

DRUG DEVELOPMENT AND AUTONOMY IN THE ESTRIE REGION

From Bench to Bedside

Expertise and technology converging in a collaborative environment to support the Life Sciences industry!



The Estrie Region: at the Intersection of Business and Research

AN INFORMED CHOICE

Economic Incentives

- Property tax credits
- **Financial support**
- Some of the lowest operating costs in the country

Location

- Proximity to the **U.S. market**
- **Soft-landing** program
- Affordable lots and buildings available

Services and Environment

- **Support** for business start-up and growth
- Economic development agencies at your service
- A **dynamic** business community operating in the Health, ICT, and Medical Technology Sectors

Human Resources and Training

- Qualified, specialized labour pool
- Largely bilingual labour force
- **Two universities** in the region (French and English)
- Co-op programs (internships)
- Captive population (clinical trials)
- CIUSSS de l'Estrie - CHUS (integrated university health and social services centre)

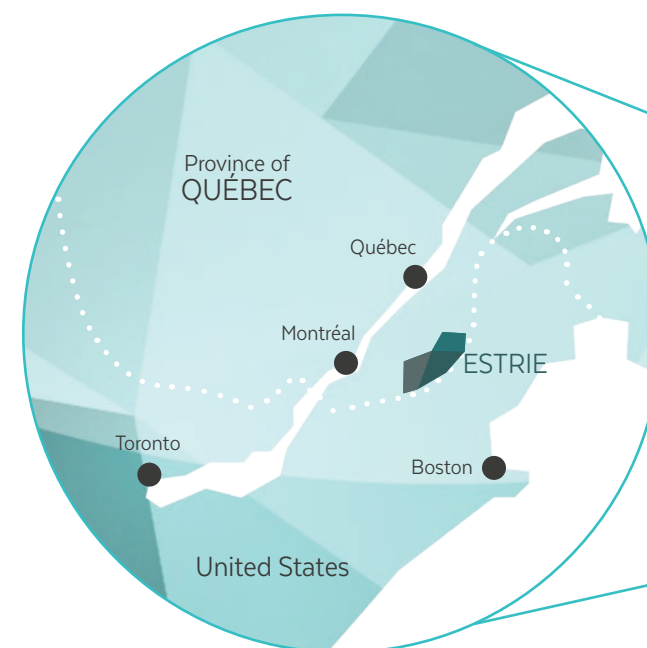
Institut de pharmacologie de Sherbrooke (IPS – Sherbrooke Pharmacology Institute)

A preferred partner in Québec for drug discovery and diagnostic research.

A culture of **multidisciplinary research** and the tremendous expertise of its team help IPS develop the products of university research into new drugs and diagnostic tools. Its many partners on the Université de Sherbrooke Health Campus (Faculty of Medicine and Health Sciences, CHUS Research Center) assist IPS in steering projects from the design of new molecules to the validation of new therapeutic and diagnostic

targets, from the preclinical to the clinical stage. As its many active collaborations with the pharmaceutical industry attest (more than 15 companies in 2015), IPS is a key contributor to the development of future drugs and diagnostic tools.

usherbrooke.ca/ips



Estrie Businesses and Research Platforms at Your Service

Industries

The Université de Sherbrooke is a fertile ground for new businesses especially through its many entrepreneurship programs such as ACET (Accélérateur de création d'entreprises technologiques - [accelerateur.ca](https://www.accelerateur.ca)), a technology-business accelerator program, and the opportunity to acquire experience in the field through **co-op programs** in which training is closely linked to industry.
usherbrooke.ca/premier-cycle/stages-coop

The Estrie region is the **third-largest Life Sciences hub in Québec**, home to a host of businesses, both highly specialized and diversified:

- Preclinical research
- Clinical research (phases I-IV)
- Medical Technologies
- Healthcare-specific software
- Drug development
- And much more!



YOUR BUSINESS HERE!

The Estrie region is ready to welcome new collaborations and new businesses to improve the value chain!

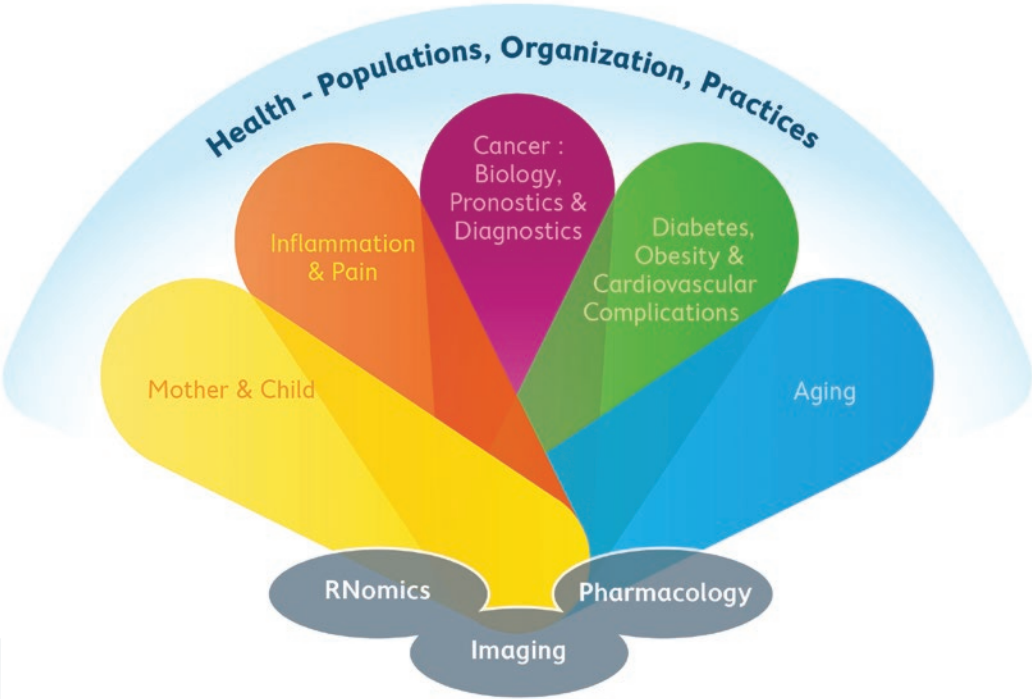
sherbrooke-innopole.com

Research

The Estrie region can accommodate bench to bedside research, including preclinical and clinical research stages, from the newborn to the elderly.

The **Centre intégré universitaire de santé et de services sociaux - Centre hospitalier universitaire de Sherbrooke** (CIUSSS de l'Estrie - CHUS - integrated university health and social services centre) serves some **500,000 residents** and includes a University Geriatrics Institute, a Primary Health Care and Social Services University Institute, a University Hospital Centre, an affiliated Rehabilitation Centre, as well as two research centres: Centre de recherche du CHUS (CRCHUS - Research Centre) and Research Centre on Aging (CdRV).

The Université de Sherbrooke includes a Faculty of Medicine and Health Sciences, which is renowned for its **7 centres of excellence** in diabetes, obesity and cardiovascular complications; mother and child health; pharmacology and structural biology; RNA biology; inflammation and cancer; molecular imaging; and neuroscience. These centres focus on **5 research themes**, which are based on **3 scientific pillars** (illustrated below).



CHARLES RIVER: at Home in Estrie!

 “Our intention was to expand our Montréal operations within the Province of Québec. The site selection process reviewed many assets offered across numerous locations in the Province. Sherbrooke was ultimately selected because of its wealth of expertise in the life sciences domain and most particularly the **availability of highly trained technical and scientific talent**. Local and regional government efforts also significantly facilitated our transition to Sherbrooke, and we continue to enjoy **thriving partnerships** within the region.”

MICHAEL BROADHURST, SITE DIRECTOR, SHERBROOKE | CHARLES RIVER LABORATORIES: [CRIVER.COM](https://www.criver.com)

Electron Microscopy and Histology Research Core

Histology and microscopy services ranging from the preparation of human and animal biological samples to their morphological, histological, cellular, and ultrastructural analysis.

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RNomics Platform

Analysis of RNA properties and identification of markers for use in the study of a number of diseases, including cancer.

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819 821-8000, ext. 70455
rnomics.med.usherbrooke.ca



Charles River Laboratories

Support for every stage in its partners' research, from drug discovery to marketing, especially preclinical research.

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criver.com



Medicinal Chemistry Platform

Synthetic chemistry, medicinal chemistry, radiochemistry, and imaging to design molecular probes in a wide variety of chemical compositions (peptides, carbohydrates, terpenes, chemifluorescents, etc.).

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Imaging Platform

Wide range of medical and biomedical imaging modalities for preclinical and clinical studies (PET, MRI, CT, SPECT, etc.).

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Imeka

Software for the analysis and visualization of medical images, diffusion MRI, preclinical PET imaging, CT imaging, and tissue analysis for clinical trials.

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imeka.ca



CRCHUS Methodological Support Unit for Clinical and Epidemiological Research (URCE)

Consultation in biostatistics, design, and conduct of clinical and epidemiological studies and data management.

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Image Analysis and Visualization Platform (PAVI)

Processing of images requiring advanced expertise in segmentation, conversion, visualization, parcellation, resetting, and kinetic analysis. PET, MRI, TDM, SPECT, and other techniques.

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BioIntelligence Technologies

Real-time intelligent sensors and instruments to increase bioprocess profitability. Applications for industrial, pharmaceutical, and cosmetic biotechnology.

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Neptune Technologies & Bioresources

Research, development and scientific validation of nutraceutical products, and commercialization of omega-3 (EPA and DHA) / antioxidant krill oil.

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neptunekrilloil.com



Omnimed

Development of software tools fostering collaboration, information sharing, work-process efficiency, etc. Electronic medical records.

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Vigilent Telesystems

Complete videoconferencing solutions for a variety of telemedicine applications (remote robotic systems, Vigilent software suite).

Goran Matic
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vigilentelesystems.com



Polymer Robotics

Cancer detection and treatment using minimally invasive MRI-guided solutions (percutaneous targeting of prostate lesions).

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polymer-robotics.com



CONCEPT



DISCOVERY OPTIMIZATION VALIDATION



PRECLINICAL RESEARCH



CLINICAL RESEARCH



MANUFACTURING



MARKET



PATIENT

Proteomics Platform

Mass spectrometry and identification of purified proteins, complex samples, post-translational modifications, etc.

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proteomique.crchul.ulaval.ca



PhenoSwitch Bioscience

Mass spectrometry services for complex samples (characterization of antibodies and proteins, quantification of peptides, lipids, etc.).

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Preclinical Phenotyping

ivPC platform: rodent behavioural assays (pain sensitivity, motor and cognitive functioning, behavioural anomalies, etc.).

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Immune Biosolutions

Highly specific validated chicken antibodies for research applications.

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ibiosolutions.com



Clinical Research Sherbrooke (RGS)

A group of four Sherbrooke research centres committed to promoting awareness of the importance of clinical research and its value in the advancement of health research.
recherche-clinique-sherbrooke.com

Diex Recherche

A private clinical-research company conducting phase I to IV trials (Alzheimer's, migraines, vaccines, women's health, obesity, urology, and more).

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diex.ca



Clinical Research Platform of the Research Centre on Aging (CdRV)

Biopharmaceutical clinical research (Alzheimer's, dementia, sleep, diabetes, dyslipidemia, osteoporosis, sarcopenia, malnutrition) and mining of aging-related population and clinical data.

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Clinical Research Platform of the Centre de recherche du Centre hospitalier universitaire de Sherbrooke (CRCHUS)

Complete clinical research infrastructure (phases I-IV), with access to populations, expertise, leading-edge facilities, and services provided by the University Hospital Centre, including biobanks and databases linked to electronic patient records (cardiology, urology, pneumology, endocrinology, oncology, and more).

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Q&T Research

Evaluative clinical research for the conduct of phase II and III research projects on pharmaceutical products and vaccines (Alzheimer's, obesity, cardiology, etc.).

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qtresearch.com



Lumed

Clinical decision support system to streamline the practice of medicine and improve quality of care (antimicrobial stewardship, prevention and infection control, surveillance, and reporting).

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lumed.ca



QuadraMed

Tools to help healthcare providers improve productivity, ensure regulatory and legal compliance, and enhance the quality of patient care and safety (automatic prescription software, electronic medical records, etc.).

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quadramed.com



THIS IS A VOLUNTARY LISTING OF BUSINESSES AND PLATFORMS.
Other products and services are offered in the Estrie region and new projects emerge on a regular basis.
For more information, please contact us.
info@sherbrooke-innopolis.com

Autonomy and Healthy Aging

Drug development is one of the major strengths of the Estrie region, closely followed by areas related to **maintaining autonomy**. Here, autonomy does not relate solely to seniors, but includes **anyone affected by an illness or accident** who needs **medication** or **technology** to improve their quality of life.

Interdisciplinary Institute for Technological Innovation (3IT)

Infrastructure for scientific innovation and technological maturation, from concept to commercialization, from device to proof of concept and validation, in a range of disciplines (nano- and microtechnologies, biomedical engineering, telecommunications, information systems, robotics, etc.). Proof of concept design for information and communication technologies (ICTs), for validation under actual conditions of use. Exceptional, dynamic, flexible, transversal, translational **research and innovation ecosystem**, harnessing true **university-industry synergy for technological innovation**.

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Centre de recherche du Centre hospitalier universitaire de Sherbrooke (CRCHUS – Research Centre)

Associated with the fourth-largest hospital centre in Québec, the CRCHUS is distinctive for its **integrated approach**, combining fundamental, clinical, epidemiological, and evaluative research. The Centre covers a broad spectrum, from perinatal care to end-of-life care, across **six research axes**: Cancer: Biology, Prognosis and Diagnosis; Diabetes, Obesity, and Cardiovascular Complications; Inflammation and Pain; Medical Imaging; Mother & Child; and Health: Populations, Organization, Practices.

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Research Centre on Aging (CdRV)

The CdRV is one of Canada's largest research centres on aging. Its mission is to produce new knowledge on aging to foster **seniors'** autonomy and encourage their development. Aging-related topics, from molecule to society, fall under three research axes: **Clinical, Biological Mechanisms of Aging**, and **Society, Populations**, and **Services**. The CdRV offers several platforms supported by expertise in **bioengineering, biostatistics**, and **biomedical** research. The CdRV collaborates with researchers from 7 faculties at the Université de Sherbrooke and from Bishop's University.

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cdrv.csss-iugs.ca



Archimed Medical

Customized solutions for therapists and patients (patient slings, frictionless tube slide sheets, walking harnesses, etc.).

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archimedmedical.com

Eureka Solutions

Vehicle adaptation for mobility-challenged clients; modular and portable ramps for residential use.

Serge Lavallée
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819 562-2555
eurekasolution.com

Physipro

Design, production and commercialization of positioning and mobility devices for people with disabilities or reduced autonomy (wheelchairs, seating, etc.).

Fabrys Fréchette
fabrys.frechette@physipro.com
819 565-3337
physipro.com

Ibiom

Production of ergonomic equipment for use by health-care professionals (stretchers, chairs, etc.).

Jasmin Bibeau and Stéphane Mongeau
info@ibiom.com
450 678-5468
ibiom.com

Keku Sports

Equipment designed to enhance the performance and enjoyment of athletes with a disability (high-performance wheelchair ergometer, customized sport seating).

Jean-Luc Lessard
jeanluc.lessard@kekusports.com
819 342-1082
kekusports.com

Arjohuntleigh Magog

Design and production of patient lifts and transfer equipment. Worldwide distribution through a network of sales/service and distribution centres.

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arjohuntleigh.com

Committed Partners



Institut de pharmacologie
de Sherbrooke



Institut de pharmacologie de Sherbrooke (IPS – Sherbrooke Pharmacology Institute)

IPS is dedicated to the study of the **actions of drugs and their targets**. Work done at the Institute integrates concepts from such disciplines as pharmacology, physiology, chemistry, imaging, and engineering, applying them to the validation of new diagnostic or therapeutic targets, the discovery of new drugs and diagnostic tools, and the development of innovative technologies in these fields.

IPS's primary goals are:

- **Isolating new molecular and cellular mechanisms** driving human pathologies
- **Discovering new bioactive molecules** with the diagnostic or therapeutic potential to act on these mechanisms
- Accompanying scientists in the **creation of value and industrial collaboration**

Some of the medical fields in which IPS research is conducted include cardiovascular, respiratory, and inflammatory diseases; cancer; infectious diseases; and pain.

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SAGE-Innovation

SAGE-Innovation is a not-for-profit organization of regional health-care stakeholders, including healthcare, educational and training institutions, community organizations and private-sector companies. It is an umbrella organization for the **pooling of ideas and resources** through value-added services, projects and activities for its members.

With the ACCORD project (regional development cooperation – Québec's Ministry of economy, innovation, and export) as its inspiration, SAGE-Innovation is a **health, autonomy, and gerontechnology cluster in the Estrie region** dedicated to ensuring that the population remains active and independent for as long as possible. Through joint action, its membership aims to enhance quality of life so people can live longer and happier lives through the development of adaptive products and services.

SAGE-Innovation is both an economic development initiative centred on supporting overall autonomy and a **gerontology hub** that pools the strengths and expertise related to this axis.

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Sherbrooke Innopole

Sherbrooke Innopole is the economic development organization for the City of Sherbrooke. Its mission is to support the City's economic transition, with an emphasis on innovation and the development of five key sectors, one of which is Life Sciences.

Sherbrooke, the central municipality in the Estrie region, is home to a number of companies in the expanding Life Sciences sector. Sherbrooke Innopole offers the following services:

- **Support** for businesses at every stage in their development
- Access to **investment funds**
- Access to an **international business network**
- A business **mentoring program**
- Link with regional partners, including an innovative business **accelerator/incubator** (space and services)

Sherbrooke Innopole also offers a **soft-landing program** for foreign companies interested in exploring the North American market. The program includes support as well as free or discounted space and services.

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