



The Ottawa Hospital | L'Hôpital d'Ottawa

Inspired by research. Driven by compassion. | Inspiré par la recherche. Guidé par la compassion.

Affiliated with



uOttawa

The Ottawa Hospital Annual Report 2015–2016



Message from The Ottawa Hospital Board Chair and CEO



Jamie McCracken
Chair, Board of
Governors



Dr. Jack Kitts
President and CEO

**“Inspired by research.
Driven by compassion.”**

The Ottawa Hospital's new tagline is the theme for this year's Annual Report. Throughout the year, we have asked staff, patients and families to share their inspirational stories and this Annual Report provides a sample of those extraordinary accomplishments. We invite you to take the time to scroll through the report and be inspired by the stories in it.

This past year, we saw The Ottawa Hospital become one of the first hospitals in Canada to offer hip and knee replacements as day surgery. In 2015, one of the world's most prestigious medical journals published the top 12 studies that had a significant influence on the way we care for patients around the world – The Ottawa Hospital was recognized for two of these.

We are proud of the life-changing care our patients receive through state-of-the-art technology and leading research, but the heart of The Ottawa Hospital is the talent of its people. Their compassion and deep sense of commitment to our patients is a true source of pride. It's an honour to work with them in the service of our patients and for the betterment of our community.

Message from the Ottawa Hospital Research Institute Board Chair and CEO



Ian Mumford
Chair, Board of
Directors



Dr. Duncan Stewart
Executive Vice-President,
Research, The Ottawa
Hospital
CEO and Scientific
Director, Ottawa Hospital
Research Institute
Professor of Medicine,
University of Ottawa

“One of our unique strengths at The Ottawa Hospital is the ability to translate these discoveries into new therapies and test them in rigorous clinical trials.”

Health research is without a doubt one of the most challenging and yet one of the most rewarding of pursuits. The most challenging part is securing funding in an increasingly competitive environment, while the most rewarding part is being able to answer fundamental questions, and by doing so, to improve the health of people in Ottawa and around the world.

This year, our research improved health in many ways. For example, we developed a new tool to help breast cancer patients manage the side-effects of chemotherapy. We discovered that a drug commonly used in certain kidney transplant patients does more harm than good. And we led clinical trials of new drugs and devices that are helping people with lung and brain cancer live longer.

We also made ground-breaking discoveries in the laboratory that are providing hope for patients with diseases such as muscular dystrophy, heart disease, diabetes and osteoporosis.

One of our unique strengths at The Ottawa Hospital is the ability to translate these discoveries into new therapies and test them in rigorous clinical trials. Indeed, this year we launched a highly innovative clinical trial of a double-virus therapy for cancer. This trial is the first in the world to use a combination of two viruses to attack cancer cells directly and stimulate the immune system to attack the cancer as well. We also launched the world's first clinical trial of a stem cell therapy for septic shock. While these trials are still ongoing, some of our other world-first trials of "made-in-Ottawa" therapies were recently completed, with promising results.

We are also recognized around the world for conducting large clinical trials that compare different treatment approaches and change medical practice. We're particularly pleased that The Ottawa Hospital had two studies on a list of the top 12 practice-changing research papers published in 2015 by the *New England Journal of Medicine* – without question the top medical journal in the world. We're proud to feature one of these studies, focusing on blood clots and cancer, as the spotlight in our annual report this year.

And although research funding will always be a challenge, we are very pleased that our researchers continue to rank well above the national average in major funding competitions. For example, we were awarded 22 grants worth more than \$28 million in the most recent competition from the Canadian Institutes of Health Research, achieving a success rate that was close to double the national average.

All these successes have translated into a score of 84 percent in the composite research metric developed to assess our performance.

As well, this year the Ottawa Hospital Research Institute has taken an important step in further strengthening alignment and connection with The Ottawa Hospital, both in terms of governance and in terms of how we present ourselves to our community and to the outside world. We now speak with one unified voice, embodied by our new tagline: *Inspired by research. Driven by Compassion.* This exercise will also serve to strengthen our important relationship with the University of Ottawa and is an important step towards better integration of health research activities within the city.

Finally, we would like to take this opportunity to thank all our researchers, trainees and staff for their exceptional hard work, as well as our board members for their oversight and guidance. And most of all, we would like to thank our patients and community, who inspire and support us every day.

In the spotlight

Research improves care:

A landmark study looked at the connection between blood clots and cancer. The surprising findings will save countless patients around the world from unnecessary and potentially harmful tests.



Jamie Dossett-Mercer planned to hit the gym after seeing his family doctor about the mysterious swelling in his left leg. Instead, he was sent to the Emergency Department. This turn of events led him to participate in a research study at The Ottawa Hospital that is changing medical practice around the world.

The 50-year-old business development officer had venous thrombosis, a blood clot in the legs that affects about 340,000 Canadians every year. If part of the clot had broken off, it could have travelled up to his lungs and blocked an artery, which is often fatal.

“There was swelling and discolouring, but I didn’t feel any pain,” said Dossett-Mercer. “It was a big surprise that it was a clot that went all the way from ankle to groin.”

Dossett-Mercer was sent directly to the Emergency Department for an injection of anticoagulants to break up the clot. The next morning he went to see hematologist Dr. Marc Carrier.

The moment Dr. Carrier walked into the room, Dossett-Mercer knew he was in good hands.

“There was this incredible connection,” said Dossett-Mercer. “As soon as you start a conversation with Dr. Carrier, he’s there with you 100 percent.”

One thing they discussed was the Ottawa man’s possible risk of cancer, because unexplained blood clots were long thought to be a predictor of this disease. Some guidelines recommend CT scanning to detect possible hidden cancers in patients like Dossett-Mercer, but there was controversy about this practice. Doctors weren’t really sure that it helped detect cancers, and CT scanning exposes patients to potentially harmful radiation.

“Everybody wants to know whether or not they’re at risk of cancer before something big happens. When dealing with something as mysterious as this, I thought participating in a study would give me a greater chance of finding out.”

-Jamie Dossett-Mercer

When Dossett-Mercer learned that Dr. Carrier was conducting a clinical trial to find out whether these scans were really necessary, he jumped at the chance to participate.

“Everybody wants to know whether or not they’re at risk of cancer before something big happens,” said Dossett-Mercer. “When dealing with something as mysterious as this, I thought participating in a study would give me a greater chance of finding out.”

He was one of the 854 patients across Canada who took part in the trial. The results were dramatic and unexpected: CT scans did not improve cancer detection in patients with unexplained blood clots. In addition, it turned out that these patients were not at any more risk of developing cancer than the general population.

“This is really reassuring for patients,” said Dr. Carrier, who is also a senior scientist at The Ottawa Hospital and an associate professor at The University of Ottawa. “Now we’re able to change practice and no longer recommend intensive cancer screening for this patient population. We’re saving patients from unnecessary radiation and anxiety, and we estimate that we’re saving the health-care system in Ontario \$8.2 million a year just by performing fewer CT scans.”

This research was published by the top medical journal in the world, the *New England Journal of Medicine*. It was further recognized as one of the top 12 studies the journal published in 2015.

This clinical trial is just one of more than 600 trials involving more than 15,000 patient volunteers conducted at The Ottawa Hospital in 2015. Many of these trials tested innovative new treatments, while others examined different ways to prevent or diagnose disease, or deliver health care more efficiently.

“The Ottawa Hospital is an ideal environment for young investigators like me to do clinical trials,” said Dr. Carrier. “I had a lot of support from different research groups and my mentors. Interacting with patients, hearing what their questions are and trying to answer those questions are what drive me to do clinical research.”

Today, Dossett-Mercer has completely recovered from his blood clot, but he still takes regular medication to keep new clots from forming. He is glad to know that he doesn’t have to worry about an increased risk of cancer.

“The doctors and nurses at The Ottawa Hospital have been absolutely fantastic from the first to the last,” he said. “I was happy to participate in research that is improving care not only at the hospital, but around the world.”

“Interacting with patients, hearing what their questions are and trying to answer those questions are what drive me to do clinical research.”

-Dr. Marc Carrier

Fast facts

Our people. Our facilities.
Our patients. Our research.



11,598

Employees

4,281

Nursing
professionals



1,413

Physicians



1,366

Residents and fellows



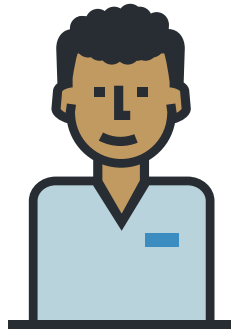
22

Paramedic student placements



653

Medical students



1,588

Nursing placements

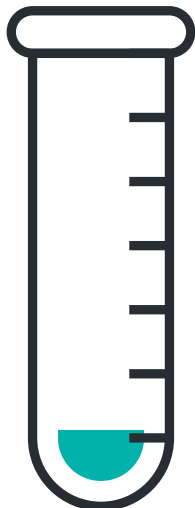


1,200

Volunteers

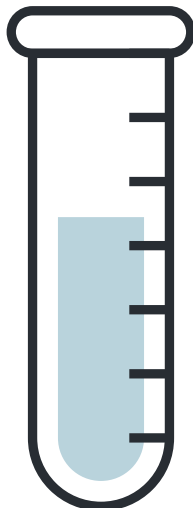
1,802 Total researchers

131



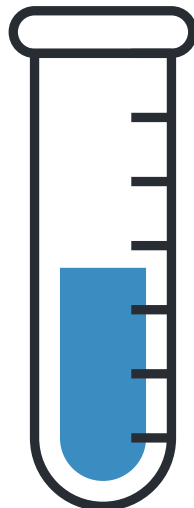
Basic and clinical scientists

491



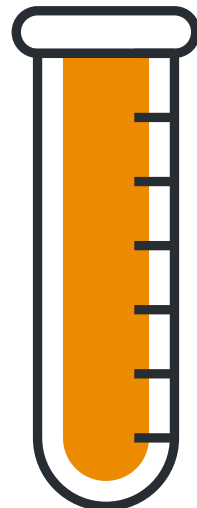
Clinical researchers/
investigators

411



Trainee researchers

769



Research support staff



3rd Hospital

in Canada for peer-reviewed funding from the *Canadian Institutes of Health Research*



5th Hospital

in Canada for overall research funding



\$1.3B

Impact on Ottawa economy due to our research (since 2001)



1,295

Scientific papers published in 2015



50

Active patent families



7

Spin-off companies



1,122

Beds



10

State-of-the-art core research facilities



63

Scientific research labs



7

National research networks



677

Active clinical trials



15,532

Patients enrolled in clinical trials



7.9

Average length of stay (days)



50,862

Patient admissions



172,445

Emergency visits



1,154,992

Ambulatory care visits



49,618

Surgical cases



6,062

Babies delivered

Corporate Performance Scorecard

At The Ottawa Hospital, excellence in patient care is our priority.

By improving on wait times, patients' rating of care and other key measures of a high-performing hospital, our goal is to rank among the top 10 percent of North American hospitals in providing safe, high-quality care to our patients.

Strategic direction	Category	Indicator	2015–2016 result	2014–2015 result
Quality	Satisfaction/ experience	Overall rating of care – inpatients Percent of admitted patients who rated the care received as excellent.	49.1%	48.4%
	Safety	Hospital standardized mortality ratio (HSMR) Ratio of actual deaths to the number of expected deaths. A ratio greater than 100 means more deaths occurred than expected; a ratio less than 100 means fewer deaths occurred than expected.	79.7	76.7
	Efficiency	Cost per weighted case – acute and day surgery patients Average cost of an acute or day-surgery patient receiving care.	\$6,344	\$6,383
	Access	Percentage of patients admitted through the Emergency Department who waited 24 hours or less before admission.	82.0%	80.5%
People	Engagement	Employee, physician and resident engagement Percent of employees, physicians and residents who strive for excellence, want to stay and say positive things about the hospital.	55%	58%*
Academics: research and education	Innovation	Research success composite score Calculated from the: <ul style="list-style-type: none"> • number of research studies published • number of times published research is cited • number of patients participating in clinical trials • number of patients consenting to be contacted for research purposes • amount of external funding received 	4.2**	N/A
Our community	System integration	30-day unplanned readmissions Percent of patients readmitted within 30 days of hospital discharge.	10.3%	9.8%
Finance	Sustainability	Total margin Percent by which consolidated revenues vary from consolidated expenses. Negative variance indicates revenues are lower than expenses; positive variance indicates revenues are higher than expenses.	-0.12%	2.11%

*Data from 2012

**Exceeded 2015–2016 target score of 3

Top news

Research, technology
and new procedures
that touch lives



Innovation and technology improving patient care today

Personalized approach helps cancer patients avoid chemo side effects

New research led by Dr. Mark Clemons shows that asking breast cancer patients a few simple questions can help minimize nausea and vomiting due to chemotherapy.

New high-tech surgical suites allow doctors to save more lives and reduce complications

First-in-Canada technology supports less-invasive vascular surgery. Quicker recovery times and fewer side effects will shorten hospital stays and patient wait times.

Landmark study allows kidney transplant patients to avoid unnecessary drugs

Trial led by Drs. Greg Knoll and Dean Fergusson is changing medical practice around the world.

Local teacher with brain cancer beats the odds thanks to 'bionic man' therapy

Dr. Garth Nicholas led the Canadian arm of a clinical trial showing that electromagnetic field therapy improves survival in brain cancer patients.

Joint replacements of the future allow patients to recover comfortably at home

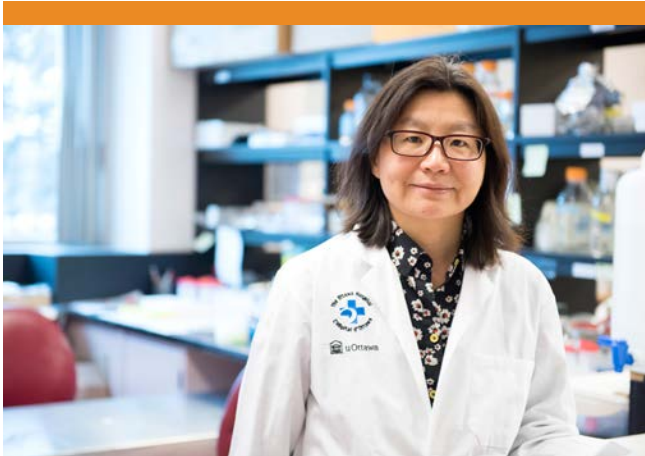
The Ottawa Hospital among the first hospitals in Canada to offer hip and knee replacements as day surgery for patients healthy enough to monitor their progress from home.

New targeted therapy helps lung cancer patients live longer

Dr. Glen Goss co-led the world's largest clinical trial comparing two targeted therapies for advanced squamous cell carcinoma of the lung.

Increasing the bang for buck from health research

Dr. David Moher takes the lead on making sure investments in research are benefitting patients.



Breakthroughs from the lab

Stem cell discovery could lead to new treatments for muscle disease

Dr. Michael Rudnicki and his team discovered that Duchenne muscular dystrophy directly affects muscle stem cells.

Harnessing viruses to treat pancreatic cancer

Drs. John Bell and Carolina Ilkow have discovered a way to make pancreatic cancer cells more vulnerable to cancer-killing viruses.

Researchers solve mystery of genetic risk factor for heart disease

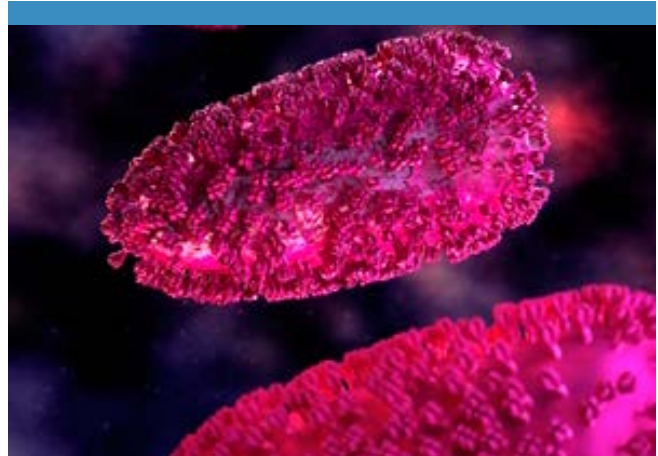
A study led by Drs. Hsiao-Huei Chen and Alexandre Stewart opens the door for the development of novel therapies.

Researchers find Achilles heel of a severe form of leukemia

Dr. Marjorie Brand has discovered a promising new approach that takes advantage of a molecular defect in cancer cells.

Stem cell therapy rejuvenates old, brittle bones in osteoporosis model

New research led by Dr. William Stanford provides hope that stem cell therapy may one day help prevent fractures in older people.



World-first clinical trials of made-in-Ottawa therapies

Ottawa cancer patients participate in viral therapy trial

Researchers hope a combination of two viruses will attack and kill cancer cells, and stimulate an anti-cancer immune response.

Stem cell therapy shows promise against rare lung disease

Small trial led by Dr. Duncan Stewart provides hope for people with pulmonary hypertension.

Trial tests stem cells as treatment for septic shock

Stem cells are usually thought of as the building blocks of the body, but a new Ottawa trial is testing the idea that they may promote healing in other ways as well.



World's #1 medical journal selects two research studies from The Ottawa Hospital among its top 12 of 2015

Financials: The Ottawa Hospital

Our 2015–2016
financial report

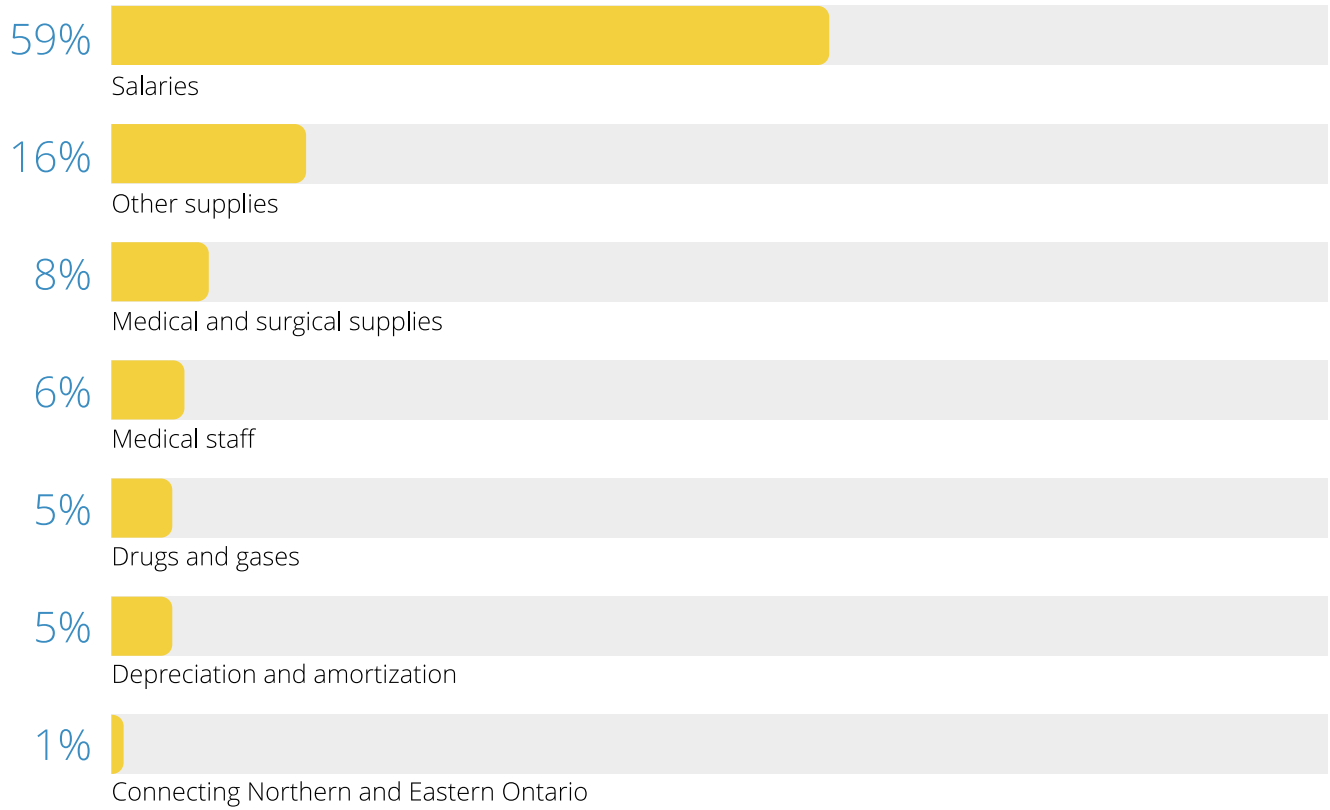


Revenue distribution 2015–2016



\$1,288M

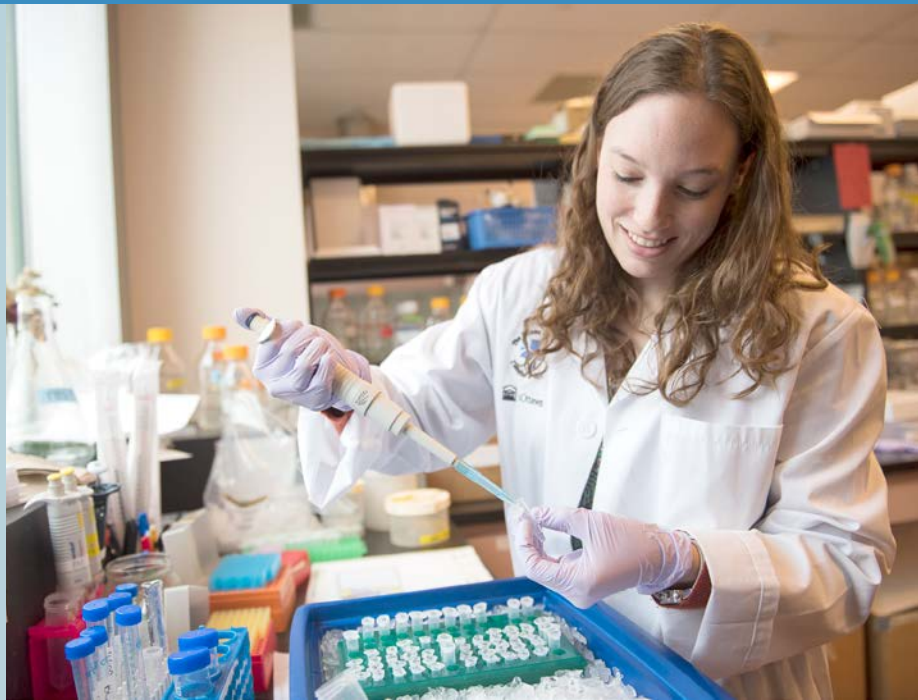
Expenditure distribution 2015–2016



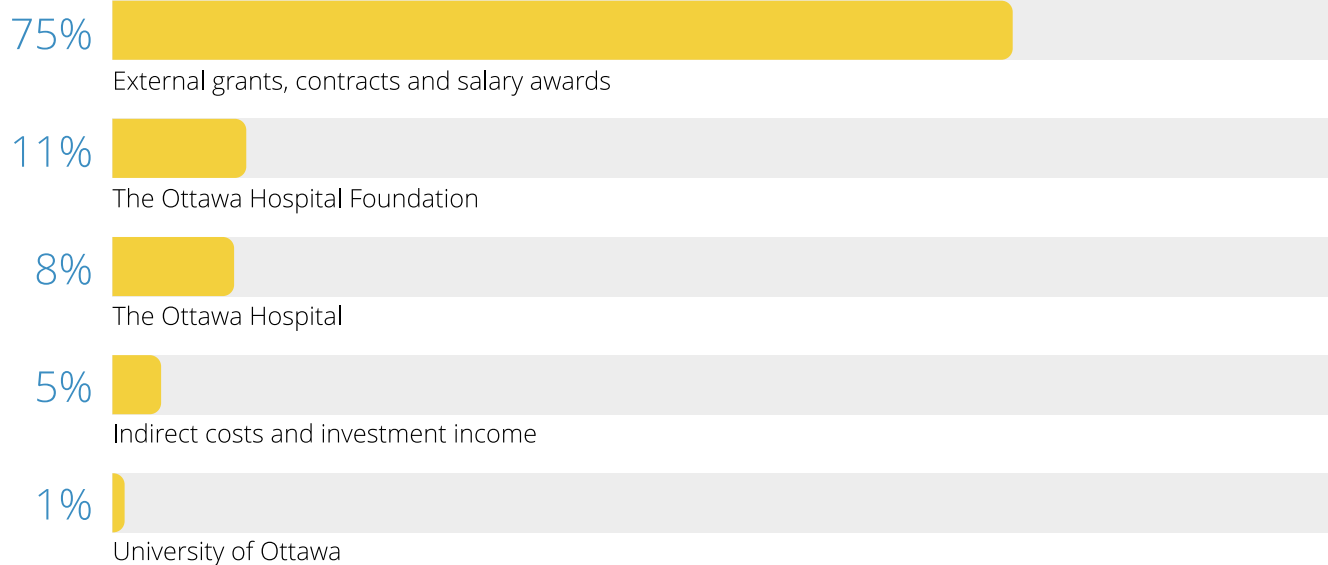
\$1,289M

Financials: the Ottawa Hospital Research Institute

Our financial report and
top 10 peer-reviewed
funding sources



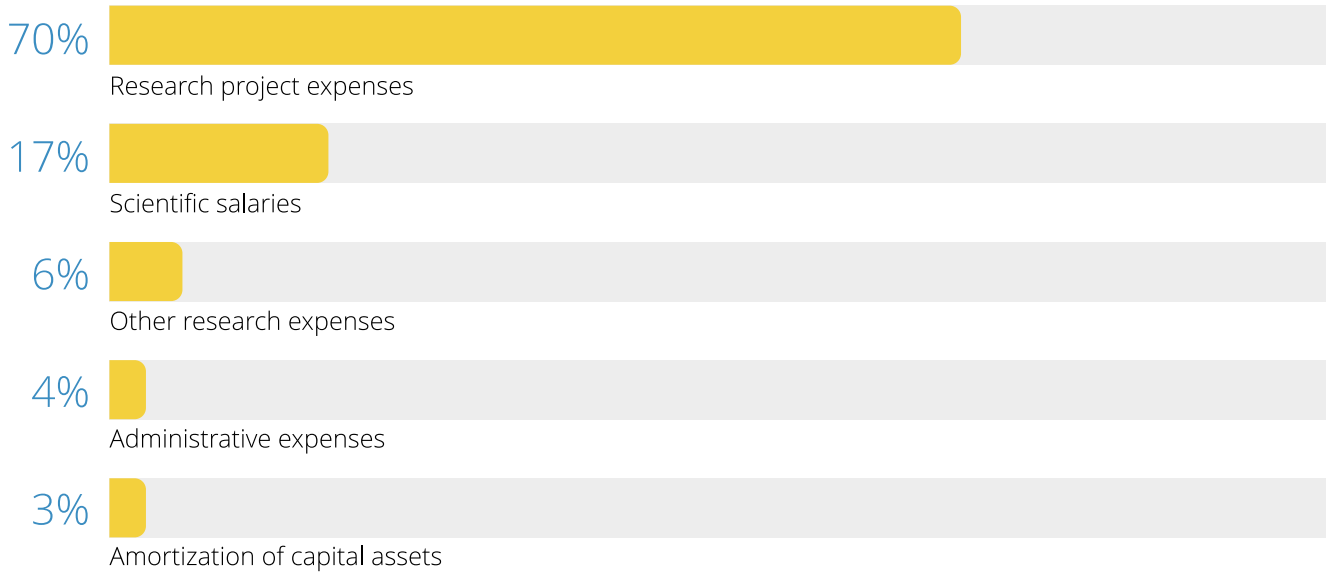
Revenue distribution 2015–2016*



\$104M

*Pending ratification at the Ottawa Hospital Research Institute Annual General Meeting on June 21, 2016.

Expenditure distribution 2015–2016*



\$105M

*Pending ratification at the Ottawa Hospital Research Institute Annual General Meeting on June 21, 2016.

Top 10 sources of peer-reviewed funding

