

Strategic Plan 2022 - 2027



Centre for

Heart Lung Innovation

UBC and St. Paul's Hospital

Message from the Director

In 2020, four of the top eight causes of hospitalization in Canada were either heart or lung-related. Heart attacks, heart failure, pneumonia and chronic obstructive pulmonary disease (COPD) were collectively responsible for 230,000 hospital admissions, representing ~10% of all hospitalizations in Canada¹. The Centre for Heart Lung Innovation (HLI) was established in 1977 by Drs. James Hogg and Peter Paré to address the growing burden of cardiopulmonary disorders in British Columbia (BC) through research and innovation. HLI is now home to 40 Principal Investigators (PI) representing 9 different departments from UBC and SFU and 250 trainees and staff. HLI investigators publish close to 400 peer-reviewed publications and secure \$16 million in external funding per year. Each year, HLI trains 100 graduate students and post-doctoral fellows (PDFs) and 40 undergraduate and summer students from 39 different countries across 6 continents².

In preparation of HLI's 50th (Gold) anniversary, Strategic Plan 2022-2027 was developed in collaboration with Providence Research, UBC Faculty of Medicine, Providence Health Care and Simon Fraser University Faculty of Health Sciences. At the heart of the Plan is our compassion for our patients and our passion for science as noted in our vision statement: "inspired by patients and driven by science, we (will) discover solutions to improve the heart and lung health of peoples of British Columbia, Canada and throughout the world". Our collective core mission is to discover patient-centred therapeutic and biomarker solutions to improve cardiovascular and respiratory health. The Plan focuses on three core areas: Research, Education, and Knowledge Mobilization, and two cross-cutting themes: Partnerships and Organizational Excellence. Within each core area, specific goals and actions have been identified to advance the overall mission and vision of HLI. Above all, HLI will reach these goals with mutual respect, inclusion and a spirit of humility. The goals of the Strategic Plan will also be enabled by the New St. Paul's Hospital and the associated Research Centre, which will open its doors in 2027. The building will be state-of-the-art and a game-changing health innovation hub for research, education, and knowledge translation. This Plan will serve as a foundation for the Centre's decision-making process and priorities over the next 5 years.

1. Canadian Institute for Health Information. Hospital Stays in Canada 2020. www.cihi.ca/en/hospital-stays-in-Canada.
2. HLI. Annual Report 2020



I am grateful for all the staff, PIs and trainees for their invaluable contributions to this Plan and their honest feedback and a special thanks to the UBC's Strategic Decision and Support Team, who brought this Plan to life. While heart and lung disorders remain the leading cause of morbidity and mortality, with Strategic Plan 2022-2027, HLI commits to providing new discoveries and solutions and bringing new life and new breath to millions of people with heart and lung diseases in Canada.

Don D. Sin, MD
 Professor of Medicine, UBC
 Director of HLI and the De Lazzari Family Chair
 Canada Research Chair in COPD

We acknowledge

The Centre for Heart Lung Innovation is located on the unceded territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish), Stó:lō and sə́lilwətaʔ (Selilwitulh (Tsleil-Waututh) Nations.



Vision

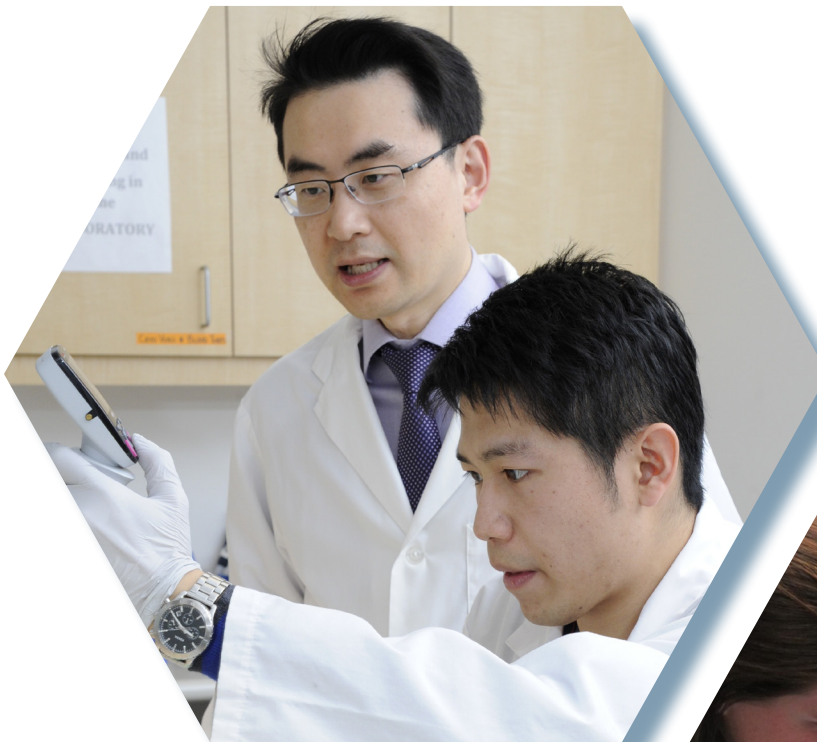
Inspired by patients and driven by science, we discover solutions to improve the heart and lung health of the people of British Columbia, Canada and throughout the world.



Mission

The Centre for Heart Lung Innovation attracts, supports, and connects world class researchers to discover patient-centred therapeutic and biomarker solutions to improve cardiovascular and respiratory health.





** Masks were not worn in pre-pandemic photos.*

Values

Excellence

We make impactful and meaningful contributions to research and education by taking a patient-centred and innovative approach.

Innovation

We value novel innovative ideas and approaches to solving the most challenging heart and lung health problems.

Integrity

We ensure that our research and work relationships are driven by ethics and honesty.

Compassion

We are advocates for health and show empathy and respect towards others.

Collaboration

We take an interdisciplinary approach to discovering and expanding knowledge through our key partners.

Equity

We are committed to integrating diverse perspectives and approaches that promote a culture of respect, fairness and inclusivity.



Centre for
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Core Areas

Research

Education

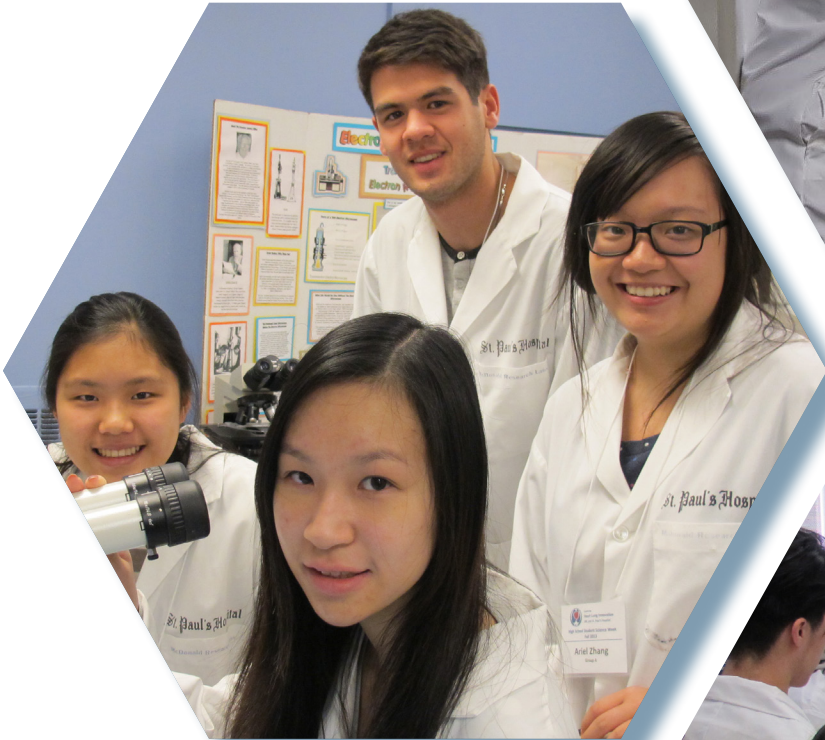
**Knowledge
Mobilization**

THEMES

Partnerships

Organizational Excellence

Our translational themes address high-level strategic opportunities and enhance impact and interconnections between the core areas.



Research

We support and attract a collaborative, cross-disciplinary network of leading researchers who explore emerging research areas and discover innovative solutions that improve heart and lung health.

OBJECTIVE 1

Attract and retain top research talent in key areas of heart, lung and critical care research.

STRATEGY

- Continue to work with the UBC Faculty of Medicine (FoM) and foster current and new relationships with individual departments and research centres for recruitment and succession support.
- Create a map diagram that links roles to funding to understand which roles are at risk.
- Develop a funding plan that considers multiple funding opportunities and a diversity of funding streams to provide targeted salary support to attract and retain Principal Investigators (PIs).
- In order to increase diversity within the HLI, partner with FoM and other departments and research centres to ensure Equity, Diversity and Inclusion (EDI) practices are included in the recruitment process.
- Develop initiatives to support PI retention.

OBJECTIVE 2

Support research excellence by ensuring that the physical, virtual and computational environment meets the diverse research needs of the Centre.

STRATEGY

- Increase PI involvement in existing planning committees to ensure space and resource needs are addressed in the new building.
- Prospectively plan the upcoming move to the new St. Paul's campus to mitigate interruptions to research productivity.
- Work with the Clinical Support and Research Centre (CSRC) relocation team to gather insight from other research centres that have moved from older to newer facilities to understand challenges and lessons learned.
- Modernize biobanks to increase user accessibility.
- Build a funding plan to maintain research infrastructure and operations without requiring PIs to contribute funds from grants.
- Develop a prioritized list of expanded services and infrastructure needed to support research programs at HLI.
- Prior to the move to CSRC, integrate with Providence Health Care (PHC), Providence Research (PR), and the Provincial Health Services Authority (PHSA) for better security and data access.
- Continue to build and maintain the grants team to support PI and trainees in securing funding for research.

OBJECTIVE 3

Connect HLI members to catalyze research contributions.

STRATEGY

- Expand the number of team-based and infrastructure grant applications.
- Identify opportunities for PI engagement in centre-wide initiatives.

OBJECTIVE 4

Explore and develop partnerships with under-represented groups in research (eg. Indigenous communities, marginalized individuals) to address heart and lung health issues in vulnerable populations.

STRATEGY

- Partner with other departments and research centres that are engaging in research with under-represented groups.
- Connect with PHC Indigenous partnership teams to establish relationships with Indigenous leaders locally and across the province to identify research questions relevant to Indigenous heart and lung health.
- Support initiatives for grant applications with a focus on heart and lung health in marginalized communities.
- Establish a research chair and/or faculty position for Indigenous heart and/or lung health.



OBJECTIVE 5

Build strategic partnerships with other leading centres to enrich research initiatives and output.

STRATEGY

- Catalogue existing collaborations with leading centres to identify areas of strength and areas of opportunity.
- Collaborate with PHSA and PHC to solve important clinical issues using big data.

Training and Education

In our multidisciplinary centre, we prepare the next generation of heart, lung and critical care leaders and health professionals, through training, mentorship and resources, to be innovative problem-solvers who can navigate their future and have a transformative impact on healthcare.



OBJECTIVE 1

Foster a culture of inclusion and diversity for our students, faculty, and staff.

STRATEGY

- Conduct a needs assessment to understand current barriers to inclusion and diversity within HLI, and identify existing resources to address needs.
- Secure funding to support underrepresented students, faculty and staff.
- Work closely with the trainee association to identify and address gaps in the admissions process.
- Target Indigenous and other underrepresented communities through high school events.
- Develop an EDI framework to support Indigenous health and research trainees that come from these communities.
- Increase mentorship opportunities with female PIs.
- Implement HLI-sponsored summer rotations.
- Support a culture of wellness by organizing regular health and wellness seminars and events.

OBJECTIVE 2

Attract and retain a diverse group of top-quality trainees.

STRATEGY

- Identify and create new funding opportunities and increase awareness of the funding opportunities that are available to support education and trainee initiatives.
- Develop a sustainable HLI Trainee Association funding framework to support excellence in trainee activities.

OBJECTIVE 3

Cultivate a relationship-rich learning environment.

STRATEGY

- Create more opportunities for trainee exposure to other labs, including spanning across basic to clinical research as well as working with allied health professionals.
- Connect people through social media platforms.
- Increase the number of social connections through planned social events.
- Develop a junior faculty mentoring program.
- Create mechanisms for trainees to collaborate with other trainees at HLI and at different research centres.

OBJECTIVE 4

Promote excellence through access to a rich, collaborative and diverse training environment.

STRATEGY

- Increase trainee exposure to other PIs at HLI and across different research centres within Providence Research through “lab crawls,” directed studies projects, and other collaborations.
- Increase trainee exposure to non-academic entities through internship programs and partnerships.
- Evaluate and refine programs to accommodate and integrate industry into academic research.
- Invite industry partners to give workshops and/or talks to provide exposure to industry.
- Create and promote opportunities, such as the UBC Public Scholars Initiative, for trainee-initiated patient and public engagement.

OBJECTIVE 5

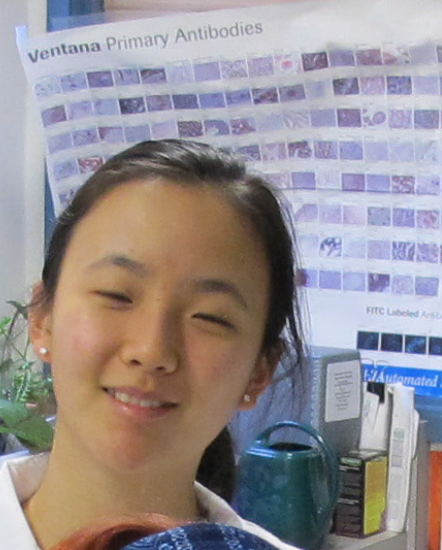
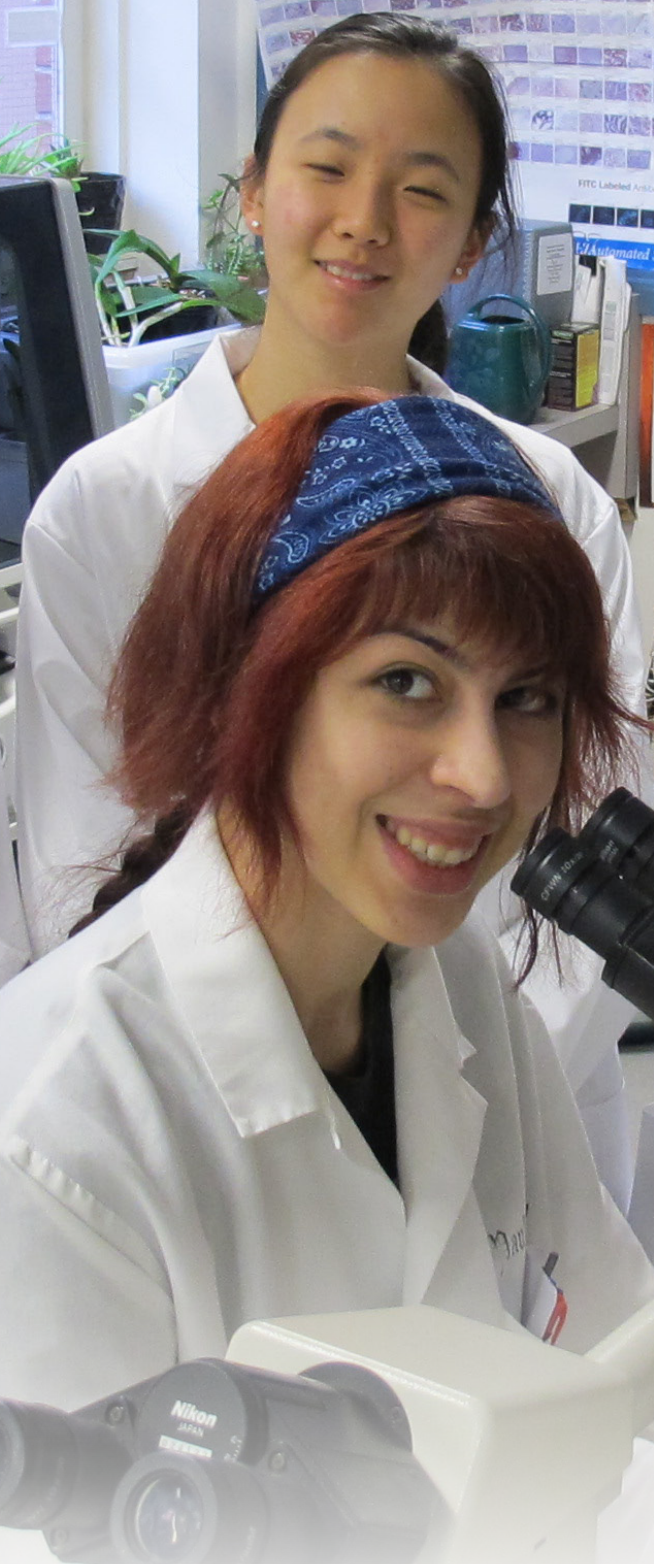
Equip students to be successful in an ever-changing environment.

STRATEGY

- Develop leadership seminars and programs for trainees.
- Identify gaps and expand opportunities for career development.
- Create a postdoc mentoring program.
- Develop a contact list of alumni to enable connection between trainees and alumni.
- Develop an alumni legacy program.
- Host a career day on a recurring basis.



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Knowledge Translation and Mobilization

We share our research findings with the world and translate our patient-informed research to make a relevant and positive impact on clinical care and health.



OBJECTIVE 1

Increase patient engagement in research to advance health priorities of patients and their supporters (families, non-profits, caregivers).

STRATEGY

- Simplify communication for patients to relay benefits effectively and ensure patient engagement material is available at all patient-involved sites.
- Partner with patient advocacy groups to act as a connector between patients and researchers.
- Develop, restructure and link website and other communications with clinical programs and St. Paul's Foundation for better integration across HLI to increase patient engagement in research.
- Partner with clinically-oriented research organizations.
- Visit other research programs with best patient engagement practices to learn best practices.
- Enhance relationships with our colleagues, patients, and families to best incorporate patient needs into our research.
- Organize short conferences and workshops and invite patients and families to increase engagement and awareness of HLI.

OBJECTIVE 2

Facilitate connections with clinical and industry partners to translate research findings that strengthen health services in heart, lung and critical care diseases.

STRATEGY

- Identify and connect to partners and shared infrastructure.
- Develop and strengthen the biobanks partnership resource, equipment, in-kind resources and projects.
- Partner with the new Providence Research Multi-Omics and Medical Imaging (MOMI) platform being developed and promoted to industry partners and designed for OMICs data that originates in much of the Centre's research.

OBJECTIVE 3

Build capacity for knowledge translation.

STRATEGY

- Create a knowledge translation (KT) committee with broad participation and engagement, that is responsible for training and social media, and to act as a knowledge broker.
- Assess the needs to continue the current one-year KT position to provide training for KT and social media.
- Develop a series of seminars and workshops focused on KT implementation.
- Work with UBC's Knowledge Exchange Unit to develop a set of modular training materials tailored for students in health research.
- Identify KT grants available for individual investigators and provide support with grant writing.



OBJECTIVE 4

Promote awareness of research findings to improve health outcomes.

STRATEGY

- Develop a community engagement strategy to share our work with industry partners and the health community.
- Develop a media and digital strategy targeted for sharing of research findings.

The Centre has established metrics for each of the Core Areas. Metrics will be tracked and reported on regularly.

UBC Centre for Heart Lung Innovation

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**Providence
Research**

We're all in.



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