, Monika
Kukreti, Vishal
Kuruvilla, John
Laframboise, Stefan
Laperriere, Normand
Leighl, Natasha
Leong, Wey
Levin, Wildred
Lipton, Jeffrey
Mackay, Helen
Manchul, Lee
Mason, Warren
Matthew, Andrew
McCart, Andrea
McCreary, David
McGilvary, Ian
McLean, Linda
McLean, Michael
McLeod, Anne
McLeod, Robin
Menard, Cynthia
Millar, Barbara-Ann
Miller, Naomi
Milosevic, Michael
Moulton, Carol-Anne
Murphy, Joan
O’Brien, Catherine
O’Sullivan, Brian
Oza, Amit
Paul, Narinder
Payne, David
Pendergast, Jacob
Perez-Ordonez, Bayardo
Pierre, Andrew
Quirt, Ian
Rasty, Golnar
Reece, Donna
Reznick, Richard
Ringash, Jolie
Rosen, Barry
Rouzbehman, Marjan
Santos, Gilda
Shaw, Patricia
Shepherd, Frances
Simpson, Rand
Siu, Lillian
Sridhar, Srikala
Sun, Alexander
Sutherland, Robert
Swallow, Carol
Sweet, Joan
Taylor, Bryce
Tkachuk, Douglas
Trachtenberg, John
Tsang, Richard
Van Der Kwast, Theodorus
Waddell, Thomas
Waldron, John
Wang, Jean
Warde, Padraig
Warr, David
Wei, Alice
Weinreb, Ilan
Wells, Woodrow
Witterick, Ian
Wong, Rebecca
Wood, Bob
Wunder, Jay
Yasufuku, Kazuhiro
Yee, Karen
Yeo, Erik
Youngson, Bruce
Zlotta, Alexandre

Where researchers have more than one affiliation within each institute, only one is shown. See wwwuhnresearch.ca for a full listing of affiliations.
## Staff and Students

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### Research Space
- **244,000 sq ft**

### Publications
- **659**

### Total External Funding
- **$67,000,000**

### Research Council

**Director, TGRI:**
Richard Weisel (Chair)

### Division Heads

**Behavioral Sciences & Health:**
Gary Rodin

**Cell & Molecular Biology:**
Eleanor Fish

**Clinical Decision-Making & Health Care:**
Claire Bombardier

**Experimental Therapeutics:**
John Parker

**Genomic Medicine:**
Katherine Siminovitch

### Clinical Program Heads

- Shaf Keshavjee
- Gary Levy/Ian McGillvray
- Conrad Liles
- John Parker
- Valérie Sales (CSRC)

### Site Lead: Marnie Escaf

### Research Operations: Lisa Alcia

### Vice President, Research: Christopher Paige

### Standing Guests

- Medical Technology Innovation: Vivek Rao
- Regenerative Medicine: Thomas Waddell

### TGRI Space Committee:
- Ren-Ke Li

### TGRI Appointments Committee: Shaf Keshavjee

### Centre for Research Education and Training: Mingyao Liu

### MBRC Facilities Management:
- Reginald Gorczynski

### Flow Cytometry: Li Zhang

### Microscopy: Lowell Langille

### Diabetes Program:
- George Fantus

### Behavioural Sciences & Health

#### Senior Scientists
- Flint, Alastair
- Kaplan, Allan
- Katz, Joel
- Olmsted, Marion
- Regehr, Glenn
- Rodin, Gary
- Stewart, Donna

#### Scientists
- Carter, Jacqueline
- Esplen, Mary Jane
- Grace, Sherry
- Jones, Jennifer

### Cellular & Molecular Biology

#### Senior Scientists
- Backx, Peter
- Berger, Stuart
- Cardella, Carl
- Cattral, Mark
- Cybulsky, Myron
- Dick, John
- Elsholtz, Harry
- Fantus, George
- Fish, Eleanore
- Gorczynski, Reginald
- Gottlieb, Avrum
- Grant, David

#### Affiliate Scientists
- Baker, Brian
- Colton, Patricia
- Davis, Caroline
- Gucciardi, Enza
- Hall, Peter
- Heslegrave, Ron
- Hodges, Brian
- Irvine, Jane
- McVey, Gail
- Nolan, Robert
- Reid, Graham
- Robinson, Gail
- Woodside, Blake

### Staff and Students
- Husain, Mansoor
- Johnston, Wayne
- Langille, Lowell
- Levy, Gary
- Liles, Conrad
- Liu, Mingyao
- Phillips, James
- Rubin, Barry
- Waddell, Thomas
- Zacksenhaus, Eldad
- Zhang, Li

### Scientists
- Irwin, David
- Jin, Tianru
- Kotra, Lakshmi
Lam, Tony
Volchuk, Allen

**Affiliate Scientists**
Belsham, Denise
Branch, Donald
Clark, David
Cole, Edward
Drucker, Daniel
Gramolini, Anthony
Lee, Douglas
Lee, Ping
Rocheleau, Jonathan
Wen, Xiao-Yan

**Clinical Decision-Making & Health Care**

**Senior Scientists**
Bombardier, Claire
Daar, Abdallah
Eysenbach, Gunther
Jadad, Alex
Krahn, Murray
Naglie, Gary
Singer, Peter

**Scientists**
Alibhai, Shabbir
Cheung, Angela
Urbach, David

**Affiliate Scientists**
Lok, Charmaine
Tomlinson, George

**CSRC Members**
Daly, Paul
Jewett, Michael
Kapral, Moira
Singer, Lianne

**Clinical Investigation & Human Physiology**

**Senior Scientists**
Allard, Johane
Bradley, Douglas
Cattran, Daniel
Floras, John
Kucharczyk, Walter
Lewis, Gary
Miller, Judith
Olivieri, Nancy
Steiner, George
Walmsley, Sharon

**Scientist**
Wong, Florence

**Affiliate Scientists**
Downar, Eugene
Easty, Anthony
Gianfelice, David
Herzenberg, Andrew
Logan, Alexander
Perkins, Bruce
Reilly, Raymond
Sawka, Anna

**CSRC Members**
Bril, Vera
Cameron, Douglas
Chan, Charles
Chan, Christopher
Chauhan, Vijay
Cooper, Richard
Djiani, George
Fedorko, Ludwik
Herridge, Margaret
Ing, Douglas
Jassal, Vanita
Karkouti, Keyvan
Karski, Jacek
McCluskey, Stuart
McRae, Karen
Parker, John
Ross, Heather
Salit, Irving
Schwartz, Len
Seidelin, Peter
Sherman, Morris
Siu, Samuel
Singer, Peter

**Experimental Therapeutics**

**Senior Scientists**
Keating, Armand
Kelvin, David
Keshavjee, Shaf
Li, Ren-Ke
Lindsay, Thomas
Liu, Peter
Medin, Jeffrey
Rao, Vivek
von Harssorf, Rüdiger
Weisel, Richard

**Scientists**
de Perrot, Marc
Nanthakumar, Kumaraswamy
Yau, Terrence

**Affiliate Scientists**
Fremes, Stephen
Hwang, David
McCarr, Andrea
McGilvray, Ian
Radisic, Milica
Sefton, Michael

**Genomic Medicine**

**Senior Scientists**
Cole, David
Hogg, David
Kain, Kevin
MacDonald, Kelly
Pei, York
Siminovitch, Katherine
Sole, Michael

**Scientist**
Kaul, Rupert

**Affiliate Scientists**
Boright, Andrew
Denommme, Gregory
Downey, Gregory
Osborne, Lucy

**Clinical Studies Resource Centre**

**Members**
Ali, Mohamed
Bargman, Joanne
Beattie, Scott
Brister, Stephanie
Colman, Jack
David, Tirone
Dzavik, Vladimir
Fenton, Stanley
Gardam, Michael
Girgrah, Nigel
Gold, Wayne
Goldszmidt, Eric
Granton, John
Grigoriadis, Sophie
Kachura, John
Kennedy, Sidney
Keystone, Edward
Lapinsky, Stephen
Lilly, Leslie
Loke, Julian
Manketlow, Ralph
Neary, Mary Ann
O’Malley, Martin
Rajan, Dheeraj
Rakowski, Harry
Ralph-Edwards, Anthony
Reznick, Richard
Richardson, Robert
Roberts, Heidi
Ross, John
Straus, Sharon
Sutton, David
Sweet, Joan
Wolman, Stephen
Yeo, Erik
# Toronto Western Research Institute at a Glance

<table>
<thead>
<tr>
<th>Staff and Students</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Senior Scientists</td>
<td>45</td>
</tr>
<tr>
<td>Scientists</td>
<td>8</td>
</tr>
<tr>
<td>Affiliate Scientists</td>
<td>17</td>
</tr>
<tr>
<td>CSRC Members</td>
<td>66</td>
</tr>
<tr>
<td><strong>Total Researchers</strong></td>
<td><strong>136</strong></td>
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<tr>
<td>Fellows</td>
<td>78</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>98</td>
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<tr>
<td><strong>Total Trainees</strong></td>
<td><strong>176</strong></td>
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<tr>
<td><strong>Total Staff</strong></td>
<td><strong>199</strong></td>
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<tr>
<td>Research Space</td>
<td>105,000 sq ft</td>
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<tr>
<td>Publications</td>
<td>459</td>
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<tr>
<td><strong>Total External Funding</strong></td>
<td><strong>$28,000,000</strong></td>
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</tbody>
</table>

**Research Council**
Director, TWRI:
Peter St George-Hyslop (Chair)

**Division Heads**
Brain Imaging & Behaviour – Systems Neuroscience:
Karen Davis
Genetics & Development:
Rod Bremner
Fundamental Neurobiology:
Peter Carlen
Health Care & Outcomes Research:
Elizabeth Badley
Patient-Based Clinical Research:
Jenny Heathcote
Visual Science: Martin Steinbach

**Clinical Representatives**
Michael Fehlings
Nizar Mohamed
Robert Inman

Centre for Research Education and Training: Frances Skinner
Site Lead: Kathy Sabo
Vice President, Research: Christopher Paige

---

**Brain, Imaging & Behaviour – Systems Neuroscience**

**Senior Scientists**
Brotchie, Jonathon
Chen, Robert
Davis, Karen
Hutchison, Bill
Lozano, Andres
McAndrews, Mary Pat
Mikulis, David
Sandor, Paul
Strafella, Antonio

**Scientist**
Kucharczyk, Walter

**Affiliate Scientists**
De Nil, Luc
Dostrovsky, Jonathan
Saint-Cyr, Jean

**Fundamental Neurobiology**

**Senior Scientists**
Broussard, Dianne
Carlen, Peter
Skinner, Frances
Tymianski, Michael
Wan, Qi

**Scientist**
Sugita, Shuzo

**Affiliate Scientists**
El-Beheiry, Hossam
Gaisano, Herbert
Zhang, Liang

**Genetics & Development**

**Senior Scientists**
Barr, Cathy
Bremner, Rod
Cardella, Carl
Eubanks, James
Fehlings, Michael
Inman, Robert
Jongstra, Jan

**Scientist**
Monnier, Philippe

**Health Care & Outcomes Research**

**Senior Scientists**
Badley, Elizabeth
Carette, Simon
Cassidy, David

Mills, Linda
Schlichter, Lyanne
Stanley, Elise
Tsui, Florence
Wither, Joan
Tator, Charles

---

Staff and Students
Davis, Aileen
Fortin, Paul
Gignac, Monique
Gladman, Dafna
Mahomed, Nizar
Mailis, Angela
Urowitz, Murray

**Affiliate Scientists**
Côté, Pierre
Cott, Cheryl
Lineker, Sydney
Martino, Rosemary

**Patient-Based Clinical Research**

**Senior Scientists**
Heathcote, Jenny
Lang, Anthony
Shapiro, Colin
Sharpe, James
Diamant, Nicholas

**Scientists**
Bernstein, Mark
Ferguson, Niall
Tarlo, Susan

**Affiliate Scientist**
Stephens, Robyn

**Visual Science**

**Senior Scientists**
Flanagan, John
Steinbach, Martin
Trope, Graham

**Scientists**
Hudson, Chris
Wong, Agnes

**Affiliate Scientists**
Eizenman, Moshe
Ethier, C. Ross
Gallie, Brenda
Gonzalez, Esther
Irving, Elizabeth
Wilkinson, Frances

**Clinical Studies Resource Centre**

**Members**
Anastakis, Dimitrios
Bookman, Arthur
Buys, Yvonne
Chan, Vincent
Chapman, Kenneth
Chung, Frances
Davey, Roderick
del Campo, Jose Martin
Devenyi, Robert
Epstein, Trina
Escallon, Jaime
Etlin, David
Evans, Michael
Farb, Richard
Fung, Ken
Gentili, Fred
Graham, Brent
Hawa, Raed
Iwanochko, Mark
Lam, Wai-Ching
Lam, Robert
Manninen, Pirjo
Massicotte, Eric
McCartney, Colin
McGuire, Glenn
McIntyre, Roger
Melvin, Kenneth
Miyasaki, Janis
Montanera, Walter
Moro, Elena
Nasmith, James
Ondasian, Ivy
Ogilvie, Richard
Ogilvie-Harris, Darrell
Panisko, Daniel
Parikh, Sagar
Peng, Philip
Radomski, Sidney
Rampersaud, Yoga Raja
Rootman, David
Rosen, Cheryl
Saltzman-Benaiah, Jennifer
Seyone, Chanth
Shannon, Patrick
Shaw, James
Silver, Frank
Simons, Martin
Singer, Shaun
Slomovic, Allan
St George-Hyslop, Peter
Stanbrook, Matthew
Stubbs, Barbara
Syed, Khalid
Terbrugge, Karel

Tu, Karen
Tumber, Paul
von Schroeder, Herbert
Voon, Valerie
Wherrett, John
Willinsky, Robert
Wong, Jean
Wong, David
Yogendran, Suntheralingam
Yu, Eric
Funding

UHN Research Core/TMDT Operating Funding (000s)

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Princess Margaret Hospital Foundation</td>
<td>$16,376</td>
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<tr>
<td>Recoveries</td>
<td>$10,876</td>
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<tr>
<td>Ministry of Health and Long-Term Care</td>
<td>$2,816</td>
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<tr>
<td>Investment income</td>
<td>$2,585</td>
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<tr>
<td>Includes funding from the Toronto General &amp; Western Hospital Foundation</td>
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<tr>
<td>Toronto General &amp; Western Hospital Foundation</td>
<td>$2,584</td>
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<tr>
<td>Arthritis &amp; Autoimmunity Research Centre Foundation</td>
<td>$1,000</td>
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<tr>
<td>Other</td>
<td>$18,253</td>
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<tr>
<td>TOTAL</td>
<td>$54,490</td>
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</table>

Top Sources of External Funding (000s)

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Canadian Institutes of Health Research</td>
<td>$38,817</td>
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<tr>
<td>Canada Foundation for Innovation/Ontario Innovation Trust/Ontario Research Fund</td>
<td>$24,614</td>
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<tr>
<td>Ontario Institute for Cancer Research</td>
<td>$8,102</td>
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<td>National Cancer Institute of Canada</td>
<td>$6,694</td>
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<tr>
<td>National Institutes of Health (US)</td>
<td>$5,111</td>
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<tr>
<td>Heart and Stroke Foundations</td>
<td>$3,767</td>
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<tr>
<td>Canada Research Chairs Program</td>
<td>$3,577</td>
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<tr>
<td>Ontario Genomics Institute</td>
<td>$2,441</td>
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</tbody>
</table>

Total Project Funding Awarded by Type (000s)

- Operating Grants: $75,634
- Career/Traineeship Awards: $10,543
- Corporate Contracts: $11,073
- UHN Foundations: $23,522
- Clinical Studies: $24,385
- Infrastructure/Maintenance Awards: $29,661
- Other: $12,722

Total: $187,540

All figures represent fiscal year 2007/08 and include Ontario Cancer Institute (Princess Margaret Hospital); Toronto General Research Institute (Toronto General Hospital); and Toronto Western Research Institute (Toronto Western Hospital). Figures may not sum due to rounding. These figures have been provided by UHN Research Financial Services and Research Grant and Contract Services. These figures have not been audited. However, they have been included in the overall UHN statements and, as a result, have been subjected to audit procedures deemed appropriate by auditors in order to determine their overall reasonableness.
Abbott Laboratories
Actelion Pharmaceuticals
Adjuvant Informatics
Advanced Cardiovascular Systems
Advanced Neuronmodulation Systems
Aegera Therapeutics Inc.
Alcon Canada
Allon Therapeutics
American Association for Hand Surgery
American Association of Neurosurgical Surgeons
American Association of Physicians in Medicine
American Urological Association Foundation
Amgen Canada
Amorfix Life Sciences
Amyotrophic Lateral Sclerosis Society of Canada
Annidis Health Systems
Anthera Pharmaceuticals
AOSpine North America
Argonne National Laboratory
Arius Research
Arthritis Research Centre of Canada
Arthritis Society
Association of Faculties of Medicine of Canada
Astellas Pharma Canada
AstraZeneca Canada
Aventis Pasteur
Aviva Canada
Banting and Best Diabetes Centre
Baycrest
Bayer
Beckman Coulter
Bill & Melinda Gates Foundation
BIO Ventures for Global Health
BioDiscovery Toronto
Biogen Idec
BioMimetic Pharmaceuticals
Biostе
BioTheryx
Boehringer Ingelheim
Brain Tumour Foundation of Canada
Bristol-Myers Squibb Pharmaceutical Research Institute
Canada Foundation for Innovation
Canada Research Chairs Program
Canadian Anesthesiologists’ Society
Canadian Arthritis Network
Canadian Association of Gastroenterology
Canadian Association of Radiation Oncologists
Canadian Breast Cancer Foundation
Canadian Breast Cancer Research Alliance
Canadian Coordinating Office for Health Technology Assessment
Canadian Cystic Fibrosis Foundation
Canadian Diabetes Association
Canadian HIV Trials Network
Canadian Institutes of Health Research
Canadian Liver Foundation
Canadian Lung Transplant Study Group
Canadian National Institute for the Blind
Canadian Society for Clinical Nutrition
Canadian Stroke Network
Canadian Urologic Oncology Group
Cancer Care Ontario
Cancer Research Institute
Cancer Research Society
Celgene
Cell Genesys
Centre for Addiction and Mental Health
Cephalon
Chlorion Pharma
Christopher Reeve Paralysis Foundation
Centre Hospitalier de l’Université de Montréal
Craig H. Neilsen Foundation
Cyclomedica Australia
Debiopharm
Dendreon
Dompé
Dystonia Medical Research Foundation
Eastman Kodak
Edwards Lifesciences
Eisai
Eisai Medical Research
Elekta Instrument
Elekta Oncology Systems
Eli Lilly Canada
European Hematology Association
Exelixis
Expression Diagnostics
Fight for Sight
Foundation Fighting Blindness Canada
Foundation of the International Society of Blood Transfusion
Fragile X Research Foundation of Canada
Gambro BCT
Gemin X Biotechnologies
Genentech
Genome Canada
Genzyme
GlaxoSmithKline
Government of Ontario
Heart and Stroke Foundation of Ontario
Heart Failure Society of America
Hoffman-La Roche
Hospital for Sick Children
Howard Hughes Medical Institute
Health Technology Exchange
Human Genome Sciences
Idenix Pharmaceuticals
International Institute for Research in Paraplegia
International Society for Heart & Lung Transplantation
J.P. Bickell Foundation
James S. McDonnell Foundation
Janssen-Ortho
Johnson and Johnson
Juvenile Diabetes Research Foundation International
Keyrs Biopharmaceuticals
Kidney Foundation of Canada
KuDOS Pharmaceuticals
Kyowa Pharmaceutical
Kyphon
Lentigen
Leukemia & Lymphoma Society
Li Ka Shing Foundation
 Lundbeck
Lupus Ontario
Mayo Clinic
McMaster University
Medical Image Fusion
Medical Council of Canada
Medicare
Medtronic
Merck Frosst
Mesothelioma Applied Research Foundation
MethylGene
MGI Pharma
Michael J. Fox Foundation for Parkinson’s Research
MicroVention
Micrus Endovascular
Millennium Pharmaceuticals
Mikana Therapeutics
Ministry of Health & Long Term Care
Ministry of Research and Innovation
Multiple Myeloma Research Foundation
Multiple Sclerosis Society of Canada
Muscular Dystrophy Association of Canada
NARSAD
National Cancer Institute of Canada
National Institutes of Health
National Parkinson Foundation
National Patient Safety Foundation
Natural Sciences and Engineering Research Council of Canada
NCE: Canadian Arthritis Network
NCE: Canadian Stroke Network
NCE: Stem Cell Network
NCE:Canadian Stroke Network
Neuroscience Research and Education Foundation
NMT Medical
Novacea
Novartis
Novo Nordisk Canada
NPS Allelix
NPS Pharmaceuticals
Octapharma
Ontario Cancer Biomarker Network
OCE: Centre of Excellence for Photonics
Ontario Consortium for Image Guided Therapy and Surgery
Ontario Genomics Institute
Ontario HIV Treatment Network
Ontario Institute for Cancer Research
Ontario Mental Health Foundation
Ontario Neurotrauma Foundation
Ontario Problem Gambling Research Centre
Ontario Research and Development Challenge Fund
Ontario Thoracic Society
Ortho Biotech
Osiris Therapeutics
PAREXEL
Parkinson Society Canada
PDL BioPharma
Pediatric Oncology Group of Ontario
Pfizer Canada
Philips Electronics North America
Physicians’ Services Inc. Foundation
Princess Margaret Hospital Foundation
Procter & Gamble Pharmaceuticals
Prostate Cancer Research Foundation of Canada
Proteolix
Quanser
Quintiles
RaySearch Medical
Reata Pharmaceuticals
ResMed Foundation
Respiromics Sleep and Respiratory Research Foundation
Rett Syndrome Research Foundation
Rheumations
Rick Hansen Foundation
Robarts Research Institute
Royal College of Physicians and Surgeons of Canada
Royal Victoria Hospital Foundation
SAIC Frederick
Sangamo Biosciences
Sanofi -Synthelabo Canada
Sanofi-aventis Canada
Schering Canada
Server Canada
Shire Canada
Signal Pharmaceuticals
Spiration
Stanley Medical Research Institute
Strauss Foundation
Susan G. Komen Breast Cancer Foundation
Synthes Spine Company
Taro Pharmaceuticals Inc.
Teva Neuroscience
Theralase
Thoratec
Tomorrowian Cancer Research Network
U.S. Army Department of Defense
U.S. Army Medical Research Acquisition Activity
University of British Columbia
University of Rochester
University of Toronto
Varian Medical Systems
Vertex Pharmaceuticals
Vion Pharmaceuticals
ViroPharma
VistaGen Therapeutics
Workplace Safety and Insurance Board
YMR Biosciences
ZIOPHARM Oncology
Office of the Vice President, Research
University Health Network
610 University Avenue, #7-504
Toronto, ON
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416.946.2000

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