

IMPROVING CLINICAL TRIALS FOR A BETTER ONTARIO

Year in Review 2017 – 2018





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ABOUT CTO

Improving Ontario's clinical trials environment

Clinical Trials Ontario is a leading organization in the clinical trials community dedicated to strengthening, promoting and capitalizing on Ontario's competitive advantages for conducting high-quality clinical trials. We work collaboratively with industry, research institutes, the public and other health innovation organizations to improve the clinical trials environment and attract investment to the province, while supporting the highest ethical and quality standards.



OUR VISION

To make Ontario a preferred location for global clinical trials while maintaining the highest ethical standards.

OUR MISSION

To strengthen, promote and capitalize on Ontario's competitive advantages to conduct high-quality clinical trials.

OUR STRATEGIC PRIORITIES



STREAMLINE processes to help make high-quality clinical trials more timely, efficient and cost-effective.



ENGAGE with patients and the public in Ontario's clinical trials ecosystem to help drive the delivery of new therapies and innovations.



PROMOTE Ontario's competitive advantages and clinical trial capacities to attract more industry investment.

MESSAGE FROM OUR CEO



Susan Marlin

President and CEO, CTO

It has been an incredible year at Clinical Trials Ontario (CTO). We have worked hard with the clinical trials community to capitalize on Ontario's health sciences assets and deliver on our mandate to build a stronger and more efficient clinical trials environment – and we're seeing the impact.

Industry investment, cost savings and economic growth. Better medicines for patients, cutting-edge innovation and a thriving health sciences sector. These are some of the ways that patients, industry and hospitals and research sites are benefiting from an improved clinical trials environment in Ontario.

CTO's flagship program, CTO Stream, an online system that harmonizes research ethics reviews, has played a key role in making clinical trials more efficient and cost-effective. CTO Stream has become essential to Ontario's clinical trials environment. More than 100 hospitals and research sites and 65 industry sponsors now use CTO Stream to conduct clinical trials faster and with fewer resources. This includes trials of treatments for some of today's greatest health challenges, including cancer, diabetes, mental illness, cardiovascular disease, and childhood diseases.

We're also helping to open Ontario for business with new programs, including QuickSTART, which is being piloted this fall. QuickSTART will further accelerate trial start-up times by streamlining processes. Our goal is to enable trial activation within 90 days.

Our Industry Concierge Service is providing pharmaceutical and medical device companies the resources they need to launch their trials in Ontario. Over the past year, CTO has connected more than 50 local and global companies to resources, researchers and trial sites in the province.

People are the heart of clinical trials. It's through their courage and hope that medicine moves forward and new treatments are discovered. We're putting in place tools and resources for patients, front-line health care professionals, health charities and the public to share information, insights and stories to ultimately shape and improve clinical trials in Ontario.

In 2018, we launched #TalkClinicalTrials, a platform for open dialogue about what clinical trials are and why they are important. We look to enhance this platform over the coming year.

As we celebrate our achievements, CTO continues to look ahead, knowing there is more work to be done to strengthen our system and make Ontario a preferred destination for conducting clinical trials. We're focusing on improving efficiency, expanding patient engagement, increasing collaboration with industry, hospitals and research sites, and growing our partnerships within and beyond Ontario.

As we look to a new year and new opportunities, I want to recognize and thank Dr. Arthur Slutsky, who has served as CTO Board Chair since our organization was established in 2012. Dr. Slutsky's vision and passion for Ontario's research enterprise has been foundational to the creation and direction of CTO. On behalf of CTO, we thank him for his leadership and commitment to advancing clinical trials in Ontario.

I would also like to thank our dedicated team, our Board of Directors, the many volunteers who help bring clinical trials to Ontario, and the members of our clinical trials community who are tireless in their efforts to discover the treatments of tomorrow, today.

MESSAGE FROM OUR CHAIR

I am very proud of what Clinical Trials Ontario (CTO) has been able to achieve since it began in 2012.

The organization was conceived because Ontario simply was not meeting its potential in conducting clinical trials. We were a province of superb scientists, with pockets of high activity, but our research centres were not as attractive for clinical trials as they could be or should be.

The reason? As a researcher myself, I saw it: Receiving research ethics board (REB) approvals was slow and complex, often involving as many as 35 entities for one trial. Time and resources were being wasted. Efforts to improve patient care were hindered. It hurt.

In a few short years, CTO has put the province on the global clinical trials map by increasing efficiencies and speeding up approvals. It has done this without compromising patient safety and while ensuring the highest ethical and quality standards are met.

The benefits are manifold: Attracting business to Ontario; ensuring the province is a hub for cutting-edge health research; saving public money; generating high quality, well-paying jobs; and improving health care.

As I step down from my position as Chair of CTO's Board of Directors, which I've held from the beginning, I'm delighted by this powerful legacy. CTO is now an

essential element of Ontario's clinical trials system, and I have no doubt that it will continue its work improving the environment for clinical trials thanks to the strong oversight of a Board dedicated to advancing patient care while serving the interests of government, industry, clinicians, patients and other stakeholders.

As I look back on the last six years, I recognize that one of my greatest successes was hiring Susan Marlin as President and CEO. Susan is a "can do" person who is able to mobilize people and get them working together. Her clear vision and team-building skills have contributed significantly to CTO's success. With Susan, the CTO team and our excellent and committed board members leading the way, I am confident that CTO will drive Ontario towards meeting its full potential in hosting clinical trials. And that benefits all of us.

Dr. Arthur Slutsky

Chair, CTO Board of Directors and Vice President of Research, St. Michael's Hospital



ONTARIO'S ADVANTAGE

Capitalizing on Ontario's thriving health and life sciences sector



A PREFERRED DESTINATION FOR GLOBAL CLINICAL TRIALS

Ontario is home to Canada's largest concentration of hospitals, research institutes, contract research organizations and trial sites. CTO is helping Ontario capitalize on its thriving health and life sciences environment to attract industry investment and become a preferred destination for clinical trials.



7th largest clinical trials jurisdiction in North America



3,500+ open clinic trials



23 academic research hospitals, including 6 of Canada's top 10



1,800+ health researchers and research support staff*



44 universities and colleges, including six faculties of medicine



200+ public hospitals



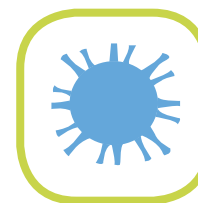
40+ contract research organizations



2,200+ biotechnology, medical device and digital health companies

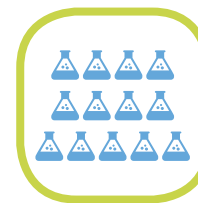
*Council of Academic Hospitals of Ontario

Ontario is a global leader in cancer, stem cell and cardiovascular disease research.



1,300+ cancer clinical trials

Princess Margaret Cancer Centre is among the top five cancer research institutes in the world and is a global leader in stem cell research.



13+ stem cell therapy trials

Ontario researchers are leading groundbreaking stem cell therapy trials, including a trial led by The Ottawa Hospital to treat septic shock, a deadly disease that accounts for 20% of all ICU admissions in Canada.



450+ cardiovascular disease trials

More than 25,000 patients are enrolled in a global study led by Hamilton Health Sciences' Population Health Research Institute to better understand causes and barriers to care for cardiovascular disease.

OUR IMPACT

Conducting more trials, more efficiently



IMPROVING EFFICIENCY OF MULTI-SITE CLINICAL TRIALS

CTO is streamlining processes to make clinical trials more efficient and cost-effective. As a result, Ontario is becoming a preferred destination for conducting clinical trials.

CTO Stream has proven its value by improving the efficiency of multi-site clinical trials in Ontario. Our Ontario-built online system enables all research sites participating in a clinical trial to undergo a single ethics review rather than separately applying to their local research ethics boards, reducing the time and labour required to obtain research ethics approval. CTO thanks the many volunteers from the clinical trials community who helped build CTO Stream.

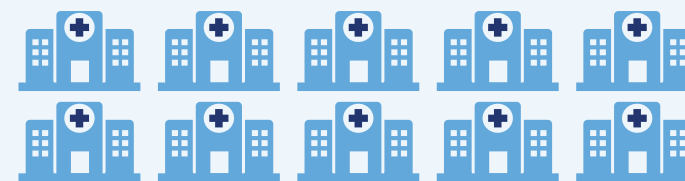
CTO STREAM



CTO STREAM BY THE NUMBERS

100+

Participating hospitals and research sites, including Ontario's most active trial sites.



65+

Participating pharmaceutical and medical device industry sponsors.



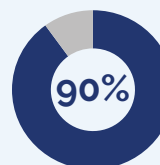
700+
Research studies in Stream.



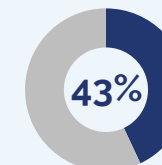
2,200+
Applications for research ethics approval received through CTO Stream.



17
Qualified Ontario research ethics boards provide multi-site ethics review.



Sites obtain research ethics approval in less than **one month**



Sites obtain research ethics approval in less than **one week**

IMPROVING THE BUSINESS ENVIRONMENT FOR CLINICAL TRIALS

▶ QUICKSTART



Harmonizing the research ethics review process is just the first step to more efficient clinical trials. QuickSTART, CTO's newest streamlining program, is designed to help clinical trials sites and pharmaceutical and medical device industry sponsors reduce their start-up time by harmonizing processes for areas such as budget and contract negotiation. Currently being run as a pilot, QuickSTART will be rolled out across Ontario in the spring of 2019.

▶ CONCIERGE SERVICE



Established in 2017, CTO's Concierge Service is making it easier for pharmaceutical and medical device companies to conduct trials in Ontario by connecting them with researchers, trial sites and resources in Ontario's clinical trials ecosystem. This past year, we connected with more than local and global 50 companies and published a new Resource Guide to Conducting Clinical Trials in Ontario.



[Download Resource Guide to Conducting Clinical Trials in Ontario](#)

INDUSTRY IS CHOOSING ONTARIO

More efficient clinical trials help to support Ontario's advantage as a preferred destination for clinical trials.



3X

The number of industry-sponsored clinical trials in Ontario in 2017 compared to 2012.



49%

Canada's total pharmaceutical and medical device R&D investment is in Ontario.



46%

Ontario's active clinical trials are industry-sponsored trials.

Large multinational companies choose Ontario as a destination for clinical research



Ontario generates global pharmaceutical companies

- ▶ Apotex
- ▶ Patheon
- ▶ Therapure Biopharma
- ▶ Nordion
- ▶ Plantform
- ▶ Trudell Medical
- ▶ Nucro Technics
- ▶ Sanofi

PATIENT & PUBLIC ENGAGEMENT

Supporting Ontario patients and the public



WORKING IN LOCKSTEP WITH ONTARIO PATIENTS AND THE PUBLIC

Paulette Lalancette's story

Paulette Lalancette feels her life depends on Ontario being a great place to do clinical trials. And she is helping to make it so.

In 2006, at age 31, Paulette was diagnosed with malignant melanoma. She was a busy young mom – working at a Toronto hospital as a respiratory therapist and anesthesia assistant, and raising her four-year-old son.

They said I probably had about six months to live.

She received treatment and surgery, but after three years, the situation became palliative. While she could see that there were immunotherapy trials going on in the U.S., she and her oncologist had exhausted the possibilities for new treatment

options here. "I was told there was nothing more I could try. My treatment was stopped and I was told to prepare for the worst," she says. "They said I probably had about six months to live."

Fortunately, she did get better. "I don't know why or how, but here I am 12 years later," says Paulette, who now lives in Sudbury. She's had two recurrences since her first diagnosis, but feels hopeful about the future because new treatments are being

It gives me comfort that there are clinical trials in Ontario for new drugs for malignant melanoma.

tested here. "It gives me comfort that there are clinical trials in Ontario for new drugs for malignant melanoma," she says. "My goal now is to one day become a grandmother!"

Paulette believes passionately that exceptional healthcare includes research, and good research policy includes the public. That's why she is on CTO's Patient and Public Advisory Group. "I give the patient perspective on why it's important to improve the landscape for clinical trials. I'm helping to make materials understandable to the public, and helping to optimize the searchability of online resources. I do this because I believe in what CTO does."



SHARING. REACHING OUT. CONNECTING.

At CTO, we know the public and patient voice is critical in shaping how clinical trials are conducted. We are grateful to Paulette and the Patient and Public Advisory Group and to the many other volunteers who guide us.

With their help, we are improving our resources and tools to help the public and patients engage with clinical trials and to help them make their own best decisions. For instance, we're updating our website, improving our position on social

We keep getting better, so that patients can get better.

media, developing a clinical trials finder, and creating better ways to link patients to health charities and other patient organizations.

CTO is involved in national and international efforts to support others in building clinical trials that are more meaningful and have more impact on patients. Through a collaboration with the University of Toronto, Queen's University and the University of Ottawa, we were awarded a CIHR Strategy for Patient Oriented grant in

March 2018 (called "Building Capacity for Patient Engagement and Patient-oriented Research In Clinical Trials"). As part of the international Patient Focused Medicines Development initiative, we are collaborating to build guidance and quality criteria for patient engagement.

Our annual conference is now more accessible to the public. We livestreamed two sessions last year and posted to our YouTube channel.

In 2018, we launched #TalkClinicalTrials, a public campaign with health charities, patient organizations, and research organizations to share stories, resources, and tools for patients.

Sharing. Reaching out. Connecting. We keep getting better, so that patients can get better.



COMMUNITY ENGAGEMENT

Exchanging knowledge and showcasing Ontario clinical trials

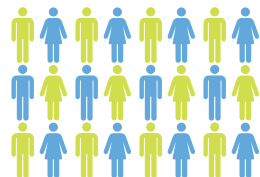


2018 CTO CONFERENCE

As the largest conference of its kind in Canada, the CTO Conference is one of Ontario's most important knowledge exchange opportunities within our clinical trials ecosystem. On March 28 and 29, 2018, we brought together more than 400 members of the clinical trials community, including leaders from the pharmaceutical and medical device industries, academic and health care leaders, and representatives from patient groups, health charities and research institutions from across the province and beyond. We focused on addressing the challenges and opportunities to support a strong environment for clinical trials and the health and economic benefits they provide.

ATTENDEES

400



PRESENTERS

30+



REGISTRANTS

70% REBs, hospitals, researchers and government

20% Health Industry

10% Health charities
Patient groups



The content is always extremely relevant to what is going on in the current clinical trials environment. Amazing work!



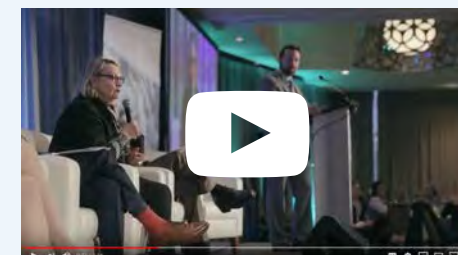
Read CTO conference review in *Biotechnology Focus* magazine



View two panel discussion sessions conducted at the conference

JOIN US FOR THE 2019 CTO CONFERENCE

Our 5th annual conference promises to be an engaging opportunity to network and learn about emerging areas and best practices for conducting efficient, high quality clinical trials from leaders in the clinical trials community. Learn more about the 2019 conference at www.ctoconference.ca.



PROMOTING ONTARIO AT BIO 2018

CTO helped fuel clinical trials innovation and promote Ontario's competitive advantage at the 2018 BIO International Convention in Boston by hosting, in partnership with Montreal InVivo and CATALIS, a knowledge exchange about the business opportunities presented by emerging technologies. Leaders from Ontario's and Quebec's clinical trials community discussed how data mining capabilities and advanced technologies, such as artificial intelligence and genomics, impact clinical trials and health care innovation. BIO 2018 attracted more than 18,000 biotechnology and pharma leaders from 67 countries.



SESSION AT A GLANCE

110
industry representatives



total attendees

150

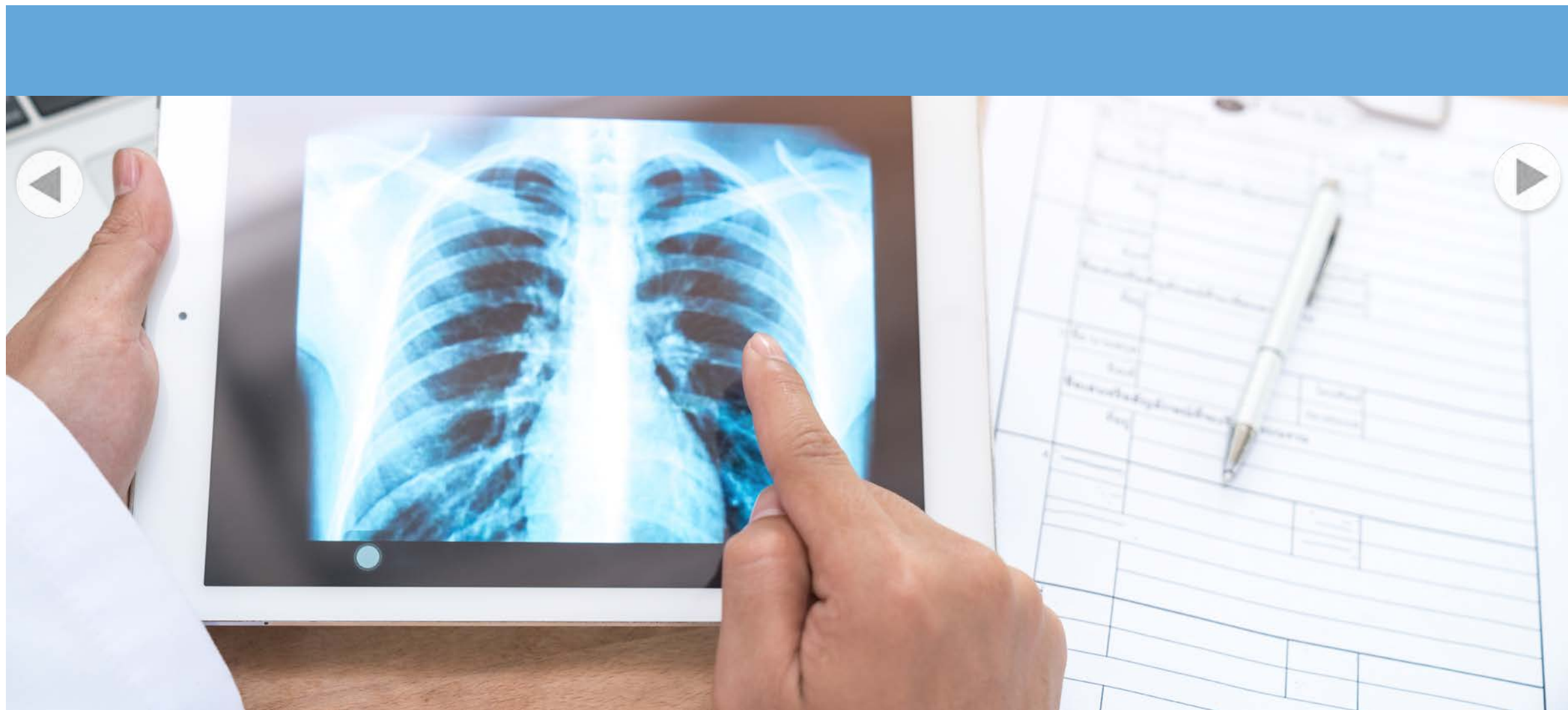


sponsors





GOVERNANCE & FINANCIALS





CTO BOARD OF DIRECTORS

Our skills-based Board provides oversight and guidance as Clinical Trials Ontario advances its important work.

Arthur Slutsky

(Chair)

Vice President, Research, St. Michael's Hospital

Mark Lundie

(Vice-Chair and Secretary)

Director, Medical Affairs, Rare Diseases, Pfizer Canada Inc.

Raphael Hofstein

(Treasurer)

President and Chief Executive Officer, MaRS Innovation

Tina Ceroni

(Member)

Clinical Trial Participant

Ed Dybka

(Member)

President and General Manager, Ipsen Biopharmaceuticals Canada

Anne Ellis

(Member)

Associate Professor and Chair, Division of Allergy & Immunology, Department of Medicine, Queen's University

Michael Owen

(Member)

Dean and Professor, Faculty of Education, Brock University

Raphael Saginur

(Member)

Chair, Ottawa Health Science Network Research Ethics board

Clive Ward-Able

(Member)

Former Executive Director, R&D, Amgen

James Wilson

(Member)

President, Brancorth Medical Inc.



FINANCIALS

	2018 CDN (\$)	2017 CDN (\$)
ASSETS		
Cash	823,833	663,238
Guaranteed investment certificates	20,000	10,000
Accounts receivable	237,610	105,870
HST recoverable	14,843	22,748
Prepaid software costs	56,551	117,620
Prepaid insurance and deposits	56,510	43,731
Prepaid rent	-	69,354
LIABILITIES AND NET ASSETS		
Accounts payable and accrued liabilities	179,723	155,930
Deferred contributions	695,614	731,679
	875,337	887,609
Net assets (unrestricted)	334,010	144,952
	1,209,347	1,032,561



CONTACT US

We are committed to improving Ontario's clinical trials environment. Contact our team to learn more about clinical trials in Ontario or about CTO's services, programs and impact.

 www.ctontario.ca info@ctontario.ca [@clinicaltrialON](https://twitter.com/clinicaltrialON) [CTO YouTube Channel](#) [CTO LinkedIn Profile](#)

CLINICAL TRIALS ONTARIO (CTO)

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the Ontario Ministry of Economic
Development, Job Creation and Trade.

