



# SUCCESS STORIES

Ontario life sciences companies are producing astounding innovations across our sector. Read about how their businesses are fuelling our economy – and how we can help them reach their full potential to accelerate life sciences into a major economic powerhouse.

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**Bay Area Health Trust**  
bayareahealthtrust.com

**Sector:**

Biopharma SME  
Diagnostics  
Healthcare  
Innovation & Research  
Med Tech

**Countries/ markets of focus:** Canada, US

**Year founded:** 2000

**Number of Employees:** 30

Bay Area Health Trust (BAHT) is a Hamilton-based company that operates life science businesses and invests in growth-oriented opportunities with the goal of returning value to our beneficiaries, Hamilton Health Sciences and McMaster University. We are proud to serve the Hamilton community by putting people first in everything we do. From fostering leading-edge healthcare innovation to enabling seniors to age safely at home, Bay Area Health Trust is committed to playing our part in building a better future. BAHT recently celebrated our 20th anniversary, and the value our organization provides is still as relevant now as it has ever been. Whether through long-standing business units that play a critical healthcare role, or urgent support for provincial programs that were needed to help fight the spread of COVID-19, BAHT was there.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Throughout the pandemic, BAHT has made strategic investments in innovative technologies. From helping seniors live safer at home for longer, to helping maximize Ontario's PCR testing capacity, we've made a concerted effort to go beyond our company's walls and play our part in safeguarding Ontarians. Our various business units are active participants in Ontario's life science community and broader healthcare ecosystem. For example, Bay Area Research Logistics is a clinical trial logistical partner of choice for leading researchers and pharmaceutical companies across North America, and our Bay Area Records business unit not only scans and integrates records (digitization of files) into hospitals' clinical information systems, but it also serves clients in other professional services where privacy and quality are key requirements. BAHT consistently engages with community stakeholders including, but not limited to: iF Synapse Life Science Competition, DeGroot Innovative Solutions Competition, Bay Area Science and Engineering Fair (BASEF), The Mark Preece Family House, McMaster Innovation Showcase.

**KEY WINS**

Early in the pandemic, BAHT answered the call of the province and the community through specialty storage and logistical support as help was needed for the first and subsequent vaccination cohorts. By pivoting in the face of a global pandemic, BAHT demonstrated its commitment to serving the community during a time of need. BAHT's role in the fight against COVID-19 was further solidified with the licensing and commercialization of a novel molecular transport medium during a time-sensitive period. Through the McMaster Industry Liaison Office (MILO), BAHT's business, supply-chain, regulatory and quality experts were able to determine the quickest way to bring McMaster Molecular Medium (MMM) to market. Millions of units of MMM have already been procured and deployed in Ontario as part of Public Health Ontario's approved list of COVID-19 PCR collection kits that contain transport media. McMaster Molecular Medium (MMM) is often preferred by labs because the samples arrive non-infectious and ready for testing. MMM inactivates the virus and therefore increases testing capacity because it removes time-consuming steps in the lab.

**LOOKING FORWARD**

Bay Area Health Trust would not be where we are today without our people. Our success as an organization is reflective of the hard work and determination that our incredible team has put in over the last 20 years. As we look ahead, we are going to continue to put our people first by investing in their growth and enabling them to help build our future. It is this mindset that has allowed BAHT to serve our community and make a difference in people's lives. Whether through physical infrastructure investments or new innovative technologies, the healthcare sector is constantly evolving. As we look ahead, we must remain committed to staying at the forefront of that evolution by operating at the intersection of healthcare and innovation. Our primary goal is to build a better future for the community.



**BD Canada**  
www.bd.com/en-ca

**Sector:**

Diagnostics  
Healthcare Diagnostics  
Healthcare  
Innovation & Research  
Med Tech

**Countries/ markets of focus:** Global

**Year founded:** 1897

**Number of employees:** 400 in Canada



BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company develops innovative technology, services and solutions that help advance clinical therapy for patients and clinical process for healthcare providers. BD has 75,000 employees and a presence in virtually every country around the world to address some of the most challenging global health issues. BD helps customers enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care.

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

The impacts of staffing shortages in health care continue to hit medical labs particularly hard with an ever increasing demand. BD-Canada aims to address human health resource issues through connectivity and to develop innovative solutions that help advance clinical therapy for patients and clinical processes for health care providers. We take pride in making frontline workers' and lab technicians' jobs easier through quick and accurate diagnoses and driving the best treatment options and actions. With more accurate, timely, and cost-effective testing, as well as enabling the expansion of laboratory capabilities, our new technology means less time for administrative tasks and more time for clinical duties.

**MAJOR INVESTMENTS / ACQUISITIONS:** Acquisition of Parata Systems

**BARRIERS TO SUCCESS**

The COVID-19 pandemic has created unprecedented challenges for Canada's healthcare systems and global supply chains across all industries. Similarly, medical technology companies have not been immune to these challenges: limited availability and access to raw materials, shipping and transportation delays, and labour shortages. This is paired with our health system, which faces many challenges, such as financial pressures and changing healthcare delivery methods. Our top priority is meeting the needs of patients by ensuring our customers have continued access to the most critical medical technology. To improve lead times and supply, we have increased capacity for the highest-demand products and streamlined our portfolio for greater consistency, quality, and efficiency.

**KEY WINS**

Shared Hospital Laboratory (SHL) recently opened a new state-of-the-art microbiology lab with total automation that will serve hundreds of thousands of patients annually across the Greater Toronto Area. The new laboratory at the Sunnybrook Health Sciences Centre features BD Kiestra™, an innovative laboratory automation solution, and BD Synapsys™, an advanced browser-based application that enables access to lab workflow and data. BD Kiestra™ offers standardized and scalable automated solutions for inoculation, incubation, plate imaging, reading, and follow-up testing. BD Synapsys™ Informatics solution offers integrated workflow and on-demand insights to empower laboratory staff to impact turnaround time, expedite decision-making, improve productivity, and support compliance requirements. SHL remained resilient through the pandemic despite numerous challenges and has completed over three million COVID-19 tests.

**LOOKING FORWARD**

BD is pursuing its purpose of advancing the world of health™ through partnerships that are focused on meeting the needs of healthcare professionals and the patients they serve. From breakthrough discoveries in research and enabling better, faster diagnostics wherever they are needed to improving the delivery of care through innovative technologies, BD has the breadth and depth of expertise across the patient journey to provide the right care, at the right place, at the right time. BD is focused on investing in innovation in AI, robotics and smart connected care to improve patient care across the care continuum. We are committed to achieving better diagnosis and the treatment of chronic disease by developing more efficient screening methods.





**Cardinal Health Inc. (Parent Company),  
Cardinal Health Canada (Canadian Subsidiary)**  
www.cardinalhealth.com |  
www.cardinalhealth.ca

**Sector:** Healthcare, Med Tech  
**Countries/ markets of focus:** United States, Canada, EMEA, LATAM, APAC  
**Year founded:** 1971  
**Number of employees:**  
~1,400 Nationally,  
~850 in Ontario  
**Projected number of employees in 3-5 years:** ~1,400



Cardinal Health is a global healthcare products manufacturer, distributor, and provider of healthcare services and solutions with a leading national presence across Canada. Cardinal Health Canada is uniquely positioned to drive patient outcomes, protect healthcare workers, and create efficiencies across the continuum of care. The company acts as the crucial link between the clinical and operational aspects of healthcare.

**Essential to care™**

Cardinal Health is a global healthcare products manufacturer, distributor, and provider of healthcare services and solutions with a leading national presence across Canada.

Cardinal Health Canada is uniquely positioned to drive patient outcomes, protect healthcare workers, and create efficiencies across the continuum of care.

The company acts as the crucial link between the clinical and operational aspects of healthcare.

- We are a **National Solutions Provider** with over 1400 dedicated employees, including clinical staff, across the country.
- We deliver to **OVER 40,000** points across Canada.
- We serve more than **3,000** long term care, retirement and assisted living homes.
- 95%** of hospitals in Canada.
- 1,000** homecare providers.
- 8,000** direct patients.
- 6,000** clinics & pharmacies.

We operate **8** strategically located distribution centers across the Canada.

We have more than **1 million** square feet of warehouse capacity.

We manufacture or source **OVER 100,000** UNIQUE PRODUCTS to support patients across the continuum of care.

Key areas of expertise: Breast Pump | Diabetes | Enteral Feeding | Incontinence | Ostomy | PPE | Respiratory | Urinary | Wound Care

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**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

As a healthcare manufacturer, distributor, and provider of healthcare services and solutions, Cardinal Health Canada is uniquely positioned to partner with healthcare providers and government to navigate the challenges facing our healthcare system. We leverage the full breadth of our scale and expertise to mitigate supply disruptions, drive operational efficiencies, and allow healthcare providers to do what they do best—care for Canadians.

**MAJOR INVESTMENTS / ACQUISITIONS:**

Cardinal Health Canada services over 95% of Canada's hospitals, 3000 Long-Term Care Homes, 1000 healthcare providers, 8000 direct patients, and 6000 clinics and pharmacies with eight strategically located distribution centers and one manufacturing site across the country. We have more than 1M square feet of warehouse capacity—inclusive of pandemic storage, and we recently expanded our footprint in Calgary by 30,000 square feet, and will be expanding our footprint in Ontario within the next year by 150,000 – 300,000 square feet. Additionally, Cardinal Health Canada will be implementing a new ERP system to drive efficiencies within the next year to 18 months.

**BARRIERS TO SUCCESS**

The effects of the global pandemic have greatly challenged our industry—surges in demand, supply chain challenges, and a hyper-inflationary market have created significant challenges for our business, our supplier partners, our customers and patients. We will need to continue to collectively collaborate to overcome these challenges together.

**LOOKING FORWARD**

Cardinal Health Canada has embarked on a multi-year strategic plan focused around enhancing the experience of both of customers and our employees. From a customer perspective, we aspire to be healthcare's most trusted partner and have created our strategic plan with market insights and customer feedback to unlock the full potential of our products, supplier partners, and services and solutions to ensure healthcare providers have the products they need to provide the best care to Canadians. From an employee perspective, we take pride in offering a people-first, diverse and inclusive culture to our teams. We believe that when people feel comfortable bringing their whole-selves to work, we drive the best results for our people and our customers.



Commercializing  
Living Therapies

**CCRМ**

ccrm.ca

**Sector:**

Innovation & Research

**Countries/ markets of focus:**

Canada & North America with global clients

**Year founded:** 2011

**Number of employees:** 246

**Projected number of employees in 3-5**

**years:** 1,000+ (including OmniaBio)

Regenerative medicine is widely recognized as the future of medicine. CCRM is preparing Ontario, and Canada, for that future. Regenerative medicine is harnessing the power of stem cells, biomaterials and molecules to repair, regenerate or replace diseased cells, tissues and organs. Regenerative medicine is already being used to treat, manage, and cure some of the most devastating and costly diseases in the world today. CCRM accelerates the translation of promising regenerative medicine-based technologies and therapies – especially cell and gene therapies – into life-changing health outcomes for patients. CCRM launched in 2011 with the goal of solving the big challenges in regenerative medicine and moving promising technologies and therapies from lab to life. Over the past decade, CCRM has partnered with leading research institutions to launch new ventures, enabled the industry by building much needed biomanufacturing infrastructure, and scaled emerging companies by catalyzing investment. CCRM is shortening the long journey that new treatments take to get from the lab to the patient, and helping to create a new global industry right here in southern Ontario.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Many new and potentially life-changing regenerative medicine-based treatments never reach patients because they are not successfully moved from the laboratory to the marketplace. To fulfill regenerative medicine's promise to treat the many diseases affecting our population, a world-renowned group of stem cell scientists and bioengineers came together to form CCRM. Together, CCRM and its partners are solving the big problems and bottlenecks in regenerative medicine. For example, CCRM is addressing the critical skills gap by establishing bespoke workforce training that is available virtually, to anyone in the world. With respect to the manufacturing capacity shortfall for Canadian therapy developers, CCRM is building gap-filling infrastructure so that the companies CCRM launches and invests in will remain in Canada. CCRM's overall mission is to generate sustainable health and economic benefits through global collaboration in regenerative medicine, and cell and gene therapy.

**MAJOR INVESTMENTS / ACQUISITIONS:** OmniaBio (CCRМ's new subsidiary)

**BARRIERS TO SUCCESS**

The industry-wide talent and skills shortage is something CCRM is wrestling with. CCRM is doing its part to address training needs by partnering with CellCAN, a Montreal-based knowledge mobilization network in cell and gene therapies. Together we launched the Canadian Advanced Therapies Training Institute (CATTI) in July 2021 and have already seen success in graduating students from its programs. Another challenge is the adoption of cell and gene therapies. At current prices, health systems are often unable or unwilling to support the rollout of these expensive treatments. If we want adoption to happen, the cost of goods sold (COGS) must come down. This can be achieved through efficiencies in industrial process development and manufacturing, which can be identified and targeted when therapeutic developers collaborate with contract development and manufacturing organizations (CDMOs) – like OmniaBio. However, this collaboration must take place at an early stage in development.

**KEY WINS**

CCRМ has built an ecosystem that not only nurtures home-grown innovation, keeping it in Canada, but one that attracts global innovation too. CCRM's unique non-profit, public-private partnership model engages 600+ organizations around the world, employs 250 highly-qualified personnel, and provides \$20M per year in gap-filling services to dozens of companies on the back of tens of \$millions of investments in its specialized facilities. CCRM has launched and scaled 14 portfolio companies that have raised almost \$1B. In addition, CCRM had the foresight to address the void in domestic biomanufacturing capacity exposed by the pandemic. On March 31, 2022, the Government of Ontario announced a \$40M loan from the Invest Ontario Fund, launching OmniaBio Inc., a milestone collaboration set to be Canada's largest CDMO facility for cell and gene therapies. The first building, scheduled to open in 2024, completes the CCRM-built ecosystem with world-class, commercial-scale biomanufacturing capabilities, providing Ontario with the manufacturing muscle to better address future pandemics and, with regenerative medicine on track to transform the future of medicine, the needs of a revolutionized health-care system.

**LOOKING FORWARD**

In five years, the commercial scale spin-off of CCRM is fully operational and has grown to over 1,000 employees. OmniaBio has reached its annual revenue target of \$300M. As a result of the manufacturing supply chain built by OmniaBio, at least two additional \$1B investments in cell and gene therapy manufacturing have been announced. Ontario is well underway in achieving its goal of being a major cell and gene therapy manufacturing destination, with at least 20,000 jobs and \$2B of new investment capital. In recognition of CCRM's best-in-class model for translating early-stage discoveries into clinical-ready technologies and therapies, as well as sustainable, high-growth companies, CCRM hubs have been established around the world in countries where the science is excellent, but commercialization lags.

**Collège La Cité**

[www.collegelacite.ca/bri/bio-innovation](http://www.collegelacite.ca/bri/bio-innovation)

**Sector:**

- Agri-Food
- Biopharma SME
- Diagnostics
- Innovation & Research
- Med Tech
- Pharmaceuticals

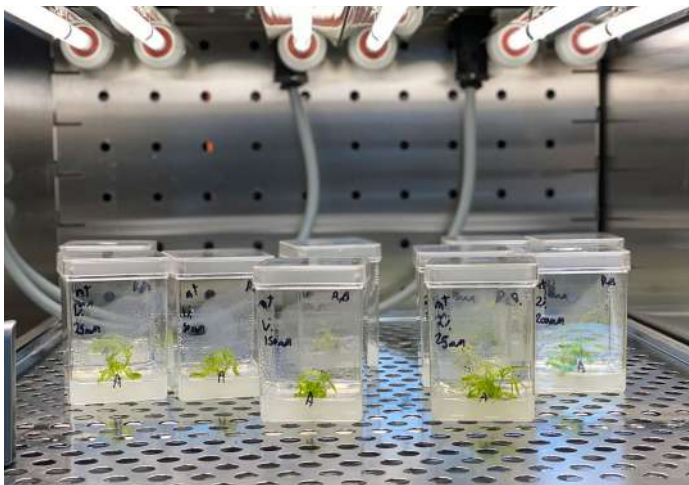
**Countries/ markets of focus:** Canada

**Year founded:** 2015

**Number of employees:** 20

**Projected number of employees in 3-5 years:** 25

The Technology Access Centre in Bio-Innovation (TAC-B), in collège La Cité, in Ottawa, contributes to the biotechnology sector by accelerating innovation in businesses through development support and product improvement. We specialize in biotechnology of health, agriculture and industrial applications. We conduct applied research projects and offer services to the industry.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Our business model is based on partnerships with industry to conduct applied research, co-funded through public and private funds, for which intellectual property for prototypes is transferred to businesses. The TAC-B team is made up of research staff, professor-researchers, and undergraduate students who all specialize in biotechnology and work in close collaboration with partner institutions and private businesses.

**BARRIERS TO SUCCESS**

Our barrier is access to public funds that support industry innovation and recruitment of experts.

**KEY WINS**

Our success stories (<https://www.collegelacite.ca/bri/projects-and-innovations>) includes a number of inspiring stories involving projects conducted within various applied research initiatives at La Cité in collaboration with partners, students, researchers, professors, and staff members who have shown perseverance and determination to complete these innovative projects. These examples of projects reflect our commitment to encouraging innovation within the community and talent development. These features promote research activities in the four major areas of research conducted through the Office of Applied Research and Innovation (OARI): Bio-Innovation (TAC-B), Smart Prototyping (CEPI), Social Innovation, and Food Processing.

**LOOKING FORWARD**

Continue to support companies to maximize R&D investment, innovation, and the development/improvement of products and services.



# EVERSANA™

**Eversana**  
eversana.com

**Sector:**

Healthcare

**Countries/ markets of focus:**

North America, Europe, Asia

**Year founded:** 2017

**Number of employees:**

150 in Canada - >6,000 worldwide

Accelera Canada, and now EVERSANA, has built an integrated commercial services platform to solve any drug pricing, promotion, access, reimbursement, adherence, or product delivery challenge. Powered by data & analytics. Supported by advocacy. Ready-to-deploy infrastructure. Proven expertise. We manage the complete launch and commercialization of products or address specific program or patient needs.

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

For decades, pharmaceutical and medical device/diagnostic companies have outsourced manufacturing and clinical research. Commercial functions were largely handled in-house. Given the increasing complexity of the regulatory, market access, pricing and commercial activities required to successfully launch new products, companies have turned to experienced vendors to support them. The challenge then is managing multiple vendors in different disciplines, particularly when you have limited management capacity and no experience in Canada. EVERSANA solves this challenge with our integrated commercial offering. We pull together all the insights across disciplines and bring this to our clients with integrated findings, recommendations and execution.

**MAJOR INVESTMENTS / ACQUISITIONS:** EVERSANA acquired Canadian Cornerstone Research Group in 2019 (global HEOR capabilities), Accelera Canada in 2021 (integrated commercial services), Protean in 2021 (specialty consulting), and In Touch in 2021 (marketing agency).

**BARRIERS TO SUCCESS**

1. One barrier we have worked hard to overcome is the lack of focus on Canadian market entry strategies within new companies. Typically they delay filing in Canada, and this in turn delays access for Canadian patients. So we try to educate these companies about the value of a well planned global strategy that takes into account regulatory synergy, global pricing inter-relationships and market opportunity.
2. We see things starting to change now but there remains some inertia in terms of the historical practice of hiring a market access vendor, and a regulatory vendor and a commercial services vendor - all separate companies who are not integrating their offerings so that optimal decisions can be made.
3. Of course the attractiveness of the environment overall weighs heavily with new companies, so the protracted PMPRB change process created barriers. The increasing complexity of the pricing process also creates reluctance. We show clients that we are still an attractive market (#9 in the world) and although complex, we can successfully navigate the system and advocate for Canadian patient access, securing coverage and pricing that generates a positive ROI.

**KEY WINS**

Accelera Canada was formed in 2017 by five partners including two former General Managers of Pharmaceutical Companies in Canada and three partners with their respective service companies. We had a vision of providing integrated commercial solutions to both businesses who wish to introduce a new drug, device or diagnostic in Canada and established pharmaceutical companies. We rapidly grew as our offering was unique, especially for startup companies who are not experienced in the Canadian market. Acclera Canada, and now Eversana, offer Blueprints for new companies so that they can make the best decisions in terms of how and when to come to Canada, and then we support their commercialization plans and in some cases, the implementation. EVERSANA had built a very similar business model in the US and planned to expand globally. They acquired Accelera Canada and their three partner companies - Podium Strategic Partners, Advocacy Solutions and Patient Access Solutions in 2021. The Accelera Partners were thrilled to join EVERSANA and expand even more quickly as we can now offer full agency services, patient support, data & analytics, advocacy & PR, field solutions, etc. as part of a larger and fast-growing company. The cultures are well aligned too - with a focus on accelerating entry into new markets so that patients can get the value of new innovation that improves and saves lives, as quickly as possible. Already under Eversana, we have expanded our services to include full regulatory capabilities and complete commercializations where we fully manage the commercial launch of products for our clients, including field teams.

**LOOKING FORWARD**

EVERSANA, both globally and in Canada, continues to add more services to their integrated commercial platform so that we can offer clients an entire solution. With 150 employees in Canada now, the number of products that we are handling via our Complete Commercialization service, is expanding rapidly. If a client wants to enter Canada, we can offer them on the ground, ready-to-deploy commercial planning and implementation services. Then, when appropriate based on their pipeline and capacity, they can transition the commercial function and manage the business. In the interim, we have built their company brand and launched into the Canadian market successfully for them. The global footprint of EVERSANA is also expanding rapidly with a keen focus on enlarging our European and Asian footprint.



**Ipsen Biopharmaceuticals Canada Inc.**  
www.ipсен.ca

**Sector:**

Pharmaceuticals

**Countries/ markets of focus:** Global presence with Canadian affiliate

**Number of employees:** 100

**Projected number of employees in 3-5 years:** 150

Ipsen is a global, mid-sized biopharmaceutical company focused on transformative medicines in oncology, rare disease and neuroscience.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

In 2019, Ipsen acquired a small Canadian pharmaceutical company, Clementia Pharmaceuticals for over \$1 billion dollars. As part of this acquisition Ipsen gained the rights to SOHONOS (palovarotene), a retinoic acid receptor gamma (RAR ) selective agonist, for the treatment of fibrodysplasia ossificans progressiva (FOP). FOP is an ultra-rare, life-shortening, and disabling genetic disorder that is characterized by congenital skeletal malformations and heterotopic ossification (HO) of the soft and connective tissues. The formation of extra-skeletal bone through the process of HO is irreversible and causes cumulative disability, with patients becoming progressively immobilized throughout their lifetime leading to early death. Prior to the approval of SOHONOS, patients only options were lifestyle modifications and treatments for symptom management. SOHONOS is the first treatment that alters the natural course of this devastating disease.

**RECENT MAJOR INVESTMENTS / ACQUISITIONS:** Canadian investments and partnerships include: Clementia Pharmaceuticals in 2019; a discovery stage oncology program with IRICoR, a pan-Canadian research commercialization center focused on drug discovery, based at the Université de Montréal in 2020; a partnership with Fusion Pharmaceuticals in 2021, who are located in Hamilton, Ontario.



**BARRIERS TO SUCCESS**

Compared to other countries, Canadian patients face significant access delays for new medicines due to Canada's sequential and cost-control focused reimbursement process. Canadians are waiting 2+ years after regulatory approval to actually get access to much needed treatments. Any Canadian, whether a patient, caregiver, or healthy citizen, should find this unacceptable.

**KEY WINS**

SOHONOS is the first and only approved treatment for FOP and is a product of Canadian- made research and development. The research and development for SOHONOS was initiated by Clementia Pharmaceuticals which was subsequently acquired by Ipsen in April 2019. SOHONOS was granted priority review status on April 15, 2021, and received Notice of Compliance (NOC) from Health Canada on January 21, 2022. Approval in Canada marked the first approval globally for SOHONOS. To date SOHONOS is the only approved treatment for FOP globally.

**LOOKING FORWARD**

Ipsen aims to ensure all Canadian patients suffering from FOP are able to equitably and rapidly access SOHONOS. As this treatment was developed and approved first in Canada it is imperative that Canadian patients are able to benefit from this much needed treatment for FOP.



**JN Nova Pharma**  
www.jnnova.com

**Sector:**

Healthcare

**Year founded:** 2020

**Number of employees:** 10

**Projected number of employees in 3-5 years:** 25-30



JN Nova Pharma is a private Canadian biotech company founded in early 2020 by two experienced biotech executives to develop a promising biological COVID19 Therapeutic. This proprietary drug class was discovered and is being developed in collaboration with the experienced teams of the National Research Council of Canada-Human Health Groups across the country.

JN Nova has exclusive worldwide rights to the product class, which blocks pan-COVID19 infection from all variants, with additional important renal, cardiovascular, and pulmonary protective properties.

A bio-manufacturing process has been developed and successfully transferred to our contract GMP facility for clinical supplies and trials will be conducted nationally and internationally in 2023.

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Our lead therapeutic molecules are corona-viral neutralizing agents which trap and inhibit viral entry to the lungs via an ultra-high affinity biological trap and cause viral clearance via immunological conjugation. This molecular class is an enhanced version of the actual human viral target, the ACE2 enzyme, and therefore is always independent of the resistance developed by emergent variants, such as Omicron, whose cloak-changes dramatically reduce antibody and immunological defence.

As an ACE2 enzymatic decoy, with full ACE2 enzyme replacement activity, the drug class will be evaluated in a COVID19 patient trial for enhanced recovery and for protection from acute kidney injury and from acute respiratory syndrome. Both of these latter effects have caused serious consequences in ICU settings in vulnerable patients infected with COVID19.

**MAJOR INVESTMENTS / ACQUISITIONS:** Private individuals, founders and a \$4.6M competitive grant award and an anticipated \$5 M investment in 2022-3 for clinical development.

**BARRIERS TO SUCCESS**

Investment from Canadian Institutional sources. Our success to date and our US investors, who are supporting this Ontario company, will encourage Ontario institutional investors to syndicate. Scalable bio-manufacturing for clinical drug supply, and use for subsequent post-COVID19 indications, is very limited in Canada and will be encouraged by clinical success of this national discovery.

**KEY WINS**

Extremely potent vs emergent viral variants: First drug candidate will be clinically-developed using an inhaled delivery device as an accessible, rapidly administered therapeutic intervention in symptomatic, pre-hospitalized and early-symptomatic hospitalized patients. Showing the drug-sensitivity for people that are infected by these vaccine-escape mutants, such as Delta, Omicron and beyond, provides great hope for a reduction in transmission and subsequent serious consequences.

**LOOKING FORWARD**

Protect vulnerable populations from organ damage and ICU now AND beyond COVID-19. Vaccines may suppress the pandemic spread, but life-saving therapeutic interventions are imperative for those with higher-risk co-morbidities, who are infected by break-through variants. Antibody therapies have had no effect on these vulnerable patients in hospitals post the initial wave.

The knowledge gained from the COVID19 infection pandemic, due to its target, ACE2, being lost in infected patients, has confirmed the vital protective role of this enzyme and its replacement as a new therapeutic approach. ACE2 is expressed in many organs where pre-existing pathological conditions exist, and its loss in patients with cardiovascular, pulmonary, nephrological and diabetic conditions has resulted in severe symptoms. Indeed, more than 80% of hospitalized patients are such vulnerable patients, where death rates (HR) are 3-6 times higher.

Beyond COVID19, future clinical evaluations will be carried out in other unmet medical indications such as AKI (acute kidney injury) and ARDS (acute respiratory distress syndrome), where acute organ injuries are strongly related to ACE2 loss, independent of viral infection. By replacing the lost ACE2 function using our long-lasting ACE2 enzyme replacement, we will be bringing a new protective treatment to patients who are currently vastly impacting the world's health-care systems.

**Johnson & Johnson** INNOVATION  
— JLABS —

**Johnson & Johnson Innovation - JLABS**

[jninnovation.com/jlabs/locations/jlabs-toronto](http://jninnovation.com/jlabs/locations/jlabs-toronto)

**Sector:**

Innovation & Research  
Med Tech  
Pharmaceuticals

**Countries/ markets of focus:**

Markets of focus for JLABS Companies:  
59 pharma, 22 medtech, 14 consumer,  
and 12 cross-sector

**Year founded:** 2016

**Number of employees:** 95 JLABS  
Companies (current and alumni)

**Projected number of employees in 3-5  
years:** 100+ JLABS Companies

Johnson & Johnson Innovation – JLABS is a global life science network for innovation. Launched in 2016, Toronto was the first JLABS site outside the United States and is now one of 13 locations globally. JLABS® Toronto is the premier incubator and enabler of life sciences innovation, driving a culture of entrepreneurship and providing a centrepiece to Toronto’s innovation ecosystem. Our mission at JLABS® Toronto is to:

- Help biotech companies grow & scale through key resources and physical space to drive commercialization;
- Facilitate collaborations and financing through our expansive network;
- Drive engagement between the Johnson & Johnson Family of Companies and Canadian biotech companies; and
- Support the growth of the biotech ecosystem in Toronto and Canada.



**WHAT ARE YOU DOING THAT’S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY’S WALLS?**

Situated in downtown Toronto’s MaRS Discovery District, North America’s largest urban innovation hub, Johnson & Johnson Innovation –JLABS® Toronto is surrounded by researchers, investors, government and entrepreneurs, who support the advancement of healthcare innovation. Through collaboration, we seek to advance the world’s best innovation to meet the needs of patients and consumers. We offer a suite of capabilities for breakthrough, early-stage innovations with the greatest potential to strengthen and differentiate therapeutic options in areas of unmet medical needs, especially within Johnson & Johnson’s areas of strategic focus. JLABS® Toronto helps innovators unleash the potential of their early scientific discoveries, by providing state-of-the-art infrastructure (lab and offices), assigning practicing biopharmaceutical experts that help on the commercialization journey and make connections with our global network of professionals, providing access to our investor community, offering training and skills, amplifying news for global visibility, and considering partnership for future opportunities.

**MAJOR INVESTMENTS / ACQUISITIONS:** JLABS companies are hot on the move, raising capital, accelerating development and partnering with commercial organizations – 3 publicly traded companies and 2 companies acquired

**BARRIERS TO SUCCESS**

For smaller companies, there can be a disconnect between the early stages of development and the patient experience in the clinic. Success involves the entire commercialization process, which means competitiveness in ideation, execution, and capital access. Our experience increases competitiveness in these areas. We also see Ontario’s life sciences strategy playing an important role in supporting this growth by building a foundation for a world class life sciences sector. Importantly, by championing early adoption of innovative health products and services, Ontario will be a key partner for supporting the growth of small companies and bringing innovations to Ontarians.

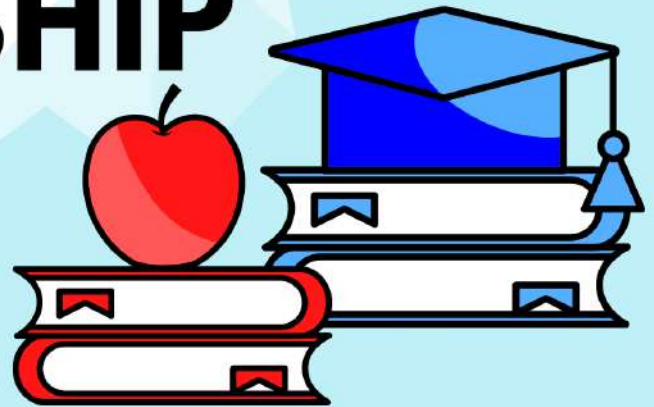
**KEY WINS**

Ontario’s life sciences sector is making progress in regenerative medicine, including cell therapy and gene editing. The market has rewarded this work with the emergence of companies like BlueRock, Notch Therapeutics, ArtisanBio, panCELLa, Intelligex, CTRL, Endogena, Mediphage, and others. These therapies are proving to be very valuable to patients on a global scale. There is also opportunity in terms of how the life sciences ecosystem—enabled by JLABS—can drive the development of novel therapies to the forefront in various disease areas. Another strength is in manufacturing. As an industry, we’ve spent decades using therapies that are mostly chemical synthetic molecules, but now we’re leveraging more complicated platforms with mRNA, nano particles, and cell and gene therapies. In Canada, government strategy is supporting the manufacturing of these innovative medicines and driving manufacturing innovation forward. JLABS portfolio companies are innovators in Cell (OmniaBio), Gene (Mediphage) and RNA (Spindle Biotech) manufacturing and are aligned with government efforts to catalyze biomanufacturing in Canada.

**LOOKING FORWARD**

For JLABS® Toronto, we have three top priorities to accelerate innovation. First, we are empowering startups. We will continue to create an enabling environment for JLABS innovators to lead in all therapeutic modalities where Canada has strategic advantage, including cell and gene therapies. Secondly, we are seeking and supporting differentiated technological opportunities, such as digital and MedTech opportunities that have the potential to significantly increase efficiency of discovery and development processes with the aim of bringing solutions to the patient faster. Finally, we are collaborating with life science leaders to drive capacity-building for next generation manufacturing of innovative medicines.

# LSO SCHOLARSHIP PROGRAM



**BECOME A SPONSOR**

## **Life Sciences Ontario Scholarship and Mentorship Program**

[lifesciencesontario.ca/scholarship](https://lifesciencesontario.ca/scholarship)

The Life Sciences Ontario (LSO) Scholarship and Mentorship program was developed in 2019 and has grown from its modest beginnings to becoming an important element of the LSO mandate, under education and mentorship. Each spring, we accept applications from undergraduate students at University or College studying in fields that are linked to employment within the life sciences sector.

In the 4 years of running the program, we have provided financial support to 135 students worth \$425,000. And more importantly we have paired each student up with an experienced professional within the life sciences sector. Through the support of our sponsors over the years, we have been able to help bring awareness to the many opportunities that exist in Ontario's life sciences sector.

### **LOOKING FORWARD**

BioTalent Canada predicts more than 65,000 new life sciences workers will be needed in Canada by 2029. Along with our partners, we will continue to take steps to support the future young talent as they become trained in the skills needed for the life sciences jobs of tomorrow. Our goal in the next 5 years is to triple the funds distributed to students with a goal of improving Inclusion, Diversity, Equity, and Accessibility (IDEA) within the life sciences sector.

### **STUDENT TESTIMONIALS**

The LSO Scholarship Program was a great opportunity for connecting with mentors in my field of study. I was given access to a host of learning experiences, including visiting the Gilead Sciences office in Mississauga. As a student with a disability, I also especially appreciated the financial assistance of the scholarship. A big thank you to LSO and its partner organizations!

*Lisa Shen, 2019 Award Recipient*

The LSO Scholarship Program provided me the opportunity to gain a breadth of knowledge in the life sciences industry. Being paired with an incredible mentor allowed me to network and create connections with leaders in this field. The program has provided me a strong understanding of how to be successful in my future endeavours and career goals.

Thank you again LSO for this incredible opportunity!

*Kiara Desender, 2021 Award Recipient*

The LSO Scholarship program gave me an excellent introduction to the life sciences ecosystem in Ontario. I was connected with a generous mentor who was patient in explaining his industry, job, and experiences. After just a few minutes into our first discussion, I realized how grateful I was for the unique opportunity! Further, the award itself helped encourage me to finish a second degree and supported my individual learning journey. I am incredibly grateful for the LSO scholarship program and hope many future students can take advantage of it.

*Harrison Solish, 2021 Award Recipient*



**London Economic Development Corporation**  
www.ledc.com

**Sector:** Other: Economic Development  
**Countries/ markets of focus:** Global  
**Year founded:** 1998  
**Number of employees:** 13

London Economic Development Corporation (LEDC) provides supports to companies exploring London, Ontario, as a possible destination for growth.

We are a non-profit organization that will partner with companies to help ensure their long-term success in London, Ontario.



**KEY WINS**

In April 2022, AMD Medicom Inc., one of the world's leading manufacturers and distributors of personal protective equipment (PPE), announced the creation of Manikheir Canada Inc., a new subsidiary that will produce nitrile gloves in London, Ontario in partnership with the Ontario government, which has committed to purchasing 500 million locally manufactured nitrile medical examination gloves per year for its healthcare system.



**MEDEXUS PHARMA**

**Medexus Pharmaceuticals, Inc.**  
www.medexus.com

**Sector:**

Pharmaceuticals

**Countries/ markets of focus:** Canada, US

**Year founded:** 2018

**Number of employees:** 100

**Projected number of employees in 3-5 years:** 150

Medexus Pharmaceuticals, Inc. is a leading innovative and rare disease pharmaceutical company with a strong North American commercial platform. From a foundation of proven best in class products we are building a highly differentiated company with a portfolio of innovative and high value orphan and rare disease products that will underpin our growth for the next decade.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Bringing Quality Healthcare Products to Market for Patients and Healthcare Professionals. Product portfolio features leading products that address a variety of conditions, including rheumatology, auto-immune disease, pediatrics, and specialty oncology.

**MAJOR INVESTMENTS / ACQUISITIONS:**

Acquired IXINITY 2020

Acquired commercial rights to Gleolan in Canada (2019) and US (2022)

**BARRIERS TO SUCCESS**

Access to capital

Adoption of innovative products in Canada

**KEY WINS**

Revenue of US\$23.0M (6/30/22 quarter) and US\$76.7M (3/31/22 fiscal year)

Successful product acquisitions that bring new products like Trecondy and Gleolan to Canadian patients

**LOOKING FORWARD**

Our goal is to build on our existing platform and make Medexus the leading specialty pharma company in Canada.





**Micellae Delivery Systems Inc.**  
micellae.com

**Sector:**

Innovation & Research  
Drug Delivery

**Countries/ markets of focus:** Canada, US

**Year founded:** 2018

**Number of employees:** 7

**Projected number of employees in 3-5 years:** 20+

Micellae is the provider of best-in-class absorption-enhancing and extraction technologies for cannabinoids and other cannabis-derived compounds.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Cannabis sector wastes \$Billions annually on processing cannabis and ends up with a suboptimal product for consumers and patients. Existing solutions have significant compromises in terms of performance, safety, and sustainability.

**MAJOR INVESTMENTS / ACQUISITIONS:** Seed investment: \$1.45M  
Private investors; \$650K (secured), \$450 (warrants)

**BARRIERS TO SUCCESS**

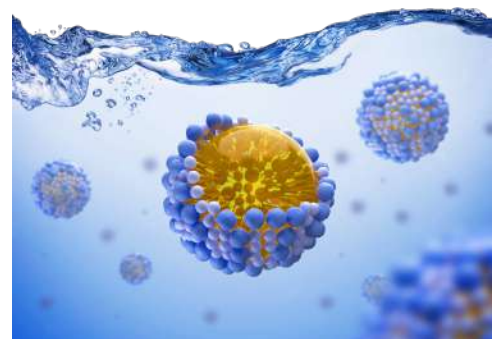
1) Regulatory barriers such as cannabis regulations limiting R&D 2) Limited financial resources and limited access to licensed facilities 3) Scaling manufacturing to meet commercial requirements 4) Securing adequate funding for product development and manufacturing

**KEY WINS**

1) Strong founding team plus an impressive advisory board (Mostly through TIAP, LSO and SVB) 2) Robust data package and IP protection for Drug Delivery and Extraction technologies 3) Generated high interest from the industry post commercialization

**LOOKING FORWARD**

1) Commercialization of our Drug Delivery technology (called O2W) in the US for consumer-based products 2) Complete the pilot-scale validation of our Extraction technology and commercialization 3) Expand the application of O2W to cannabis-based pharmaceuticals 4) Longer-term, expand the application of O2W to other fat-soluble active ingredients





**Microbix**  
www.microbix.com

**Sector:**

Diagnostics

**Countries/ markets of focus:**

Canada, US, Europe, RoW

**Year founded:** 1978

**Number of employees:** 110

**Projected number of employees in 3-5 years:** 200

Microbix is a profitable and growing, publicly-traded (TSX, OTCQX), award-winning, Ontario-headquartered, world leader in the development and manufacture of specific biotechnology solutions for human health. The company has over 110 skilled employees based in Mississauga. It is currently ISO9001- and ISO13485 (Medical Device)-accredited, has a Pathogen and Toxin license issued by the Public Health Agency of Canada and a Medical Device Establish License (MDEL) from Health Canada. The company's current 34,000ft<sup>2</sup> campus comprises R&D, manufacturing, and testing facilities.

The company makes a range of critical materials for the global diagnostics industry, notably infectious disease antigens for diagnostic immunoassays and its laboratory quality assessment products (QAPs™) that support clinical lab proficiency testing, enable new test validation, or ensure the optimum accuracy of testing in clinical diagnostics laboratories. Microbix's antigens enable the antibody tests of over 120 international diagnostics companies, while its QAPs are sold to globally to clinical laboratory accreditation organizations, diagnostics companies, and clinical laboratories.

**BARRIERS TO SUCCESS**

The health of Ontarians will be improved, and delivery costs reduced, if Ontario authorities maintain a Quality- and Value-based approach to strategic procurement, with meaningful focus on longer-term planning. Focus should also be on local procurement to support Ontarians and mitigate future supply chain issues. This approach will allow Ontario companies to plan for growth and more Ontarians to find high-quality employment.

**KEY WINS**

Microbix has more than doubled in size (footprint and staff) in the last 3 years. It provides Ontarians with rewarding, high-quality jobs. Microbix's current QAPs portfolio is now available in over 30 countries. This encompasses over 200 separate products. Within these there are currently over 30 fully-regulated IVD medical devices that ensure testing accuracy for human diseases, including QAPs controls for all major variants of SARS-CoV-2 (COVID-19). Microbix has received support from FedDev Ontario to support this growth. In response to the COVID-19 pandemic, and with a grant from the Ontario Together Fund (MEDJCT), Microbix applied its expertise in sterile manufacturing, automation and quality management to produce a state-of-the-art IVD viral transport medium (DxTM™ brand) to support COVID-19 (and other) testing in Ontario. To date, Microbix has provided over 2 million units of this vital, locally-made, product to the province. Microbix will continue helping Ontario and other provinces optimize infectious-disease testing for respiratory viruses, sexually-transmitted infections, and other human pathogens of concern.

**LOOKING FORWARD**

COVID-19 has amply demonstrated the need for locally-derived capabilities to manage human infectious diseases. In future, other such diseases must be managed to support the health of Ontarians. These include respiratory infections (RSV, Flu, etc.), gastrointestinal pathogens, sexually-transmitted infections and antibiotic-resistant organisms. Microbix works in all of these areas, and more. In the coming years, Microbix will continue its profitable growth and will acquire further facilities and talented staff. The company intends to create a secure, Ontario-based global leadership position for assuring the best possible testing for human infectious diseases.



# **NETRAMARK**

**NetraMark Corp**  
www.netramark.com

**Sector:**  
Med Tech  
**Countries/ markets of focus:** US  
**Year founded:** 2017  
**Number of employees:** 11  
**Projected number of employees in 3-5 years:** 60



Diseases are more complicated than their labels. Alzheimer's is not one disease, and neither are the majority of cancers and psychiatric disorders. At NetraMark we provide maps of disease through a new interactive machine intelligence so that pharmaceutical companies can optimally conduct their trials and reduce the risk of failure. Our unique system uses systems biology and a powerful AI empowering technology that can learn from small data in order to suggest the most important ways that patients relate to each other as it pertains to a clinical trial. In this way, pharmaceutical and biotech companies are able to better understand how to enrich their patient populations so that they can have a successful clinical trial.

### **WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

In order to deal with the fact that clinical trials only involve hundreds of people, we had to develop a novel mathematical system capable of empowering machine learning to create hypotheses from small data. Further, we wanted to close the gap between physicians/scientists and their data science teams. We accomplished this by focusing on explainability and a simple-to-use interface that allows for medical decision makers to actually see how and why their patients relate to each other. We provide these companies a way to see what is driving drug and placebo response, leading to extremely valuable decision making. Ultimately, this puts our organization in a position to create a new taxonomy of disease that can lead to new ways of helping people suffering from a variety of disorders. The enhanced vantage that this brings will allow us to become a targeting system for a variety of diseases as gene editing and other therapeutic modalities emerge. Our technology helps to better engage patients with precision and personalization.

**MAJOR INVESTMENTS / ACQUISITIONS:** Acquired by Nurosene Health for 15M CAD

### **BARRIERS TO SUCCESS**

Funding in Canada has been very difficult. The acquisition opened up a team of investors for NetraMark. We are now seeking some wins with clients in order to secure our growth. Exposure to pharmaceutical companies and biotechs came through time spent in the United States.

### **KEY WINS**

The company itself was able to gain the attention of international pharmaceutical companies through our placebo and patient stratification work. We have had the privilege to work with two top 10 pharmaceutical companies and a handful of other companies. The real differentiator has been our exceptional technology. Roche Canada recognized our work with Everything ALS, which contributed to a global ALS data challenge. Our solution suggests a hypothesis about how ALS patients differ in how the disease begins. As a result of this technology, we were invited to present at rare disease and orphan drug conferences in the summer of 2022. We recently attracted a top American executive (Josh Spiegel) in the pharmaceutical space who is now our president, in addition to Dr. Luca Pani and Dr. DJ Cook. We are now serving several companies in the psychiatric space as well as the neurodegeneration field. Finally, we have partnered with Cyclica in the search for an early Alzheimer's drug. The integration of systems biology with our unique machine intelligence technology has provided our company with significant growth.

### **LOOKING FORWARD**

As a company, we foresee NetraMark capturing a good portion of the phase II market in order to sustain growth, with the eventual goal to rely less on venture capital. Our vision is to get NetraAI technology to become a standard tool for clinical trials, where its suggestive analytics output becomes a real differentiator. NetraMark will have an impact on reducing the failure rate of clinical trials for our customers. As we grow, however, NetraAI will start to gain a perspective on human health that will have an impact on the next generation of therapeutics. This is what excites us the most.



**Noa Therapeutics Inc.**  
www.noatherapeutics.com

**Sector:**

Pharmaceuticals

**Countries/ markets of focus:**

USA, Japan, Canada, EU, Australia,  
New Zealand, South Korea

**Year founded:** 2022

**Number of employees:** 4

**Projected number of employees in 3-5**

**years:** 25



People are complex. It is not surprising then, that diseases are complex too. So, why is it that we are still trying to create a one-size-fits-all approach to the treatment of inflammatory skin disease?

At Noa Therapeutics (Noa), we are here to disrupt this convention. Noa is a preclinical Canadian biotech company on a mission to remove complexity from patients' lives by delivering a singular, multimodal, therapeutic solution to streamline the treatment of complex inflammatory skin diseases. Addressing unmet needs, while leveraging unprecedented reimbursement pathways, Noa will target adoption into underserved and underrepresented patient populations. Expanding, not only the absolute market potential within our first indication in atopic dermatitis, but broader opportunities in the greater inflammatory disease space.

Leveraging our multimodal therapeutic platform, Noa is driven to streamline the deliver meaningful clinical outcomes to patients living with complex inflammatory skin diseases.

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Atopic dermatitis (AD) is a chronic disease that affects over 16M people in North America, \$5.0B, 10.1% CAGR. Diagnosed through a collection of symptoms, AD stems from multiple underlying factors including barrier dysfunction, microbial imbalance, and immune dysregulation.

Over the last four decades, the AD market has been saturated with therapeutics targeting inflammatory symptoms in isolation. Despite despite recent innovations, 89% of patients are still dissatisfied with current treatment options. Patients are pleading for a disruption in the current treatment paradigm. At Noa, we have heard their call.

**BARRIERS TO SUCCESS**

The largest hurdles Noa faces to date is to keep up with the speed at which we wish to progress our venture forward. The macroeconomic conditions, into which Noa was founded, have created hurdles to securing capital. However, through the knowledge and connections we have acquired from our engagement with the life science community in Ontario and across Canada, we are confident in our ability to carry forward our mission and effect meaningful change in the treatment of complex diseases.

Although we are not invulnerable to the economic challenges of the years ahead, we are working with the life science community at large to ambitiously advance our development programs with resolute focus and streamlined precision. We strive to rapidly address the challenges we face ahead including biotech devaluation, clinical challenges, regulatory hurdles, discrete differentiation, and reimbursement. Leveraging the knowledge of those who have walked in our path while blazing a trail of our own for others to follow.

**KEY WINS**

Noa is an idea, a notion of freedom from restrictions or convention; an absence of limitations. At Noa, we've listened to the 9 out of 10 dissatisfied inflammatory skin disease patients and responded with the daring and know-how to shift the current treatment paradigm. An achievement not feasible without Noa's founders, who are a product of the Ontario life science ecosystem. An ecosystem structured to inspire and mold the next generation of leaders and innovators through programs and organizations like MaRS, CDL, BMZ, OBIO, and LSO. The very programs that honed the skills of Noa's founders and catalyzed their bonding over a love of science, competitive natures, and eerily similar laughs. It was through this thriving ecosystem and the blending diverse backgrounds, skills, and talents that we had our first big win, and Noa Therapeutics was conceived.

Although Noa is only three months old, we've secured over \$350K in funding and are ambitiously advancing our pre-clinical program while working to close our first financing round. Striving, not only for commercial and clinical success, but to continue the Ontario tradition of exchange and learning. Empowering the younger generation of underrepresented innovators, entrepreneurs, and leaders of tomorrow.

**LOOKING FORWARD**

At Noa, it is our mission disrupt the convention of traditional drug development to revolutionize treatment options for complex inflammatory skin diseases. Within the next five years Noa will deliver convergent therapeutic solutions stemming from our multimodal drug platform. Addressing unmet needs, while leveraging unprecedented reimbursement pathways to enable adoption into underserved populations. Not only the expanding the absolute market potential of our first use case, but broader opportunities in greater inflammatory diseases through alignment with key strategic partners.

Integral to our journey will be the continuous development of internal skills and expertise. Noa is dedicated to creating a thriving, supportive and productive environment. Within which we will foster the development of the next generation of scientists, entrepreneurs, and innovators within the life science sector in Canada. Translating our knowledge and achievements to commercial success and to developing the talent needed to succeed, not only now, but for tomorrow.



**Northeastern University**  
toronto.northeastern.edu

**Sector:**  
Post-secondary

Northeastern University in Toronto is part of a global university system that includes campuses in Boston; Arlington, VA; Charlotte, NC; London; Oakland, CA; Portland, ME; San Francisco; San Jose, CA; Seattle, and Vancouver.

Our Toronto campus delivers graduate programs in a flexible and experiential format focused on in-demand fields and tailored to Ontario's economic development priorities. Northeastern also partners with Toronto's corporate, tech, and research communities to attract, retain, and invest in Canadian talent.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Northeastern University is a global leader in experiential learning. Our career-focused programs integrate classroom study with our signature cooperative education experiences. Northeastern's programs also provide flexible entry and delivery of instruction and offer learners opportunities to network with alumni and peers across the globe.

Our Toronto campus offers innovative, industry-aligned graduate programs, including two programs in the life sciences: the Master of Science in Regulatory Affairs and the Master of Science in Biotechnology. These programs are unique due to the depth of the content they deliver, as well as the breadth of concentrations available to learners. Regulatory Affairs students can explore a range of topics, including pharmaceutical and medical device regulation, clinical research, and quality assurance, while gaining a uniquely global perspective on the role of the regulatory professional. Our Biotechnology program is notable for its flexible delivery, offering the option of fully online delivery to suit the needs of learners across Ontario. As the only Masters-level Biotechnology program offered in downtown Toronto, the program features unique concentrations such as Process Science, Biopharmaceutical Analytics Sciences, and Pharmaceutical Technologies.

**KEY WINS:**

Northeastern has launched and nurtured two innovative programs that will provide a meaningful contribution to the life sciences ecosystem in Ontario.

Over the past four years, enrolment in the Master of Science in Regulatory Affairs program has grown by over 2000%. Our learners have made valuable connections in co-op roles at Medbotics, Moleculight, Proctor & Gamble, and others. The program now has over 50 graduates, some of whom have gone on to full-time positions at companies like Roche, NERv Technology, Proctor & Gamble, and Metapharm Inc. In fall 2022 we welcomed our first cohort of Biotechnology students at the Toronto campus. Our co-operative education team looks forward to finding new opportunities for this talented group of learners



Novo Nordisk is a leading global healthcare company, founded in 1923 and headquartered just outside Copenhagen, Denmark. Our purpose is to drive change to defeat diabetes and other serious chronic diseases such as obesity and rare blood and endocrine diseases. We do so by pioneering scientific breakthroughs, expanding access to our medicines and working to prevent and ultimately cure the diseases we treat. We employ about 50,800 people in 80 offices around the world, and market our products in 170 countries. Our Canadian head office is in Mississauga, Ontario.



**Sector:**

Pharmaceuticals

**Countries/ markets of focus:**

80 countries with affiliates.

170 countries with marketed products

**Year founded:** 1923

**Number of employees:** 50,800 world-wide

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

We are driven by our purpose to defeat diabetes and other serious chronic diseases including obesity, haemophilia and growth hormone disorders. While innovation is our core contribution to this fight, we know that there are other factors in healthcare that present the biggest barriers. Prevention is a vital pillar in our strategy to defeat diabetes. Diabetes and obesity prevalence continue to grow on all continents and the burden on individuals, families, workplaces and society is large and growing. Ensuring access to our medicines will help reduce the burden for people with chronic disease but we must also work to prevent these diseases from developing in the first place. Our aim is to find, pilot and scale effective interventions to prevent both diabetes and obesity. These efforts, which explore innovations in place-based interventions, digital solutions and new ways of collaborating with financial services sector participants in support of common objectives, are evidence-based and partnership-driven for the greatest possible impact.

**BARRIERS TO SUCCESS**

Diabetes is rising at an alarming rate around the world. Today, approximately 537 million adults in the world are living with diabetes – a figure that is projected to rise to 783 million by 2045 if no action is taken. In 2021, diabetes was responsible for 6.7 million deaths and caused at least USD 966 billion dollars in health expenditure. Given the enormous human and economic cost that diabetes and its complications have on individuals, communities and society, this trajectory is unsustainable. Cities are where more than half of the world's population lives and where three out of four people with diabetes reside. Cases of type 2 diabetes in Peel Region (which includes Mississauga) have increased by 182 per cent between 1996 and 2015 putting an added strain on our public health agencies and healthcare systems. One in six adults living in Peel Region had Diabetes in 2015. Overall, an increase in the total number of diabetes cases is expected given the rising rates of obesity and changing demographics.

**KEY WINS**

On November 10, 2021, the City of Mississauga (home to our Canadian head office) joined Novo Nordisk's global network of cities participating in the Cities Changing Diabetes (CCD) programme. The partnership was made official during a council meeting in which Mississauga made Cities Changing Diabetes history with Mayor Bonnie Crombie signing the Urban Diabetes Declaration along with every member of the City Council. The goal of joining the CCD Programme is to help bring down rates of type 2 diabetes in Mississauga by focusing on healthy living and increasing disease prevention to limit the rise of the disease in the city. The CCD Programme launched in 2014 by the Steno Diabetes Center Copenhagen, University College London and Novo Nordisk to address the growth of type 2 diabetes and obesity. Today, the programme has established local partnerships in more than 40 cities around the world, with 150 partnership organizations involved to help prevent and control urban diabetes.

**LOOKING FORWARD**

Urban environments significantly impact how people live, travel, play, work and eat – factors that, in combination, affect the rise in type 2 diabetes. Although cities are engines of economic growth and innovation, some of the drivers of their prosperity also lead to health inequity. This means that some people have fewer opportunities to make healthy choices than others and vulnerable groups are more likely to be affected by disease. We have to target our efforts where the greatest change can happen – and that is in the world's cities. By joining the CCD Programme, Mississauga will be able to:

- Understand its urban diabetes challenge
- Set its own unique goals to lower type 2 diabetes in Mississauga
- Work to unite stakeholders behind a common cause
- Develop a Mississauga Type 2 Diabetes Prevention Strategy. Mississauga will conduct a series of community engagement sessions with community stakeholders to identify areas for change and generate insights that will build programme components specific to Mississauga.



**PlantForm Corporation**  
 www.plantformcorp.com

**Sector:**

Biopharma SME  
 Innovation & Research

**Countries/ markets of focus:**

North America, Europe, Brazil,  
 South Africa

**Year founded:** 2008

**Number of employees:** 20

**Projected number of employees in 3-5 years:** 60-75



PlantForm Corporation is a privately-held Canadian biopharmaceutical company with a proprietary plant-based manufacturing platform for the ultra-low-cost production of specialty antibody and protein drugs. The company's vivoXPRESS® technology uses genetically modified tobacco plants to produce biopharmaceuticals in fully contained greenhouse environments. Our plant-based technology delivers high drug expression levels and mammalian-type glycosylation (to eliminate the risk of an unwanted immune system reaction). PlantForm's pipeline features both innovator products and biosimilar/biobetter versions of billion-dollar brand name biologic drugs, including:

- Biosimilar trastuzumab (a plant-made version of the brand name drug Herceptin®).
- Biosimilar ranibizumab (a plant-produced version of the age-related macular degeneration drug Lucentis®).
- biobetter versions of two additional biologic drugs which are recombinant replacement versions of plasma-derived drugs
- an innovator antibody for treatment of ricin exposure
- recombinant butyrylcholinesterase (BuChE), an enzyme used as preventative medicine for people vulnerable to attack by nerve agents, organophosphates or other stimulants.

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

PlantForm's plant-based vivoXPRESS® technology platform lowers the cost of production for biological drugs by as much as 90% compared to industry-standard mammalian cell culture systems. Other key advantages of the proprietary vivoXPRESS® manufacturing system include:

- rapid drug development & production timelines (as few as six weeks)
- versatile for new product development, including repurposing existing drugs for novel indications and new markets
- unlimited scale-up capacity • the ability to efficiently manufacture products that are problematic in other systems

**BARRIERS TO SUCCESS**

The key barriers to date are securing investment and navigating regulatory processes as PlantForm's plant-based manufacturing platform disrupts the industry status quo mammalian-cell fermentation systems.

**KEY WINS**

Biosimilar pembrolizumab co-development program: PlantForm has a co-development program with Bio-Manguinhos/Fiocruz (Health Ministry of Brazil) to develop a biosimilar pembrolizumab for world markets. The original antibody drug, pembrolizumab (Keytruda® by Merck), is widely used in immunotherapy to treat a variety of cancers including melanoma, lung cancer, head and neck cancer, and stomach cancer. The original drug is a global market leader in oncology treatment and is on track to be the world's best-selling drug by 2025 with annual projected sales of US\$22.5 billion. It will lose exclusivity protection in the U.S., EU and Brazil in 2028.

Classical Swine Fever vaccine: PlantForm has a Commercialization Agreement with South Korean partners to license HERBAVAC™, the world's first plant-based vaccine for Classical Swine Fever (CSF), in many countries. Although harmless to humans, CSF is a highly contagious viral disease that affects domestic pigs and wild boar populations, causing severe illness and death in millions of swine each year with significant economic consequences. PlantForm is beginning the registration process in the U.S. and Canada, followed by the other countries.

Anti-ricin product licensing: PlantForm subsidiary AntoXa Corporation has obtained a license from Defence Research & Development Canada (DRDC) to develop and produce an anti-ricin monoclonal antibody for sale in markets worldwide. Ricin is a naturally occurring protein from the castor-bean plant, Ricinus communis. It is extremely toxic to humans when inhaled or injected. There is currently no approved antidote against ricin poisoning.

**LOOKING FORWARD**

We are focused on commercializing the anti-ricin monoclonal antibody (our first countermeasures to bioterrorism program) and bringing biosimilar ranibizumab (a plant-produced version of the age-related macular degeneration drug Lucentis®) to market.



**Roche Canada**

www.rochecanada.com

**Sector:**

Medtech, Diagnostics, Digital and Pharma

**Countries/ markets of focus:**

Multinational with footprints in Ontario and Quebec

**Year founded:** 1931

**Number of employees:** 1,800

Roche is a global pioneer in pharmaceuticals and diagnostics focused on advancing science to improve people’s lives. Roche is one of the largest biotech companies, with differentiated medicines in oncology, immunology, infectious diseases, ophthalmology and diseases of the central nervous system. Roche is also a leader in in vitro diagnostics and tissue-based cancer diagnostics, and a frontrunner in diabetes management. In recent years, Roche has invested in genomic profiling and real-world data partnerships, has become an industry-leading partner for medical insights, and has collaborated in artificial intelligence (AI) data-mining to fuel healthcare insights. Roche aims to improve patient access to innovations by working with stakeholders across the entire healthcare sector to provide the best care. Globally, Roche has been recognized as one of the most sustainable companies in the pharmaceuticals industry by the Dow Jones Sustainability Indices for 13 consecutive years. Roche Canada is also actively involved in local communities through its charitable giving and partnerships with organizations that help improve the life of Canadians.



**Andrew Plank,**

President and General Manager,  
Roche Diagnostics Canada

**Jade Dagher,**

Cluster Head, Northwestern Europe and  
Canada Roche Diabetes Care

**Brigitte Nolet,**

President & CEO, Roche Canada Pharma

**WHAT ARE YOU DOING THAT’S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY’S WALLS?**

Having the courage to reinvent ourselves and question the status quo is what patients and the healthcare system expect from Roche—and our commitment is as strong today as it was on the first day of our Canadian journey in 1931. Globally, Roche celebrated 125 years this year. With combined strengths of pharmaceuticals and diagnostics, and growing capabilities in data-driven health insights, Roche is equipped to deliver personalized healthcare. By understanding genetic differences between individuals and tailoring treatments to the right person at the right time, the efficacy and safety of medicines can be improved, while also reducing healthcare costs. To further enable the realization of personalized healthcare, Roche is harnessing the power of artificial intelligence, data, and insights to bolster our expertise in the areas of medicine, diagnostics and digital health solutions. Another unique element of our company is our commitment to patient inclusivity. Partnering with the patient community to understand their everyday lives is essential to evolve the way we look at diseases. It is through collaboration that we can personalize healthcare, developing better medicines and diagnostics.

**BARRIERS TO SUCCESS**

As a member of Ontario’s vibrant life sciences ecosystem, Roche Canada advocates for the integral role of our sector for improving the health of people living in Ontario and energizing our economy. We are pleased to see the inclusion of the direct connection between economic development and health with the introduction of the Ontario Life Sciences Strategy. We will continue to advocate for recognition and adoption of innovations. In particular, we look forward to partnering with the government in implementing the strategy to build a strong infrastructure for digital opportunities to catalyze the uptake of innovative technology and contribute to the successful delivery of personalized healthcare. For this to happen, there needs to be a reduction of duplication, alignment with value-based healthcare, and a strong focus on the implementation of health data.

**KEY WINS**

Since the very beginning of the pandemic, Roche has been at the forefront of innovation to minimize the impact of COVID-19. Worldwide and in Canada, Roche has launched, in record-time, numerous solutions including molecular PCR and rapid antigen tests to detect the virus, serological tests to determine the immune response, digital agnostic solutions to help share, manage, and report health data, and sequencing assays for COVID-19 research. Roche has increased manufacturing and supply chain capacity to meet demand across our portfolio. This year, Roche delivered 15 million rapid tests to the Ontario government. Continuing on the heels of the 2020 launch of AI with Roche (AIR), the first collaboration to bring together all 3 national artificial intelligence institutes (Amii, Mila, and the Vector Institute), Roche Canada and Innovative Medicines Canada partnered with University of Toronto’s Dalla Lana School of Public Health to announce a \$50,000 scholarship. This scholarship will fund research and training in AI, machine learning, and data science to help the next generation of scientists in creating innovative public health solutions. We are also proud to note that by 2023, Roche Canada is on track to have recruited 500 highly skilled workers at our Mississauga-based Global Pharma Technical Operations site.

**LOOKING FORWARD**

We want to be perceived by healthcare systems as a strategic collaborator that provides integrated solutions to enable a holistic approach to healthcare. Roche Canada has the ability to interact across the care continuum—prevention, detection, treatment, and monitoring. We are committed to mitigating the burden of future pandemics and chronic diseases by investing in the research and development of leading diagnostics and treatments. We are committed to building a personalized, sustainable healthcare system where people living in Ontario have timely access to quality care. We are confident that innovation and efficiency can be achieved if we work towards a healthcare system that enables preventative care, utilizes high medical value diagnostics that treat earlier, avoids unnecessary therapies, and contributes towards access for all.

# sanofi

**Sanofi Canada**  
www.sanofi.ca

**Sector:**

Pharmaceuticals

**Countries/ markets of focus:**

100 countries

**Year founded:** 1973

**Number of employees:** 100,000



We are Sanofi, a global biopharmaceutical company committed to healthcare solutions from prevention to treatment. We turn scientific discoveries into medicine to improve health. Every day, we dedicate our most important resource, our people, to support patients and families through their health journey. In Canada, Sanofi employs approximately 2,000 people and in 2021, we invested more than \$143 million in R&D in Canada, creating jobs, business and opportunity throughout the country. In 2021, Sanofi announced an investment of \$925 million (CAD) in a new vaccine manufacturing facility at its existing site in Toronto, Canada.

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

We are an innovative global healthcare company, driven by one purpose: we chase the miracles of science to improve people's lives. Our team, across some 100 countries, is dedicated to transforming the practice of medicine by working to turn the impossible into the possible. We provide potentially life-changing treatment options and life-saving vaccine protection to millions of people globally, while putting sustainability and social responsibility at the center of our ambitions.

**MAJOR INVESTMENTS / ACQUISITIONS:** Sanofi's North American 'Center of Excellence' for Bioprocess and Analytical R&D – a \$100 million CAD facility, \$925 million CAD investment in 2021. The largest in Canadian life sciences and biomanufacturing history to build a new vaccine manufacturing facility.

**KEY WINS**

Sanofi recently announced the opening of an Artificial Intelligence Centre of Excellence in downtown Toronto, joining its global network of existing digital hubs in Paris, Boston, New York and Barcelona. The Centre will be focused on using leading technologies to develop world-class data and artificial intelligence (AI) products that accelerate research and development to improve access to life-saving medicine for patients. Sanofi's global AI Centre of Excellence supports the company's mission to improve patients' lives through digital innovation. The Centre will identify, develop, and scale innovative solutions, leveraging world-class mentorship from top academics, industry professionals, and international network of thought leaders. The choice of location for this global AI Centre was based on Toronto's vibrant high-tech community, which is recognized as one of the world's premier AI and data ecosystems. Locally, Sanofi is in the process of attracting top AI talent and partnering with leading academic and research institutions to address healthcare's biggest challenges. The goal behind the AI Centre will be to democratize data across Sanofi's global organization by building strong data foundations, first-in-class platforms, and scalable AI products. In 2022, Sanofi Canada will hire more than 100 highly skilled tech employees for the AI Centre of Excellence, a number that will grow to over 200 by 2025. The team will leverage expertise across data science, computational biology, AI strategy, data engineering, data management, data architecture and product management—all guided by a vision to transform the practice of medicine.

**LOOKING FORWARD**

Since sharing its new global digital strategy in 2021, Sanofi has focused on simultaneously building digital and data foundations, delivering business value, developing modern skills, and fostering a digitally-driven and data-driven company culture with the upskilling of over 16,000 employees. The ongoing digital transformation has already led to significant achievements including:

- accelerating the discovery of new targets and R&D image analysis using AI;
- improving clinical trial efficiency by using real-world evidence to reduce the number of required participants and by enabling participants to provide their data and digital biomarkers remotely;
- accelerating the access to clinical reports for regulators by using cloud-based data collection and natural language processing;
- increasing engagement with HCPs using a global, integrated CRM and Omnichannel solution;
- optimizing advertising & promotional spending across multiple markets and products using data integration and AI;
- digitizing our manufacturing processes with modern solutions;
- and improving supply chain performance by using predictive AI.

By 2025, Sanofi's leading digital healthcare platform will support new digital businesses, fuel new digital experiences for patients and HCPs, and drive innovation and efficiencies across the entire value chain—from research and development to manufacturing and commercial operations. The deep integration of digital, data, and technology solutions is critical to transform the practice of medicine and deliver better outcomes for patients.



**Takeda Canada**

www.takeda.com/en-ca

**Sector:**

Pharmaceuticals

**Number of employees:**

approximately 350 employees in Canada

Takeda is a 240-year-old global, values-based, R&D-driven biopharmaceutical leader headquartered in Japan, committed to bringing Better Health and Brighter Future to patients by translating science into highly innovative medicines. We are guided by our values of Takeda-ism which incorporate Integrity, Fairness, Honesty, and Perseverance. They are brought to life through actions based on our philosophy of Patient, Trust, Reputation and Business—in that order. From efforts to ensure access to treatment to supporting physicians, Takeda is dedicated to advancing healthcare in Canada. Our way to better health is by advancing science to develop leading innovations in gastroenterology, oncology, neuroscience, and rare diseases to meet the needs of Canadians. We also make targeted R&D investments in Plasma-Derived Therapies and Vaccines, and we support our communities through philanthropic, environmental, and DE&I programs. Since 2017, Takeda has invested \$1.4 billion CAD in research and development in Canada. Takeda's Canadian division employs approximately 350 workers.

**Takeda Canada's footprint**

- 46 ongoing clinical trials
- 144 clinical trial sites
- 494 enrolled patients
- 122 investigators
- 16 RWE ongoing studies

To find out more about Takeda Canada and our commitment to Canadians, visit [www.takeda.com/en-ca](http://www.takeda.com/en-ca).



**Our priorities**

- Patient: Responsibly translate science into highly innovative, life-changing medicines and vaccines, and accelerate access to improve lives worldwide
- People: Create an exceptional people experience
- Planet: Protect our planet
- Data & Digital: We strive to transform Takeda into the most trusted, data-driven, and outcomes-based pharmaceutical company

**Approach to Innovation**

We are innovators and collaborators with a robust partnership model that brings forward truly transformative treatments for patients who have significant unmet needs. Partnering with others is essential to identify and continuously explore new options to support patients at every step through their journey.

- **Canadian Inflammatory Bowel Research Consortium (CIRC):** In February 2022, Takeda awarded a \$1 million PIONEER grant to support CIRC. With a shared goal to improve the quality of life for people living with inflammatory bowel disease (IBD), the grant will support clinical research conducted by CIRC members in a collective effort to improve patient outcomes.
- **Takeda Canada Innovation Challenge:** In May 2022, Takeda announced an investment into Pentavere Research Group Inc. to support advancements in rare disease diagnoses through AI technology. Together with our investments in the Canadian healthcare landscape, we aim to revolutionize how we treat disease and improve experiences for Canadian patients.
- **Takeda Canada Partners with Canadian Institutes of Health Research (CIHR):** In September 2022, Takeda Canada and CIHR's Institute of Genetics partnered to establish a fellowship program to identify emerging talent and innovation to support advancements in rare disease across Canada. The fellowship program will provide \$720,000 to support 4 research awards and provide an opportunity for postdoctoral fellows to accelerate rare disease research with dedicated funding.

**Takeda's commitment to advancing rare disease care in Canada**

Takeda is a leader in the rare disease space with a long history of patient engagement, a global footprint in 100+ countries, relationships with key players in the sector, and a clinical pipeline in which 50% of our products treat rare diseases. We understand the urgency for a comprehensive Rare Disease Strategy to ensure Canadians receive the support and resources they require. Takeda recently launched the report entitled, "Strategies for Rare Diseases: International Landscape Report." This report leverages Takeda's global reach to outline critical practices from 16 comparator countries with rare disease strategies. Seven key elements were identified as instrumental to the success of a comprehensive National Rare Disease Strategy in Canada. The full report can be accessed at <https://www.takeda.com/4ae35c/siteassets/en-ca/home/newsroom/strategies-for-rarediseases/strategies-for-rare-diseases---international-landscape-report--dec-2021-en.pdf>.



**TeleVU Innovation Ltd.**  
www.TeleVU.ca

**Sector:** Healthcare, Innovation & Research, Med Tech

**Countries/ markets of focus:**

Canada & International

**Year founded:** 2021

**Number of employees:** 3

**Projected number of employees in 3-5**

**years:** 25

TeleVU Innovation Ltd. is a privately held, Ontario-registered corporation with a head office located in Vaughan, Ontario. We harnesses the power of AR, AI & IoT to build an ecosystem of connected devices and applications to improve health care.

Our proprietary software creates a secure real-time audio-visual link via Smart Glasses between frontline health care providers & remote clinical experts worldwide!

Our telepresence solution provides a hands-free POV (Point Of View) experience utilizing AR (Augmented Reality), voice-activation and AI (Artificial Intelligence) to redefine access to specialized medical care, high-quality medical education and digital workflow management.

Our digital workflow solution allows for seamless medical training, audits, and intelligent checklist integration on Smart Glasses.

Our connected ecosystem improves access to care for the patient by eliminating geographical barriers to care and enables frontline care providers to deliver better care by being connected to remote specialists. It allows specialists to care for more patients without the need to travel.

**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Quite simply we bring a highly advanced and clinically meaningful technology to solve for the biggest challenges in healthcare: time, resources (people & financial) and patient outcome!

Our platform has been designed with over 30 years of collective experience in healthcare and MedTech settings.

Intuitive, scalable, affordable and easy-to-use technology that combines the power of wearable IoT Augmented Reality and Artificial Intelligence to allow human integration beyond borders to instantly share patient care knowledge and help deliver best practices.

We have simple, clinically meaningful AI enhancements that help clinicians treat more patient.



A global shortage of physicians and nurses leads to inequity in care, and healthcare professionals are not willing to move to remote and rural areas.

Referring the patient to larger centers is not only costly but delays the time for clinical decision-making, which leads to poorer patient outcomes.

Inadequate telemedicine tools such as handheld devices do not allow for a comprehensive assessment nor any interaction beyond audiovisuals. In addition, hand and eye coordination with handheld devices is a limiting factor in receiving adequate visuals unless a second person points the device to the areas of interest, which is inefficient given the existing shortage of staff and security and privacy concerns.

Using our technology, the frontline clinician can instantly have access to the knowledge of the remote experts with the confidence of over-the-shoulder guidance using augmented reality functions as explained above.

**BARRIERS TO SUCCESS**

- Limited resources and funding.
- Support program available by the government is not designed to help startups in the most efficient way.
- Lengthy sales cycle in Canada and lack of early adopters due to competing interests post pandemic.

**KEY WINS**

- Being able to develop a completely connected ecosystem of fully functioning product that is highly qualified
- Expanding the use of our technology locally and internationally with strong partnerships formed with NGOs and TELUS in Canada.





**ToeFX**  
www.toefx.com

**Sector:**

Healthcare  
Med Tech

**Countries/ markets of focus:**

Canada, US

**Year founded:** 2016

**Number of employees:** 10

**Projected number of employees in 3-5 years:** 20

Millions of people worldwide have toenail fungus. It's unsightly, embarrassing, and hard to treat. The foot care industry is hungry for innovation and disruption. ToeFX has developed an innovative and effective light therapy treatment for the treatment of this infection. The ToeFX vision is to become the global standard of care for onychomycosis (toenail fungus), ridding millions of people of one of the world's stubbornest and most prevalent infections. The ToeFX product is designed to resolve this dilemma: it is a safe, non-toxic treatment with no side effects. It has been shown to significantly clear up the appearance of toenail fungus in 75% of patients.



**WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

ToeFX's technology is non-invasive and designed for professional foot clinicians. It is based on photodisinfection technology, where nail fungus is exposed to light, painlessly destroying it. ToeFX's ClearToe Therapy Light was authorized for sale by Health Canada in November 2020. ToeFX has sold its ClearToe Therapy technology to 120+ clinics and foot care nurses across Canada. The ClearToe Therapy Light is the first photodisinfection technology that has been approved by Health Canada for the treatment of onychomycosis. ToeFX is led by two scientists and all technology is developed in-house.

**BARRIERS TO SUCCESS**

Dealing with different regulations and different market needs across the globe is anticipated to be a challenge!

**KEY WINS**

We are proud that 120+ clinics across Canada are our clients since our launch almost 2 years ago.

**LOOKING FORWARD**

We are looking forward to expansion into other countries including the US and UK.



# UNIVERSITY OF TORONTO

**University of Toronto**  
www.utoronto.ca

**Sector:**  
Post-secondary

**Year founded:** 1827

**Number of faculty supporting the health and life sciences programs of study**

- 4,200

**Number of undergraduate and graduate students in the health and life sciences programs of study**

- 28,110

The University of Toronto (U of T) is a powerhouse for world-class teaching, scientific discovery, innovation, and entrepreneurship. U of T brings together top minds to tackle the impossible and transform society through the ingenuity of its faculty, students, and alumni. The University powers Ontario's life sciences ecosystem and is home to Canada's largest faculty of medicine, as well as a full range of faculties across the health sciences including nursing, dentistry, pharmacy, public health, social work. Its interdisciplinary research and teaching centers draw on strengths in medicine, engineering, cell biology, computer science, physics, and related fields. As a member of the Toronto Academic Health Science Network (TASHN), a dynamic network of nine of Canada's leading research hospitals U of T supports transformational research, life-saving discoveries and game-changing innovations.

### **WHAT ARE YOU DOING THAT'S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY'S WALLS?**

Building on U of T's dynamic, world-class life sciences research ecosystem, the University is catalyzing large-scale, high-impact interdisciplinary research through the Institutional Strategic Initiatives (ISIs) portfolio. Twenty research initiatives and hundreds of faculty members are addressing society's grand challenges, including regenerative medicine, healthy aging, fluidic technologies, pandemic preparedness and data sciences. For instance, Medicine by Design, launched in 2015 through a \$114-million investment from the Canada First Research Excellence Fund, has since awarded more than \$75 million for 170+ interdisciplinary projects, and has led to the creation of over 40 spinoff companies and 1000 new jobs in Toronto's regenerative medicine ecosystem.

Other ISI initiatives that are building capacity in the region's life sciences ecosystem include AGE-WELL, which is working to maintain seniors' independence; and TRANSFORM HF, which is increasing the capacity of the health-care system to deliver care for underserved populations living with heart failure. Through the ISI portfolio, U of T researchers are strengthening Canada's contribution to health care and life sciences.

### **BARRIERS TO SUCCESS**

Ontario's life sciences sector is experiencing unprecedented growth, leading to increased demand for highly skilled talent, critical lab infrastructure, and commercialization capacity. To ensure the sector can manage these needs, leveraging Ontario's research, talent and innovation enterprise will be essential in positioning Ontario for success. Ontario's life sciences companies, universities and the provincial government need to strengthen all stages of the life sciences pipeline, from research discovery to commercialization. As other international jurisdictions make the necessary investments to support their ecosystems, it will be critical for Ontario's top research talent and its innovators to be certain they can find the capital they need in the province.

### **KEY WINS**

U of T's globally recognized leadership in research and innovation continues to have a major impact on Ontario's biomanufacturing and life sciences ecosystem. Over the past decade, 230 life science startups have launched at U of T, with world class strengths ranging from oncology and precision medicine to artificial intelligence. In terms of academics, U of T ranks 5th globally in clinical, pre-clinical and health research and 1st in Canada in infectious disease research. Over the last 5 years, U of T and its hospital partners have secured \$4.9 billion in health and life sciences research funding and have engaged in over 2000 research partnerships with stakeholders across the health and life sciences ecosystem.

### **LOOKING FORWARD**

U of T and its hospital partners will continue to serve as an engine of fundamental research, knowledge translation, innovation and entrepreneurship, bridging Ontario's life sciences and industrial development strategies with the university research and innovation ecosystem.



### **RELEVANT LINKS**

University of Toronto: <https://www.utoronto.ca/>

U of T ISI: <https://isi.utoronto.ca/>

Innovations and Partnerships Office: <https://research.utoronto.ca/partnerships/partnerships>

Government Relations Office: <https://gro.utoronto.ca/>

U of T Bioinnovation: <https://bioinnovation.utoronto.ca/about/>



**Zucara Therapeutics Inc.**  
www.zucara.ca

**Sector:**

Biopharma SME

**Countries/ markets of focus:**

US, Canada, Europe, Asia

**Year founded:** 2014

**Number of employees:** 6

**Projected number of employees in 3-5 years:** 10

Zucara Therapeutics Inc. is developing ZT-01, a first-in-class therapeutic to prevent insulin-induced hypoglycemia (low blood sugar) in patients using insulin therapy. ZT-01 is designed to inhibit somatostatin (SST), a pancreatic hormone that impairs the glucagon response to hypoglycemia in people in people with Type 1 diabetes and insulin-dependent Type 2 diabetes. ZT-01 restores glucagon secretion to prevent hypoglycemia, which could dramatically change diabetes disease management and improve both patient health and quality of life. Zucara has raised US\$21M in a Series A financing that provides capital to conduct Phase 1 and 2 clinical trials. Phase 1 trials have shown ZT-01 to be safe and well tolerated and a proof-of-concept study just announced confirmed ZT-01’s mechanism of action in restoring glucagon release in patients with Type 1 Diabetes. ZT-01 has the potential to become the first therapeutic designed to prevent hypoglycemia in people with Type 1 diabetes.

**WHAT ARE YOU DOING THAT’S UNIQUE? WHAT PROBLEMS ARE YOU SOLVING, AND WHAT IS YOUR IMPACT BEYOND YOUR COMPANY’S WALLS?**

Zucara’s product in development, ZT-01, is a SSTR2 receptor antagonist designed to normalize SST (somatostatin) signalling in the pancreas, which is dysregulated in diabetes. There is good evidence that this approach will restore the glucagon counterregulation system, which is defective in people with diabetes, preventing their ability to avoid hypoglycemia with insulin treatment. Hypoglycemia is the main barrier to optimum glycemic control for patients with insulin-dependent diabetes. The initial target market is people with Type 1 diabetes (T1D). Zucara has completed a Phase 1 safety trial and ZT-01 was shown to be safe and well tolerated. A Phase 1b proof-of-concept study just announced confirmed ZT-01’s mechanism of action in restoring glucagon release in patients with Type 1 Diabetes. Zucara has also conducted preclinical studies confirming its mechanism of action in Type 2 diabetes (T2D) models which could more than double the market opportunity and addressable patient population.

**MAJOR INVESTMENTS / ACQUISITIONS:** Zucara has raised US\$21M in a Series A financing by the Perceptive Xontogeny Venture Fund that provides capital to conduct Phase 1 and 2 clinical trials.

**BARRIERS TO SUCCESS**

Prior to raising our Series A financing, we were challenged by finding significant capital to move the company into later stages of development. There are several funding programs available in Ontario and Canada, but they do not provide meaningful capital (+several \$millions) to advance a technology. Available venture capital funds are also limited. Our only option was to look outside of Canada. Thankfully, we did not need to relocate, as our employees are based in Canada. We have used several local contractors and manufacturers to progress our development. Our next challenges will likely continue to be access to capital until our drug is hopefully approved.

**KEY WINS**

Zucara recently raised US\$21 million in a Series A financing through an investment by the Perceptive Xontogeny Venture Fund. This provides capital to conduct Phase 1 and 2 clinical trials. Zucara has completed a Phase 1 safety trial and ZT-01 was shown to be safe and well-tolerated. A Phase 1b proof-of-concept study just announced confirmed ZT-01’s mechanism of action in restoring glucagon release in patients with Type 1 Diabetes. The company is now preparing to enter a Phase 2 clinical trial to start in Q1, 2023.



**LOOKING FORWARD**

Our goals over the next 5 years are to move ZT-01 forward to approval. ZT-01 has the potential to become the first therapeutic designed to prevent hypoglycemia in people with Type 1 diabetes. We also hope to expand into Type 2 diabetes which would more than double the market opportunity and patients addressed. We are optimistic, based on the strong Phase 1 data so far, and are moving forward soon to Phase 2 studies.

# About LSO

LSO is a business-led, member-funded, not-for-profit organization with a legacy of more than 30 years advancing the success of Ontario’s life sciences sector. Our customized approach to working with member companies and industry partners allows us to leverage the strengths of the LSO network to commercialize Canadian innovation and technologies, while offering value-added support, services, mentorship, and events.



## Mission

LSO’s mission is to foster commercial success for the sector through advocacy and education, and promoting the industry locally, nationally, and internationally.

### LSO advances our sector’s diverse interests by:

## Values

- Consultation and collaboration
- Inclusivity and consensus-building
- An aligned voice on key policy matters
- A hub-based approach
- Evidence based decision making
- The equal social and economic benefits of life sciences



## Strategic Priorities

1. Raising the profile of Ontario’s Life Sciences sector to secure our economic and social prosperity.
2. Advocating for specific public policy action to support our sector’s continued growth, such as access to capital, an inclusive and aligned provincial life sciences strategy, and evidence-based decision-making.
3. Delivering unparalleled educational, networking, mentorship, and thought leadership programs to our members.
4. Acting as a centralized hub connecting our sector’s diverse clusters to facilitate a strong, aligned life sciences sector with national connectivity.

# Thank You Queen's Park Event Sponsors







To learn more about LSO, visit:

[www.lifesciencesontario.ca](http://www.lifesciencesontario.ca)

[admin@lifesciencesontario.ca](mailto:admin@lifesciencesontario.ca)

[@LifeSciencesON](https://twitter.com/LifeSciencesON)