

Together we can

Research



We all owe our health to research. A better understanding of disease — how to prevent it, diagnose it and treat it — stems from breakthroughs in the laboratory and at the bedside. Inquiry and discovery are the hallmarks of any teaching hospital and the cornerstone of the shared mission of the university hospitals of Kingston.

Kingston General Hospital, Hotel Dieu Hospital and Providence Care each have a proud tradition of excellence in health care research. From investigations in basic science, to clinical and health services research, our discoveries are helping to dramatically improve and prolong patient lives. Among a number of fields of existing and emerging strength, research initiatives in computer-assisted orthopaedic surgery, hemophilia, trauma, amyloid and Alzheimer

disease, sexual dysfunction, prostate disorders, gastrointestinal disorders, reproductive and neonatal research are earning international acclaim. Each year, the hospitals' investigators attract more than \$18 million in external funding from national and international granting agencies, and clinical trial partnerships.

Building on these successes and toward a vision of an enhanced and integrated health research program, the university hospitals of Kingston are investing in the creation of a robust research environment that supports the translation of research, from discovery, through clinical application, to knowledge synthesis, and dissemination hospital-wide and beyond.

Building Capacity

Since 2002, research space at the university hospitals of Kingston has grown by approximately 100,000 square feet and another 25,000 square feet of expansions are planned as part of a comprehensive strategy to enhance research capacity and drive local innovations of benefit to patients throughout the region and around the globe:

- The Clinical Research Centre at KGH is a dynamic and interactive environment where practicing doctors from a number of the hospitals' key research programs work together and with key consultants in research methods, project management and biostatistics. The Centre is also able to provide our other

hospital-based researchers with consultation services in research study design and an infrastructure that supports the development and successful completion of research projects.

- More than 50 basic and clinical scientists and their students in the Gastrointestinal Diseases Research Unit (GIDRU) are exploring questions related to digestive diseases in a new \$9 million, 7,000 square-foot research facility supported by Kingston's teaching hospitals, Queen's University, the Province of Ontario and the country's first Canada Foundation for Innovation grant in the digestive sciences.
- At the Human Mobility Research Centre (HMRC) surgeons, engineers, scientists and students combine research and patient care in the quest to improve mobility of people with bone and joint disorders.
- A new \$1 million research facility for the Centre for Applied Urological Research (CAUR) is fueling an expanded program of basic and clinical urological research, including studies on prostate cancer and male sexual dysfunction.
- Plans are being developed for two additional centres in Translational Biology Knowledge Synthesis and Transfer that will help to translate critical research discoveries into new diagnostics, therapies and models of care.



Success Stories

Research at the university hospitals of Kingston is making a notable difference in the lives of patients throughout Southeastern Ontario. For example:

- HMRC is a pioneer in computer-assisted surgery that includes the world's first computer-assisted wrist, hip and knee surgeries. KGH is one of the few centres in the world to employ computer-assisted treatment models and the only one to feature an operating room equipped with high-tech computer navigation technologies. HMRC's new \$1.6 million Human Motion Performance Lab at Hotel Dieu will be the most advanced laboratory of its kind in Canada. Researchers will study the human movement needs of middle-aged people and active seniors with mobility challenges who want to increase their range of motion so they can continue to work and engage in recreational activities.
- A 30-year-old discovery by university hospital urologists remains the standard of care for bladder cancer and the foundation of current immunotherapy research. More recently, CAUR researchers established the world's first treatment protocols for various forms of prostatitis.
- GIDRU researchers are world-recognized for their discoveries leading to improved therapies for the treatment of inflammatory bowel disease, irritable bowel syndrome, esophageal disorders, colon cancer, and obesity.

Equipment

While a good number of research discoveries take root in the

examination and operating rooms, the equipment needs of hospital researchers are often far above and beyond the technologies used in the delivery of clinical care.

HMRC's researchers, for example, rely on high-speed computers, a CT scan and angiography arm to guide the development of new models of computer-assisted surgery. The team's engineers and computer scientists are also working to modify existing technologies and design new tools used to assess patient mobility before and after treatment.



External grants and funding from government agencies, including the Canada Foundation for Innovation, provide important operational funding for one-time equipment purchases. Private support helps to provide researchers with the means to keep abreast of new technologies, manage expensive repairs and purchase the additional equipment and resources required to translate discoveries into improved diagnosis, prevention and treatment strategies.

Education

Creating an environment in which talented hospital clinicians can actively pursue their research interests is a top priority of the

university hospitals of Kingston. It's also a major challenge. In recent years, Canada has seen a dramatic decline in the number of clinicians interested in conducting basic and clinical research. Fewer medical school graduates than ever before are complementing their studies with graduate work; those who do struggle to balance twin interests throughout a demanding career.

The university hospitals of Kingston are implementing a novel strategy to grow the number of clinician scientists at Hotel Dieu Hospital, KGH and Providence Care. Investments in staff education opportunities will strengthen the capacity of research staff to play a lead role in the day-to-day planning, implementation and analysis of research — activities that are traditionally managed by clinician scientists with significant costs to patient delivery. At national and international workshops and conferences, key members of the clinical research team may share discoveries, learn timely new strategies and pinpoint innovative areas for development, while allowing clinicians the time to better balance research and patient care.

Opportunities for giving

- Unrestricted gifts to help the Program
No minimum
- Equipment (list available)
\$1,000 - \$175,000
- Invest in local hospital research
No minimum