

### Research to Improve Patient Care

The world turns to The Ottawa Hospital for answers to its most complex healthcare challenges.

Research breakthroughs at The Ottawa Hospital mean better care and life-saving medicine. Everyday we look beyond the laboratory and see the results of what we do - lives saved, better care, suffering stopped. We relentlessly pursue answers to the world's most challenging health care problems and we do so with knowledge, experience and care. Our research is fuelled by a passion to create made-in-Ottawa solutions for a healthier world.

Join our campaign and let's give the world a little Tender Loving Research.

### The best patient care begins with research

Safer drugs, better diagnoses, faster and more accurate assessments of life-threatening injuries – these are just some of the ways researchers at the Ottawa Hospital Research Institute are improving patient care and safety.

Most of the research done at the Ottawa Hospital Research Institute is focused directly on patient care by changing and improving medical protocols and practices. It is the kind of research that can only take place in a hospital-based research institute with an international reputation. Many of the practices studied and established in Ottawa are now in place in hospitals around the world. For patients, it is research that means shorter hospital stays and better outcomes. For hospitals, it is research that saves lives and health-care dollars.



DR. MARC RODGER Physician and Scientist

# Physicians around the world benefit from made-in-Ottawa medical protocols

In the next few years, the Ottawa Hospital Research Institute will expand its research that improves medical practices, with an emphasis on clinical trials and on knowledge translation. As a result, research will be shared and adopted by those who work directly with patients. Sharing best practices and new approaches improves standards of care at The Ottawa Hospital and around the world. That's why we're raising \$15 million to expand the practice-changing research team and research facilities. We will:

- · Increase support for our research teams and attract top recruits from around the world
- Build new research facilities and retrofit older ones to ensure that our researchers have the tools to compete with top global research centres
- Invest in technology and resources to help front-line clinicians design and conduct innovative clinical trials that can make a difference for our patients

# Researchers and clinicians at The Ottawa Hospital are improving patient care

- Patients at The Ottawa Hospital (TOH) and around the world now receive safer anti-bleeding
  drugs during heart surgery, thanks to a clinical trial led by Drs. Dean Fergusson and Paul
  Hébert. The clinical trial compared three commonly used antibleeding drugs and showed that
  one was causing undue deaths. This trial has likely saved thousands of lives and millions of
  dollars for hospitals; the safer anti-bleeding drugs now used are much less expensive.
- Dr. Ian Stiell's Ottawa Ankle Rules have improved the diagnosis of ankle injuries and decreased emergency room wait times at TOH and around the world. These rules allow emergency clinicians to rule out a broken ankle based on a few simple clinical factors, without the need for an ankle x-ray. Dr. Stiell and his team also developed similar rules for spine, head and knee injuries. These rules help clinicians provide better and faster care for patients, while also increasing efficiency and reducing costs in the emergency department.
- Dr. Shawn Aaron's research on lung disease has resulted in better approaches for diagnosing asthma, better infection control for people with cystic fibrosis and better treatment approaches for chronic obstructive pulmonary disease.
- Drs. Phil Wells and Marc Rodger have transformed how dangerous blood clots in the legs, arms and lungs are treated at TOH and around the world. They have developed faster and more accurate diagnostic methods, a home-based treatment approach and an interactive phone system to improve communication with patients. Their research has also allowed many people to safely stop taking blood-clot treatments, thus sparing them unnecessary sideeffects and inconvenience.
- Dr. Derek Jonker led the world's largest clinical trial using a novel biological therapy called cetuximab for colon cancer. Patients who received this treatment survived 23% longer and had significant improvements in quality of life. Thanks to this study, cetuximab is now widely available for patients at TOH and beyond.
- Drs. Mark Walker and Shi Wu Wen are leading a large international clinical trial that could lead to better approaches to prevent pre-eclampsia during pregnancy. This potentially deadly high-blood-pressure condition affects up to eight per cent of all pregnancies.

"Research to improve patient care and safety is as important as having the best doctors. best equipment and state-of-the-art facilities. We want patients at The Ottawa Hospital to have access to the best practices, best care protocols, new medications and most up-to-date diagnostic rules. We use clinical research to make that happen."

Dr. Phil Wells, Chief, Department of Medicine, The Ottawa Hospital, and Senior Scientist.

Ottawa Hospital Research Institute



- Dr. Dawn Stacey is a pioneer in the development of strategies for implementing decision aids that help patients decide which treatments are right for them. She leads a group that helped develop and implement decision aids for people with cancer, lung disease, arthritis and other conditions.
- Members of the HIV Research Group are helping people with HIV live healthier and more normal
  lives. For example, Dr. Jonathan Angel's research has allowed some people to safely stop taking
  antibiotics that cause serious side-effects. Drs. Paul MacPherson and Louise Balfour are also
  pioneering Canada's first rigorous clinical trial of a smoking-cessation program for people with HIV.
  This trial is aimed at reducing the growing incidence of cardiovascular disease in this population.
- Dr. Alan Forster led the first major study of medical errors in Canadian hospitals and is a pioneer in improving patient safety. He has developed a Data Warehouse and eTrigger computer system to track, monitor and improve patient safety at TOH.
- Dr. Janine Malcolm developed a specialized insulin ordering system to ensure that patients with diabetes who are admitted to TOH receive the appropriate dose of insulin to control their blood sugar. This system greatly improved care and reduced complications in these patients.
- Dr. David Moher leads The Ottawa Hospital Evidence Secretariat, which rapidly reviews and summarizes health research studies from around the world to help TOH leaders develop protocols and practices to benefit patients. The group's work helped TOH develop several new innovative approaches - improving care for pregnant women, newborns, people with chronic diseases and patients in the emergency department.
- Dr. David Grimes has spearheaded the development of Canada's first national Parkinson's guidelines, designed to help family physicians and other health-care professionals provide a consistent level of diagnosis and treatment for Parkinson's disease in Canada. He also leads Ottawa's Parkinson Research Consortium.

#### Research changed a life

Thomas d'Aquino, a prominent national business leader, entrepreneur and lawyer, says research helped save his life after he began to experience sharp pain in his back. Because of diagnostic rules and outpatient treatment programs developed by Drs. Phil Wells and Marc Rodger at the Ottawa Hospital Research Institute, Thomas was quickly diagnosed and treated for a life-threatening blood clot in his lung. The rapid assessment and treatment programs developed by Drs. Wells and Rodger meant Thomas was placed on life-saving medication immediately – without ever having to be admitted to the hospital. Research means patients at The Ottawa Hospital are the first to benefit from new medical practices. "This is research that saved my life," says Thomas.

#### **About the Ottawa Hospital Research Institute**

Our goal at the Ottawa Hospital Research Institute is to make tomorrow's health care possible today; bringing new hope to our patients, while advancing health research at a global level. The Ottawa Hospital Research Institute is the research arm of The Ottawa Hospital and an affiliated institute of the University of Ottawa, with more than 1,700 scientists, clinical investigators, trainees and staff. In 2013, The Ottawa Hospital ranked in the top five per cent of more than 4,000 academic institutions worldwide for impact of research publications, and we are currently ranked third among more than 600 Canadian hospitals for research grants from the prestigious Canadian Institutes of Health Research. With the Ottawa Hospital Research Institute's unique commitment to having PhD researchers work alongside clinicians, new discoveries are quickly brought to the patient's bedside. Whether it's new drugs, new protocols or new medical practices, patients at The Ottawa Hospital benefit from research every day.

