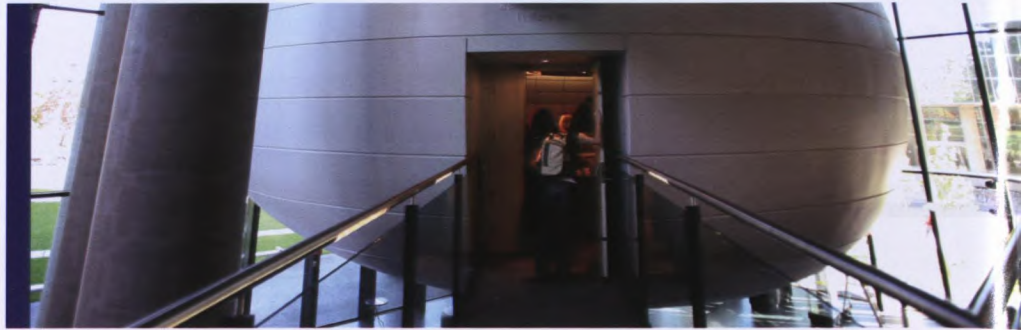


The Leslie L. Dan Pharmacy Building is an award-winning structure and home of the Faculty of Pharmacy at the University of Toronto. The building provides state-of-the-art facilities to over 1,000 pharmacy students at the University. It is particularly notable for its two orb-shaped classrooms, referred to as the "pods", which are suspended lecture halls that look like pills. Students use a catwalk to enter, and the pods are suspended in the vaulting glassed-in lobby of the building.



Oncology

Canada is a leading global centre for oncology research. Across the country, various research institutes are collaborating with investors to develop cures for cancer. The **Ontario Institute for Cancer Research (OICR)** is a leading centre in Canada, occupying 55,000 square feet of space in the MaRS Centre in Toronto's Discovery District. The OICR houses the International Cancer Genome Consortium's (ICGC) Data Coordination Centre and hosts the ICGC's Secretariat. The participating research institutes around the world will sequence 500 samples each of the 50 most common types of cancer.

In 2008, Switzerland's **Hoffmann-La Roche Ltd.** invested \$191 million in Toronto-based **Arius Research**. Renamed **Pharma Research Toronto**, this division of Roche is a global leader in personalized cancer therapy and has more than 400 functional cytotoxic anti-cancer monoclonal antibodies in development for treating various cancers.

Contract Research

Canada ranks fourth worldwide in terms of its share of global clinical trials¹ and second among the G7 for cost efficacy.²

In 2009, U.S.-based **Charles River Laboratories International, Inc.** opened a \$140-million pre-clinical services facility in Sherbrooke, Quebec.

Also in 2009, **SGS Life Science Services**, of Switzerland's **SGS S.A.**, announced that it was tripling the size of its existing Toronto facility to meet growing demands for its R&D and quality control services.

Other Pharmaceutical Verticals

Canada has significant expertise in areas such as diabetes research, pain therapeutics, and vascular disease. In 2009, U.S.-based **Merck & Co., Inc.** signed an agreement with Vancouver's **Cardiome Pharma Corp.** worth potentially up to \$1 billion—the largest deal ever for a Canadian life sciences company. The deal was for the development and commercialization of an atrial fibrillation drug candidate. In the same year, Merck also established a \$184-million agreement with Vancouver's **Xenon Pharmaceuticals Inc.** for developing a new cardiovascular disease therapeutic.

Sandoz Canada Inc., a division of Swiss-based **Novartis AG**, opened its new head office in Quebec in 2009, following the construction of its new plant for manufacturing injectable pharmaceuticals. These facilities were created as part of the company's \$80 million investment program in the province.

Other major investors in Canada include: **Abbott Laboratories**, **Amgen Inc.**, **Bayer AG**, **Bristol-Myers Squibb**, **Johnson & Johnson**, and **Pfizer Inc.**

KEY VALUE-CHAIN STRENGTHS

- Drug discovery
- Clinical synthesis and formulation
- Clinical trials planning and management
- Drug manufacturing and packaging

KEY SEGMENT STRENGTHS

- Vaccines and immunotherapeutics
- Oncology therapeutics
- Central nervous system therapeutics
- Genomics and proteomics platforms
- Regenerative medicine and stem cell research
- Generic pharmaceuticals

¹ DFAIT. *Rx for Success in Biopharmaceuticals*. p. 1.

² KPMG. *Competitive Alternatives 2010*. Clinical trials sector profile. p. 40.