

The Toronto Rehabilitation Institute (Toronto Rehab) has one of the world's fastest growing and most comprehensive rehabilitation research programs. We are dedicated to advancing rehabilitation and enhancing quality of life for the 3.6 million Canadians and millions more worldwide living with disabling injury and illness or age-related conditions. **Our research benefits people affected by conditions such as stroke, brain injury, heart disease, spinal cord injury, cancer and Alzheimer's disease.**

## Our history

Toronto Rehab's research program was launched in 2001 with a grant from the Ontario Ministry of Health and Long-Term Care and a unique mandate from the Government of Ontario to build capacity for rehabilitation research in the province and advance rehabilitation knowledge and practice through research. Toronto Rehab is Canada's largest academic adult rehabilitation hospital. We are a fully affiliated teaching and research hospital of the University of Toronto, to which many of our scientists are appointed. We also have affiliations with many other universities in Ontario including Waterloo, York, Wilfrid Laurier and Ryerson, as well as universities in other provinces and Countries.

## Why rehabilitation research?

The need for rehabilitation research has never been greater due to:

- The rising number of Canadians who are disabled; their number will reach an estimated 4.1 million by 2011
- An aging and growing population; the elderly are the fastest growing segment of our population
- A rise in the prevalence of chronic disease
- The epidemics of diabetes and obesity
- Medical advances that are saving and prolonging lives

## What is rehabilitation research?

Rehabilitation research provides practical solutions to everyday problems faced by people with disabilities and those encountering older age. Our discoveries are helping to:

- Speed recovery with new interventions
- Facilitate a quicker return to the community and work
- Support people safely in their homes for longer
- Enhance people's quality of life, participation and productivity
- Develop new and marketable assistive technologies, devices and products
- Ensure that health care is delivered in the best way possible
- Prevent disability
- Assist those who care for people with disabilities

## Major areas of study

Scientists at Toronto Rehab lead seven research teams that focus on: activity; cognition; communication; mobility; optimization of the rehabilitation system; sleep and cardiopulmonary function; and technology. Researchers and students come from a wide range of disciplines. Many have engineering, computer science or clinical backgrounds.

### Vice President, Research

Dr. Geoff Fernie, PhD, MIMechE, CEng, PEng

### iDAPT Project Manager

Dayle Levine, BPHE

### Manager, Research Administration

Lois Ward, AOS (NY)

### Research Faculty 2006/07

Senior Scientists: 12

Scientists: 13

Adjunct Scientists: 36

Trainees (postdoctoral fellows, graduate and summer students): 125

Research Support: 57

### Research Funding 2006/07

Ministry of Health and Long-Term Care: \$3,000,000

Toronto Rehab Foundation: \$1,000,000

External Research Grants: \$3,610,911

Canada Foundation for Innovation (operating): \$260,319

**Total: \$7,871,230**

### Publications 2006/07

Book chapters: 6

Journal papers: 144

## Facilities

Toronto Rehab scientists are based at several sites, including:

- University Centre (550 University Ave.)
- Rehabilitation Sciences Building, University of Toronto (500 University Ave.)
- Lyndhurst Centre (520 Sutherland Dr.), home to Canada's largest spinal cord rehabilitation program
- 180 Elm St., until a new building is erected as part of a multi-million dollar redevelopment of the hospital's University Centre.

Toronto Rehab is currently building one of the most advanced rehabilitation research environments in the world. iDAPT (Intelligent Design for Adaptation, Participation and Technology) is a \$36 million initiative that will create an integrated network of research facilities where ideas can be cultivated, tested and applied in the real world, leading to practical new therapies and assistive devices.

By 2011, iDAPT facilities at Toronto Rehab's University and Lyndhurst Centres, and at the Rehabilitation Sciences building of the University of Toronto, will be fully operational with 14 labs and several other research spaces—in total, 60,000 square feet of renovated and newly constructed space. The centrepiece will be an underground lab with a unique hydraulic motion simulator that can recreate winter challenges, such as ice and snow-covered surfaces. Several iDAPT labs are already open. For details, please visit [www.torontorehab.com/research](http://www.torontorehab.com/research).

## Commercialization

Toronto Rehab has close links with private industry. Our industry-friendly Club program and state-of-the-art design and prototyping facilities help to accelerate the movement of products into the marketplace. We are also creating jobs and wealth in our community by providing the emerging assistive devices sector in Ontario and across Canada with an important boost and competitive edge.

## Other highlights

- Toronto Rehab actively involves consumers in research through the annual Toronto Rehabilitation Institute Scholarship in Rehabilitation-related Research for Students with Disabilities, supported by TD Bank Financial Group.
- Toronto Rehab is a member of BioDiscovery Toronto and the University of Toronto Innovation Foundation, which are partners in the Ontario Research Commercialization Program.
- The Ontario Rehabilitation Technology Consortium (ORTC), a network of assistive technology researchers, is headquartered at Toronto Rehab.
- The ORTC and Center for Inclusive Design and Environmental Access at the University of Buffalo: the State University of New York are co-hosting a Rehabilitation Engineering and Research Center on Universal Design, funded by the U.S. National Institute on Disability and Rehabilitation Research.

Toronto Rehab researchers work closely with the nurses, doctors, therapists and others who care for our patients, and with valued partners and research collaborators across Canada and around the world.

## For further information:

To find out more or to download a copy of Toronto Rehab's annual research report highlighting some of our many research accomplishments, please visit [www.torontorehab.com/research](http://www.torontorehab.com/research) or contact Lois Ward, Manager, Research Administration, at 416-597-3422, ext. 7600 or [ward.lois@torontorehab.on.ca](mailto:ward.lois@torontorehab.on.ca).