



# Our research. Our impact.

The Ontario Institute for Cancer Research





If you have any questions or comments about our work we welcome your feedback at [info@oicr.on.ca](mailto:info@oicr.on.ca).

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## THE CANCER CHALLENGE

Eight people are newly diagnosed with cancer every hour in Ontario and three people die from the disease. These are staggering numbers. Those diagnosed are our relatives, friends, co-workers and neighbours. Developing better, more accurate diagnostics and treatments with far fewer side effects for these individuals, as well as better prevention strategies to reduce the incidence of cancer, is one of the great scientific challenges of our time.

The Ontario Institute for Cancer Research was established by the Government of Ontario in 2005 to address this challenge head on. Over the past decade OICR has recruited top talent to the province, built new infrastructure and networks to foster innovation and collaboration, invested in cancer research province-wide and, as a result, strengthened the province's capacity to conduct cutting-edge cancer research on a global stage.

Today, the Institute is the Ontario government's largest single investment in cancer research. We exist to accelerate the movement of new Ontario cancer research discoveries into clinical use for the benefit of patients worldwide and to maximize the economic benefits for the people of Ontario. We are working with researchers across the province and around the world to ensure that cancer will

one day be a more manageable disease.

In April 2016, OICR adopted a new, five-year strategic plan after months of consultations with the cancer research community. The new plan builds upon the strong foundation of OICR's first decade of research, while also recognizing changes and advances in global cancer research over the past few years.

This document is about who we are and what we do. It explains the work we've accomplished so far and our goals for the coming years. It also explains what those goals and outcomes mean for you.

Cancer research is a long and difficult process. The more we learn about cancer the more we understand just how complex it is. In the last two decades there have been major breakthroughs in both our understanding of cancer and the technologies that can be used to target it, leading to growing optimism that significant improvements in cancer care can be achieved in the near future.

We are happy to share our work with you and we are confident that we are on the right path to continue making a real impact on the lives of cancer patients worldwide.

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## About OICR

OICR is a cancer research institute accelerating the movement of new Ontario discoveries into clinical use for the benefit of patients. Through innovation and research excellence, the Institute is improving outcomes for patients globally and generating economic benefits for the province. We are collaborating with the oncology community in order to build a better ecosystem that brings research results to patients. Through our leadership in provincial, national and international initiatives we are filling gaps in expertise, technology and resources to improve the health of cancer patients worldwide.

OICR is an independent, not-for-profit corporation that is funded by the Government of Ontario.



### Mission

Partner with the Ontario oncology community to accelerate the development and implementation of clinically important knowledge, products, services and policies to improve cancer prevention, detection, diagnosis and treatment and enable patients in Ontario and worldwide to live longer and better lives.

### Vision

A collaborative centre of excellence in cancer research that moves Ontario to the forefront of discovery and innovation so that the people of Ontario and the economy benefit from promising research results and breakthroughs.

# OICR's Impact



OICR had many successes in its first decade, as the Institute grew from a promising idea into a global leader in cancer research.

Here are some highlights of our work so far.



## **Recruiting and retaining top research talent**

OICR created an Investigator Awards Program to recruit and retain outstanding researchers and clinician scientists in Ontario. Twenty-eight scientists are currently supported with investigator awards.



## **Personalizing prostate cancer diagnosis and treatment**

OICR co-founded and co-leads the Canadian Prostate Cancer Genome Network (CPC-GENE), the largest prostate cancer genomics project in the world. The project has sequenced tumour and healthy tissue from over 350 patients and is now publishing results of their findings, with the goal of better personalizing prostate cancer diagnosis and treatment.



## Finding the genetic origins of cancer

OICR launched and coordinates the International Cancer Genome Consortium, a global collaboration focused on identifying the genomic changes present in 50 tumour types or subtypes. OICR has taken on the study of two types of cancer: pancreatic and prostate.



## Facilitating the sharing of research

OICR is a co-founder and co-host of the steering committee of the Global Alliance for Genomics and Health, which has brought together organizations from around the world to enable the responsible, voluntary and secure sharing of genomic and clinical data. The ultimate goal is to help unlock the great potential of genomic data for human health.



## Partnering with industry to invest in new treatments

OICR is collaborating with Janssen Biotech to accelerate the development of promising drug candidates for blood cancers. The collaboration will focus on a new approach to treat a subset of patients who don't benefit from existing therapies.



## Building companies, creating jobs

OICR created the Fight Against Cancer Innovation Trust (FACIT), which works with OICR and other strategic partners to bring cancer discoveries to market. OICR/FACIT have together supported the development of 23 companies and created 310 highly skilled jobs. FACIT attracted \$307 million to Ontario.



## Bringing cutting-edge research to patients

OICR/FACIT supported the development of a new cancer vaccine that is now in a Phase I/II clinical trial and could one day be used as a cancer therapy.





# Our goals

OICR both conducts and enables cancer research in Ontario. This will help to ensure Ontario's cancer researchers play a critical role in the global fight against cancer. OICR has five goals for the next five years to direct the Institute's research and to bring more cancer discoveries to patients:

## Perform cutting-edge translational research

1

Translational research is focused on moving discoveries out of the lab and into clinical use for the benefit of patients. In order to make this happen, OICR will focus on solving pressing clinical challenges to improve cancer prevention, detection, diagnosis and treatment.

2

## Mobilize Ontario research strengths around key cancer priorities

OICR will bring together the best minds in cancer research from across Ontario to conduct research focused on addressing the unmet clinical needs of cancer patients while also making major advances against the disease.

## Partner with the Ontario cancer community to leverage and elevate the level and impact of cancer research in the province

3

OICR will provide access to resources, expertise, technologies and training opportunities to strengthen Ontario's capacity to bring cancer research discoveries to patients.



## Drive the adoption and/or commercialization of cancer innovations in Ontario

4

A great deal of coordination and investment is required for new research discoveries to be adopted in the clinic – far beyond what one institution can do alone. OICR will collaborate with healthcare providers, agencies and private sector partners, including our commercialization partner FACIT, to bring Ontario research discoveries to patients and economic benefit to the people of Ontario.

**FACIT**  
Fight Against Cancer Innovation Trust



5

## Enhance Ontario's global leadership in cancer research

OICR will take part in national and international initiatives where Ontario can provide leadership and unique expertise to tackle major challenges in cancer research on a global scale.

## Making goals a reality

Together, these goals provide a roadmap to guide OICR's activities over the next five years and help us to work with partners from healthcare, academia and industry to deliver research discoveries to patients sooner.

# OICR's Strategic Plan 2016-2021

OICR's Strategic Plan provides a blueprint for how we will achieve our goals. The plan outlines opportunities for more integration and coordination of research on a global scale, new collaborations within the Ontario cancer research and clinical communities and serves as a catalyst for private sector partnerships and investment. Here are some of the major parts of the plan and an explanation of how they will ultimately impact patients.

## OICR Investigator Awards

The OICR Investigator Awards Program is designed to strengthen Ontario's research capacity by attracting top research talent and retaining existing talent in the province. The program provides stable funding for principal investigators in the Institute's Strategic Initiatives, Technology Programs and in other affiliated research projects, with the ultimate goal of using this world-class expertise to help accelerate the delivery of Ontario research discoveries to patients.

OICR's Investigator Awards are ensuring that Ontario remains home to some of the best researchers and clinician scientists in the world.

## Technology Programs

OICR's Technology Programs in diagnostic development, genomics, imaging, informatics and medicinal chemistry build on a legacy of cancer research developed during OICR's first 10 years and support OICR's Strategic Initiatives across the province. These programs will contribute cutting-edge expertise and technologies to drive OICR research and make OICR's resources accessible to cancer researchers in Ontario.

These programs will enable research innovation in the province for the benefit of all Ontarians.

## Clinical Trials

OICR is currently supporting numerous clinical trials in Ontario. We will continue to support clinical trials through partnerships with industry, funding agencies and Ontario clinical trials groups. We will help to attract new clinical trials to Ontario by helping to identify and address common hurdles to starting and running trials in the province.

Supporting trials in Ontario means better access to cancer innovations for patients.



# Strategic Initiatives

## Global Leadership in Precision Oncology

Precision oncology will use genetic information to help better diagnose and tailor treatment for cancer patients. OICR will partner with cancer centres and academic institutions in Ontario to strengthen the province's cancer genomics research capacity, while continuing to lead and contribute to global initiatives in precision oncology. This will better equip the province to incorporate findings from the global initiatives into clinical care in Ontario.

OICR's investment in the province as well as leadership and participation in major global initiatives will help to accelerate the adoption of more precision oncology in Ontario.

## Cancer Therapeutic Innovations Pipeline

OICR will capitalize on provincial expertise to transform promising discoveries into new therapies. OICR researchers will collaborate with other Ontario researchers, applying findings from cancer biology to identify and validate new drug targets and discover drug candidates hitting these targets. These targets can then be evaluated in clinical trials in collaboration with commercialization partners.

OICR is providing funding and expertise to enable early-stage cancer drug research, which will help attract the necessary investment needed to develop and bring new therapeutics to cancer patients.

## Translational Research Initiatives

The Translational Research Initiatives are large-scale, multi-disciplinary collaborations formed between laboratories and clinician-scientists to accelerate the advancement of promising discoveries to the clinic.

These initiatives will bring the best minds together from different research areas to accelerate the development of important discoveries in some of the most deadly cancers.

## Collaborative Research Networks

OICR's Collaborative Research Networks provide access to shared expertise, resources and enabling infrastructure to facilitate high-quality cancer research in Ontario.

Strengthening capacity for cancer research throughout Ontario will help to ensure patients across the province have access to the results of high-quality cancer research and clinical trials.





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