

UNIVERSITY PLANNING COMMITTEE
Wednesday, March 27, 2024 at 10:30 AM
Gilmour Hall, Council Room (Room 111)

AGENDA

Page

OPEN SESSION

1. **Notice of Meeting - March 13, 2024**
2. **Minutes of the Previous Meeting – March 6, 2024 (Open Session)**
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3. **Chair's Comments and Update**
4. **Business Arising**
5. **Report from the University Secretariat**
A. Thyret-Kidd
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6. **Report from Undergraduate Council**
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[6.1. Engaging and Partnering for People-Centered Care](#)
[6.2. Wilson College of Leadership and Civic Engagement Combined Honours in Leadership and Civic Studies and Another Subject](#)
7. **Proposals for Research Centres and Institutions**
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 1. **Proposal to Establish the Firestone Institute for Respiratory Health (FIHR)**
G. Parise & D. Bowdish
Approval
[Firestone Institute for Respiratory Health \(FIHR\) Memo](#)

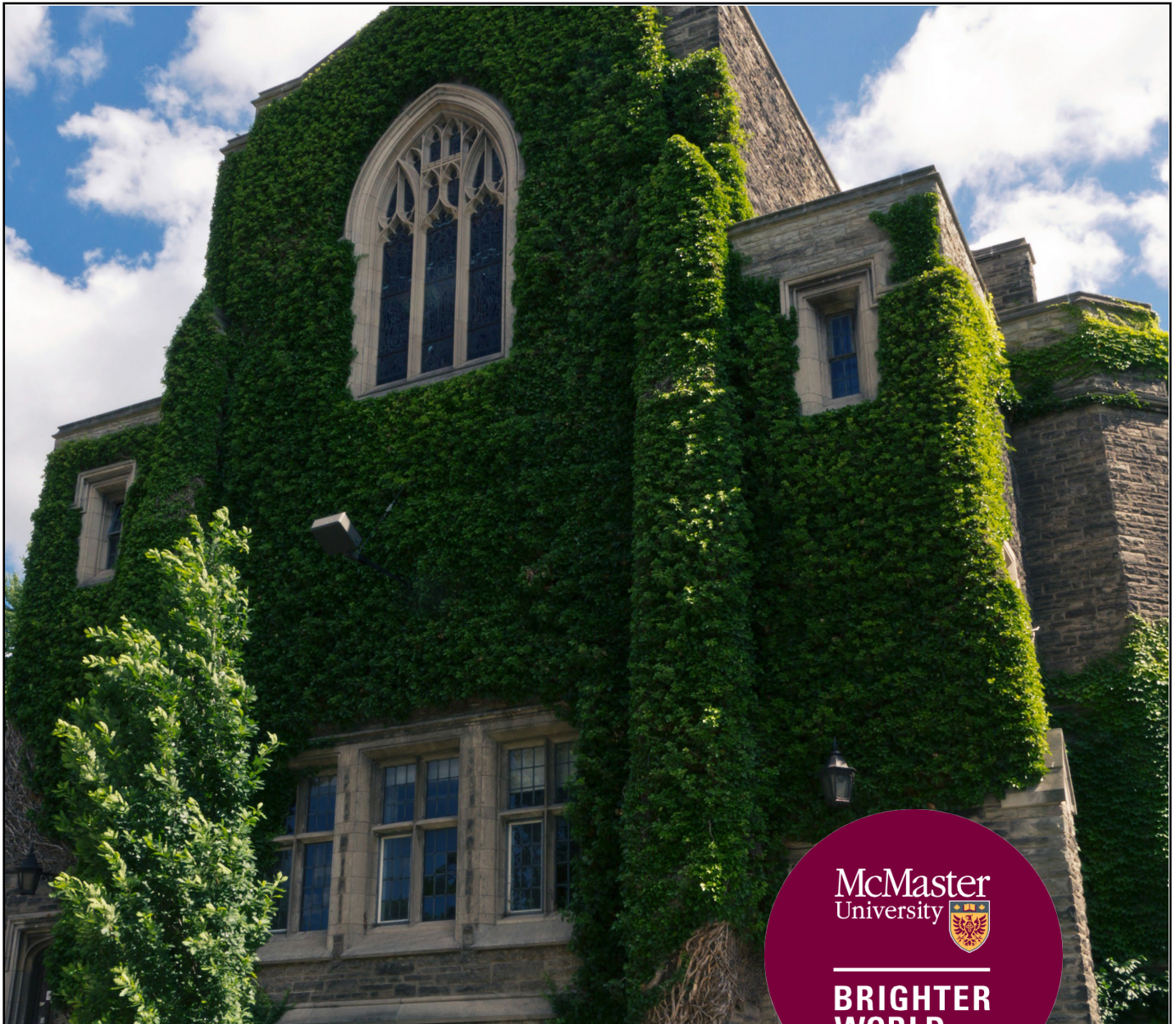
2. Closure of the Fraunhofer Project Centre for Biomedical Engineering in Advanced Manufacturing (BEAM)

G. Parise

Approval

[Closure of the Fraunhofer Project Centre for Biomedical Engineering and Advanced Manufacturing \(BEAM\)](#)

8. Other Business



REPORT TO THE UNIVERSITY PLANNING COMMITTEE (UPC)

University Secretariat

MARCH 2024

University Secretariat Mission & Mandate

Our mission is to guide and facilitate the responsible and transparent decision-making processes for the governing bodies of McMaster University. We achieve this mission through our expertise and breadth of knowledge in the following five areas of our mandate:

- provision of professional support to the Board of Governors, Senate, University Planning Committee and their respective committees, councils and advising bodies;
- facilitation of University policy development and renewal, including documentation and interpretation;
- coordination of Senate & Board elections and executive searches for senior administration appointments;
- supervision of the legal responsibilities for all tribunal hearings; and
- oversight of information governance and compliance with privacy laws.

Organization

The Secretariat is an administrative office that supports the University. The team is 9 people and is organized into 4 areas:

- a. Governance (includes elections)
- b. Policies (includes PVP searches)
- c. Hearings
- d. Privacy & Records Management

Governance

Governance is the system by which entities are directed and controlled. It refers to structures and processes that are designed to ensure accountability, transparency, responsiveness, the rule of law, stability, equity and inclusion, empowerment, and broad-based participation.

Pillars of Governance

Leadership

- Understand and manage direction

Accountability

- Obligation to explain actions of the University
- Requires 'answerability' and 'consequences'

Responsibility

- Explicit acceptance of authority to act on behalf of the University

Transparency

- Timely access to information
- Disclosures

Independence

- Decisions untainted by self-interest

Predictability

- Stakeholders have confidence in ethical conduct

Participation

- A voice for stakeholders

How does the Secretariat support the governance of the University?

- Facilitate processes through training, understanding of responsibility and the role of each committee, providing space for discussion and decision-making
- Publish committee memberships, agenda & minutes from Open Session meetings of the Senate and Board on the Secretariat website. Also, provide access to by-laws, policies, election information, reports, lists & bulletins
- Ensure that approval items are sent to the correct committees in the correct order, and in a timely manner. Universities have complex formal ways to consult and approve items, e.g., financial thresholds for different kinds of financial decisions, curriculum revisions, tenure & promotion decisions, etc.

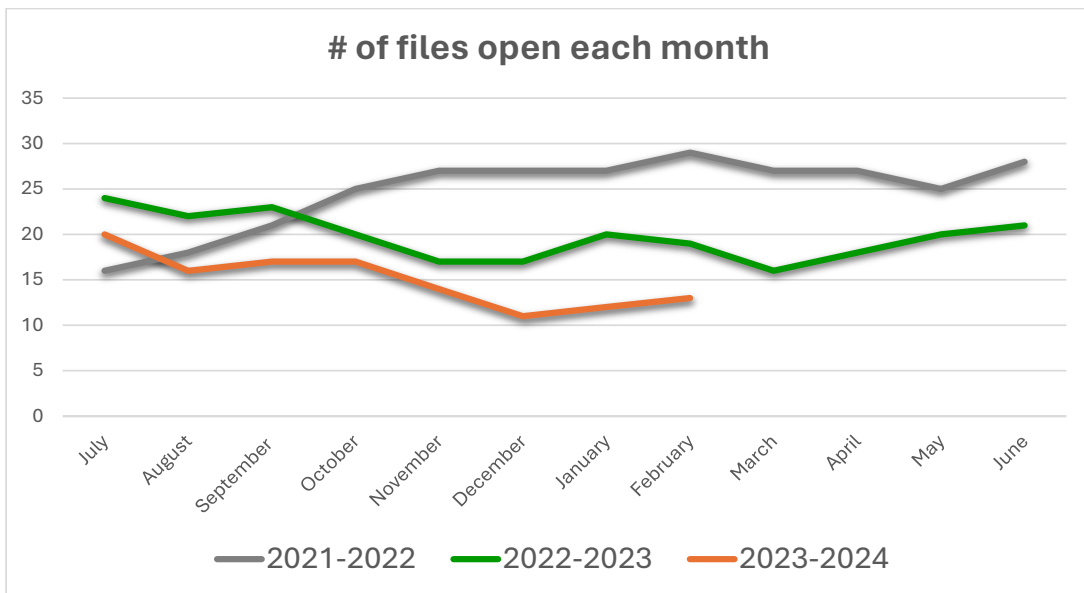
- In cooperation with many offices, the Secretariat serves as a gate-keeper, ensuring that the correct approval paths are followed
- Support for ~155 meetings per year for 26 committees (managing memberships, scheduling meetings, agenda setting, preparing motions, minute taking, delivery of materials in a protected manner, etc.)
- Maintain the records of governance meetings, that eventually become part of University archives
- Senate + 7 Senate Committees
 - Undergraduate Council + 4 UGC Committees
- Board + 9 Board Committees
- University Planning Committee, Budget Committee + Student Fees Committee

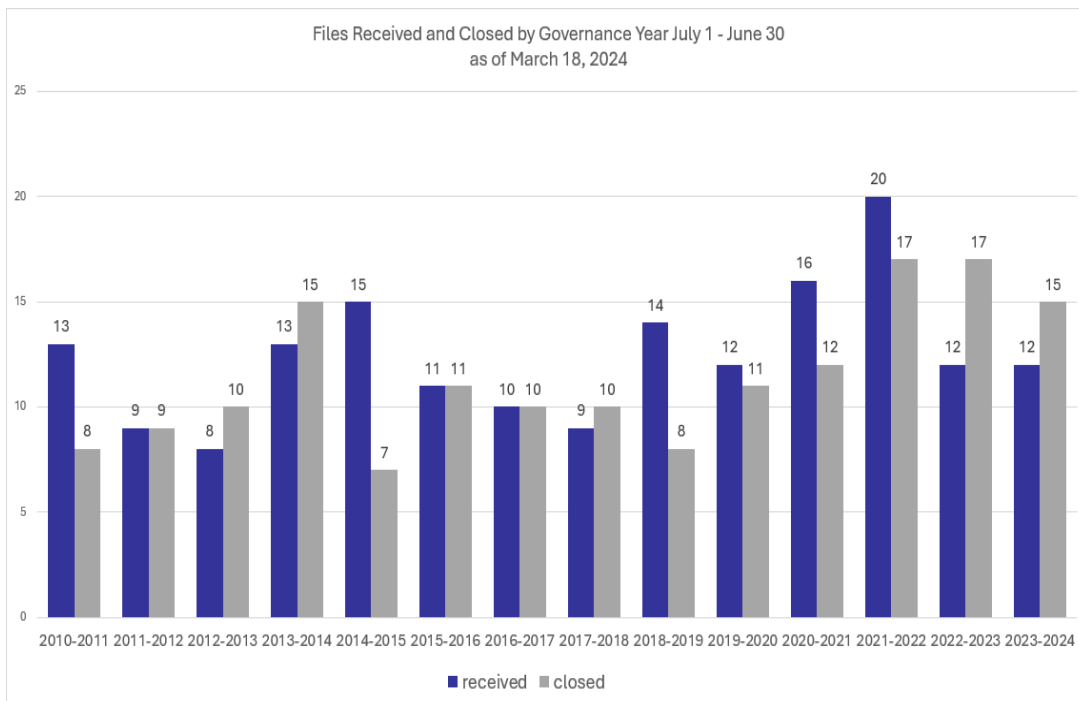
Policies & PVP Searches

- ~180 policies approved by the Senate and/or Board of Governors
- Each policy has a Responsible Executive, usually the President or a Vice-President
- Policies are posted in an accessible format on the Secretariat website
- The Secretariat assists with updates, reviews and the writing of policies:
 - The Responsible Executive can manage the process and the Secretariat reviews and then assists with governance approvals, or
 - The Secretariat can support an ad hoc policy drafting/reviewing committee that can take months engaging in consultation and finally governance approvals.
- The Secretariat provides policy advice and interpretation
- Provides assistance regarding McMaster history, e.g., MCE project, locating original documents/approvals for projects, etc.
- Goal of reviewing each policy every 5 years, currently trying to update/terminate policies that have not been reviewed in years (decades)
- President & Vice-President Searches:
 - The Secretariat provides administrative support to the search committees and assists with approval of the appointments
 - Currently supporting the Committee for Recommending a President
 - Three Vice-President processes will start in the next 24 months

Hearings

- Policies that have a hearing process:
 - Senate Board for Student Appeals
 - Faculty Code of Conduct
 - Tenure & Promotion Policy
 - Tenure and Promotion Appeals
 - Faculty Grievance Policy
 - Research Integrity Policy
 - Discrimination & Harassment Policy/Sexual Violence Policy
- 5 governance committees (e.g., Senate Board for Student Appeals, Tenure & Promotion Appeal Nominating Committee, Research Misconduct Hearings Panel, etc.)
- McMaster's hearing processes are quasi-judicial and provide a high degree of procedural fairness, including the right to representation, an unbiased decision-maker, disclosure of evidence, the right to call witnesses and cross-examine witnesses, etc.
- Hearing members are comprised of internal McMaster people. 2023-24 involved:
 - 48 faculty members (counts towards service)
 - 12 undergraduate students
 - 8 graduate students
 - 9 TMG members
 - 9 UNIFOR members





- The length of the hearing and time for a decision to be reached will depend on the type of file, how many people are involved, whether legal counsel is involved, how many witnesses, etc.
- Student appeals typically take 3-4 months to schedule a hearing, with a decision issued 3-6 weeks later, but it can also take much longer than this.

Privacy and Records Management

- Privacy Laws:
 - The Privacy Act (federal)
 - FIPPA & PHIPPA (provincial)
 - The laws govern the collection, use and disclosure of personal information.
 - Personal Information is defined as ‘information about an identifiable individual’.
 - The laws allow the public to request and obtain records held by public sector institutions, both personal records and records held by the institution.
- Formal Access Requests (Freedom of Information):
 - Access request numbers for 2023 – the Privacy Office closed 53 FOI Case Files
 - 34 requests for Personal Information
 - 19 requests for general records
- Processing Background Checks:
 - 50 requests for coordinating student background checks with the Student Case Management Office, Academic Integrity Office, and Campus Safety.
- Incident Management:
 - The Privacy Office managed 30 Incident/Complaint files
 - The primary source of privacy incidents was through inadvertent mis-sending of emails or misapplying attachments.
 - One incident involved a high-profile case where the information breached was in the custody of a third-party service provider.
- Training:
 - Primer on Privacy Training (A2L) – 3,098 enrolled; 1,793 completed the training.
 - PHIPA for Health Care Professionals (A2L) – 910 enrolled; 646 completed the training.
 - Department Presentations – 11 training sessions (in person and remote)
 - FHS Privacy Form Series
- Privacy Impact Assessments (PIA)
 - The Privacy Office completed 45 full-depth privacy impact assessments (including ClinicalConnect, ChatGPT, CoPilot, Jane App, CP@Clinic, Symplicity, Telus EMR, and a series of transcription applications/services)
 - 109 Consultations on privacy compliance and best practices. High-frequency clients include FHS, HRS, RO, and UTS.

Records Management

- Records Management Pilot Projects
 - Completed Faculty of Social Sciences Pilot Project, including 5 draft record series, information architecture framework, and comprehensive migration to SharePoint.
 - University Secretariat, including comprehensive inventory and drafting record series for retention and disposition.
- Newly approved Records Management Policy
- Initiated Preferred Vendor process for secure records destruction

Looking Ahead

1. The priorities of the Board, the Senate and the President/Vice-President team are the priorities of the Secretariat.
2. Supporting the Committee for Recommending a President.
3. Supporting new(ish) governance meetings: In 2022, the Secretariat began supporting the Budget Committee, Student Fees Committee, Investment Pool Committee and the Pension Trust Committee. Depending on the committee, we are developing processes and timelines, revising terms of reference, etc.
4. Privacy: Creating a privacy culture across a decentralized university community through training, workshops, promotion, etc.
5. Organizing the University Secretariat records. We are in year 2 of a 3-year process.
6. Policy work: Improvements to the website to make the university's policies accessible. Approval of the Faculty Code. Approval/termination of ~20 policies in 2023-24.
7. Process mapping and documentation is a priority for the current Secretary. E.g., governance schedules, workplans for committees, election checklists, tenure & promotion processes, Committee to Recommend a President processes, book binding, etc.

REPORT TO THE UNIVERSITY PLANNING COMMITTEE
from the
UNDERGRADUATE COUNCIL

FOR APPROVAL

1. New Non-Academic Microcredential Program: Engaging and Partnering for People-Centred Care

At the meeting held on February 27, 2024, the Undergraduate Council reviewed and approved the establishment of the non-academic microcredential in Engaging and Partnering for People-Centred Care. The fees for this microcredential program were approved at the University Student Fees Committee on March 19, 2024. Further details can be found within the circulated materials.

It is recommended,

that the University Planning Committee approve the establishment of the non-academic microcredential in Engaging and Partnering for People-Centred Care, as circulated.

2. New Program Proposal: Combined Honours in Leadership and Civic Studies and Another Subject

At the meeting on March 26, 2024, the Undergraduate Council will review and be asked to approve the proposal for the Combined Honours in Leadership and Civic Studies and Another Subject degree program for inclusion in the *2025-2026 Undergraduate Calendar*. Due to timing concerns related to Quality Council, it is coming forward to the University Planning Committee for approval now. The fees for this new program were approved at the University Student Fees Committee on March 19, 2024. Further details can be found in the circulated materials.

It is recommended,

that the University Planning Committee approve the establishment of the Combined Honours in Leadership and Civic Studies and Another Subject degree program, as circulated.

University Planning Committee
FOR APPROVAL
March 27, 2024

Date: March 18, 2024

TO: University Planning Committee

FROM: Andy Knights, Vice-President, Research (Acting)



RE: Firestone Institute for Respiratory Health (FIHR)

The Committee on Research Institutes, Centres and Groups (CRI) has reviewed and unanimously approved the attached establishment proposal for the Firestone Institute for Respiratory Health (FIHR).

Please include this as an agenda item for the next University Planning Committee Meeting on March 27, 2024.

AK;jt

Attach.

cc: Provost and Vice-President (Academic)
Vice-Provost and Dean of Graduate Studies
Vice-President and Dean of Health Sciences
University Secretariat

January 2024

Dr. Andy Knights
Acting Vice-President, Research
Chair, Committee on Research Institutes
c/o Gilmour Hall, Room 208

Re: Proposed Institute – Firestone Institute for Respiratory Health (FIRH)

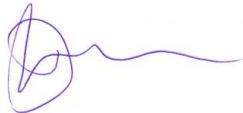
Dear Dr. Knights,

On behalf of the Faculty of Health Sciences at McMaster and St. Joseph's Healthcare Hamilton, we would like to recommend the approval of the Firestone Institute for Respiratory Health (FIRH) as an official joint University/Hospital research institute at McMaster.

Please find a proposal for the Institute attached.

If you require further information, please do not hesitate to contact us.

Yours sincerely,



Dr. Jonathan Bramson
Vice Dean, Research
Faculty of Health Sciences
McMaster University



Dr. Lehana Thabane
Vice President, Research
St. Joseph's Healthcare Hamilton

cc: P. O'Byrne
D. Bowdish

Encl.

JB/LT:sm

Proposal for the Establishment of

an Institute a Centre

Official Name of Research

Institute or Centre

The Firestone Institute for Respiratory Health

Submitted by

Dr. Dawn Bowdish

Core Members		<i>Please define what constitutes a "core member" for this Institute or Centre:</i>
Definition: McMaster Faculty who have footprint at/participate in St. Joe's funded activities whether in an educational, clinical or research capacity.		
Name	Faculty	Expertise
John Agzarian	Health Sciences	Lung and esophageal cancer, benign upper GI conditions/surgery
Rebecca Amer	Health Sciences	Management of Complex Pulmonary Infections in collaboration with Infectious Diseases, Post-COVID (ambulatory) care
Dawn Bowdish	Health Sciences	Immunity, aging, macrophage biology, pneumonia, vaccination
Madhu Chari	Health Sciences	Sleep Medicine
Gerard Cox	Health Sciences	Sarcoidosis and pulmonary fibrosis, bronchial thermoplasty
Myrna Dolovich	Health Sciences	In vitro and in vivo characterization of vaccine and medical aerosols from various types of drug delivery systems
MyLinh Duong	Health Sciences	Respiratory epidemiology, and understanding the environmental and social determinants of lung development and function
Christian Finley	Health Sciences	Cancer surgery quality, governance, standardization and benchmarking
Nathan Hambly	Health Sciences	Pulmonary hypertension, interstitial lung disease, sarcoidosis and acute exacerbations of idiopathic pulmonary fibrosis
Wael Hanna	Health Sciences	Robotic thoracic surgery, advancements in the field of thoracic surgery
Jeremy Hirota	Health Sciences	Respiratory mucosal immunology in airway diseases, chronic respiratory diseases and the impact of exterior factors such as cigarette smoke and cannabis
Terence Ho	Health Sciences	Severe airways disease, airway inflammation, novel mechanisms of COPD exacerbations, iron metabolism and chronic inflammation
Mark Inman	Health Sciences	Mechanisms of airway hyper-responsiveness, health and research ethics
Juliana Li	Health Sciences	Sleep Medicine
Martin Kolb	Health Sciences	Interstitial lung disease, mechanisms of lung injury, repair and fibrosis
Mark Larche	Health Sciences	Asthma/allergy, rheumatoid arthritis, scleroderma, and graft versus host disease
John McDonough	Health Sciences	Molecular mechanisms of chronic lung disease
Andrew McIvor	Health Sciences	Knowledge translation in asthma and chronic obstructive pulmonary disease
Manali Mukherjee	Health Sciences	Developing/validating airway biomarkers, mechanisms of airway inflammation, and response to biologic therapies, long-COVID
Parameswaran Nair	Health Sciences	Developing and applying non-invasive measurements of airway inflammation in the treatment of severe asthma and COPD
Helen Neighbour	Health Sciences	Severe Asthma and Eosinophilic Lung Disease
Eldar Priel	Health Sciences	Perioperative care, interventional pulmonology
Natya Raghavan	Health Sciences	COPD, respiratory rehabilitation
Imran Satia	Health Sciences	The effects of aging, risk factors, impact, and burden of disease at a population level with respiratory symptoms such as chronic cough
Muntasir Saffie	Health Sciences	Global health policy and its impact on pulmonary infections; health system funding and policy, tuberculosis, nontuberculous mycobacteria and infectious lung diseases
Ciaran Scallan	Health Sciences	Lung transplant, interstitial lung disease, connective tissue disease
Yaron Shargall	Health Sciences	Perioperative care, VTE, Thoracic Oncology
Taryn Simms	Health Sciences	Sleep Medicine

Sarah Svenningsen	Health Sciences	Non-invasive pulmonary (lung) imaging
Joshua Wald	Health Sciences	COPD, respiratory rehabilitation
Susan Wasserman	Health Sciences	Allergy, rhinitis, asthma, determinants of allergic reactivity in peanut allergy

Associate Members		<i>Please define what constitutes an "associate member" for this Institute or Centre:</i>
Definition: McMaster Faculty Members who do not have a footprint at St. Joe's but collaborate with identified Firestone Core Members		
Name	Faculty	Expertise
Marla Beauchamp	Health Sciences	Evidence-based strategies to improve mobility among older adults
Dina Brooks	Health Sciences	Chronic obstructive pulmonary disease (COPD), cardiovascular rehabilitation, rehabilitation and aging
Derek Chu	Health Sciences	Prevention and treatment of food allergy and anaphylaxis, evidence-synthesis and guideline development in Allergy-Immunology, pediatric health
Neil Johnston	Health Sciences	Respiratory virus epidemiology
Paul O'Byrne	Health Sciences	Mechanisms and treatment of asthma: specifically the regulation of environmental allergen-induced airway inflammation and the development of new anti-inflammatory asthma treatments
Roma Sehmi	Health Sciences	Molecular mechanisms that stimulate migration of progenitor cells into the lung tissue following allergen challenge
Jane Turner	Health Sciences	Chemotherapy and bone marrow transplant related bronchiolitis and lung disease; respiratory Covid sequelae

Space Needs

Sq. Ft
Approx. 8,473

New space required? Yes

Yes

<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Proposed	<input type="checkbox"/>
<input type="checkbox"/>	No	<input type="checkbox"/>

Location? St. Joseph's Hospital

Confirmed

Space cost allocation covered by lead Faculty? Yes

Yes

If no, specify: _____

Frequency

of

Internal: _____

Frequency

of

External: _____

Plans for Organizational Review

Please provide names below and check box to verify that approval has been obtained from each:

Check box

Department Chair/ Area Director

Faculty Dean or Director of Administration

Other (specify)

_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>

A. Background:

The origins of the Firestone Institute go back to the development of the Firestone Regional Chest and Allergy Unit (FRCAU) in 1978, when Dr. Michael Newhouse established a regional respiratory clinical program at St. Joseph's Healthcare Hamilton and became its first director. The original Firestone building was renovated with funds provided by Mr. Morgan Firestone. That building housed the offices of the clinicians and provided clinic space for ambulatory patient care. The Respiriology service provided to the hospital was intimately associated with the Firestone, as all Respiriologists working within the inpatient system were members of the FRCAU. Research was an integral part of the original FRCAU. The focus of research was particularly on clinical measurement and treatment methods, and their translation to patient care.

The opportunities provided by the Canada Foundation for Innovation to rebuild the Firestone infrastructure became the driving force in the later 1990's to expand the original FRCAU into the Firestone Institute and to encourage basic research in respirology to move from McMaster to St. Joseph's. The success of this CFI application led to the creation of integrated clinical and research space within the Juravinski Tower and cemented the position of the Firestone Institute within the St. Joseph's Healthcare Hamilton ecosystem. The increasing emphasis on Thoracic Surgery at St. Joseph's Healthcare Hamilton lead to its integration with the medical respiratory program as the Chest program. The thoracic surgeons are members of the Firestone Institute and their offices are located adjacent to FIRH offices. This interdisciplinary relationship between Thoracic Surgery and Respirology has led to innovative new training and research opportunities and is unique in Canada.

The Firestone Institute has always had a strong history of clinical and research collaborations with Allergy/Immunology, Rheumatology, Infectious Disease and other related Divisions and a number of joint clinics are run through the Firestone clinic. This history of collaboration has led to important research advances in autoimmunity in the lung, allergic asthma, and treatment of infection induced exacerbations in chronic lung disease. Our asthma and interstitial lung disease programs have been very successful in uncovering basic mechanisms of airway disease, discovering biomarkers of disease, disease progression and treatment response and performing clinical trials. Our aerosol research program led to the development of the Aerochamber™, which improved treatment for asthma, and was foundational to the new development of inhaled vaccines. Our studies of population health provided insights into factors associated with asthma and other airways of disease. Current research strengths include understanding the biology of interstitial lung diseases (especially asthma, pulmonary fibrosis, and pulmonary hypertension), using endophenotyping to understand the etiology and guide treatment for asthma, the role of autoimmunity in asthma and Long COVID, understanding lung function in health and disease through advanced imaging and improving chronic obstructive pulmonary disease (COPD) patient outcomes through patient-centred programs. Emerging areas of strength include understanding the causes and consequences of acute exacerbations, advocacy for vaccination and prevention, diagnosing lung cancer early to improve prognosis, uncovering mechanisms of chronic cough and testing new therapies, and respiratory mucosal immunity.

Evidence of research excellence is found in the number of research Chairs held by Firestone researchers including the endowed Frederick Hargreave/Teva Innovation Chair in Airway Diseases held by Dr. Parameswaran Nair, the Jack Gaudie Boehringer Ingelheim Chair in Interstitial Lung Disease held by Dr. Martin Kolb, the McMaster University/GlaxoSmithKline Chair in Lung Immunology at St. Joseph's Healthcare Hamilton held by Dr. Mark Larché, and the Moran Campbell Chair in Respiratory Medicine held by the Division Director. Dr Jay Hirota holds the Canada Research Chair (Tier 2) in Respiratory Mucosal Immunology and Dr. Dawn Bowdish holds the Canada Research Chair (Tier 2) in Aging and Immunity. Dr. Sarah Svenningsen holds the Canada Research Chair (Tier 2) in Translational Pulmonary Imaging.

The strength of FIRH continues to be its focus on improving patient outcomes. Pathways to impact include high impact manuscripts and international presentations, recognized excellence in clinical trials and guideline development, investigations of basic mechanisms of chronic lung diseases and advocacy and education of scientists and healthcare professionals.

Synergy with McMaster’s Strategic Research Plan:

“Addressing the Growing Burden of Chronic Disease” One in five Canadians is living with lung disease, yet lung health research is underfunded and as a result respiratory conditions such as COPD and respiratory infections including COVID-19, influenza and pneumonia are in the top 10 causes of death in Canada, while lung cancer is the most frequent and deadliest cancer. Exacerbations for airway disease and COVID-19 infections are the most common cause of hospital admissions or unscheduled emergency visits, challenging health care systems. Age is the single biggest risk factor for lung disease and demographic change means more people will develop lung disease and live with it for longer. Furthermore, lung disease is often co-morbid with other conditions such as tobacco addiction and mental health disorders. Understanding these intersecting health issues is essential to developing effective care. Improvements in clinical care that we develop at The Firestone will improve the lives of those currently living with lung disease, while research will discover new treatments to reduce the burden of disease in future generations.

“Aging across the lifespan” Epidemiologic studies from Firestone researchers have demonstrated that the seeds of lung health are sowed early. Prenatal influences affect lung development and accelerate lung disease. There is also a bidirectional relationship between age and lung disease. Individuals whose biologic age is older than their chronologic age (premature agers) are more likely to develop lung disease and once a person has COPD or pulmonary fibrosis, their biologic age accelerates, and they develop comorbidity, frailty and other age-related conditions early. Our researchers incorporate aging across the lifespan by using novel pre-clinical models and epidemiologic studies to understand early life influences of lung health and understand the interaction between immune aging and infections.

“Understanding and Responding to Infectious Disease”. Three respiratory infections – pneumonia, influenza and COVID-19 are in the top 10 causes of death in Canada. Infectious exacerbations in chronic lung disease are a leading cause of hospitalization and serious respiratory infections are known to increase the rate of developing other age-related health conditions. Firestone researchers aim to diagnose and prevent respiratory exacerbations, study long term health consequence of infection such as Long COVID, and advocate for increased adult vaccination.

“Equity, diversity and inclusion to strengthen our research programs” The burden of lung disease is not evenly distributed. Indigenous Canadians are more likely be infected with respiratory pathogens, but less likely to receive vaccines and have higher rates of asthma and COPD than non-Indigenous Canadians. There are socioeconomic factors that contribute to lung disease such as air pollution, smoking/vaping/cannabis use, and occupation and access to spirometry, respiratory rehabilitation and other treatment modalities are not equitably distributed. The Firestone is committed to understanding and addressing inequities in lung health through research, clinical practice, and education.

B. Objectives and Proposed Activities:

The Firestone Institute for Respiratory Health aims to improve the lives of people living with chronic lung disease and improve lung health through research, education and transforming clinical practice.

Objectives:

- i) *Patient endotyping to understand disease etiology and personalize treatment:* The etiology of chronic lung diseases is complex. Traditionally asthma was classified as mild, moderate or severe but these classifications were not sufficient to determine what treatment a patient would benefit from having. Firestone researchers pioneered the use of sputum cytology (i.e., counting the number and type of white blood cells in sputum) to categorize patients based on their profiles of cellular inflammation and to tailor treatment accordingly. Basic scientists have provided mechanistic understanding to these findings, clinicians use sputum cytology to direct treatment and improve outcomes and sputum cytology combined with deep mechanistic understanding allows us to direct patients to appropriate clinical trials. We aim to refine our patient phenotyping using tools such as transcriptomics, metabolomics and proteomics that will allow us to both understand the origins of disease and develop biomarkers to understand which treatments will be effective. This is not limited to asthma, but will be a part of characterizing

patients with COPD, ILD or other chronic lung diseases. Our recent investments in imaging, including computed tomography (CT) and magnetic resonance imaging (MRI) have allowed us to understand structure-function relationships to disease severity and treatment response.

- ii) *Clinical trials to build a better future for people living with chronic lung disease:* Clinical trials are a staple of our research program. Our patients with pulmonary hypertension, pulmonary fibrosis, or other late-stage diseases have grim outcomes due to the lack of treatments to slow progression of disease. They are highly motivated to participate in clinical trials as evidenced by our high enrollment and study completion rates. Similarly, we have a strong history of investigator-initiated studies to test treatments in asthma, COPD, chronic cough, and interstitial lung disease. We aim to be the premiere clinical trial centre for chronic lung disease in Canada.
- iii) *Uncovering mechanisms of lung disease and discovery of biomarkers of progression and responsiveness to treatment using preclinical models and biospecimens:* Firestone researchers have developed novel pre-clinical models of pulmonary fibrosis, chronic cough, asthma, and infectious disease to uncover mechanisms of disease. Our tissue microarrays and other biospecimens have facilitated discoveries of biomarkers of disease and treatment response.
- iv) *Better diagnosis to improve prognosis:* Lung cancer is the deadliest form of cancer in Canada, in part because it is often diagnosed late. Our researchers are working to develop novel diagnostics to detect lung cancer recurrence and early-stage cancer.
- v) *Understanding the short and long-term consequences of respiratory infections:* Respiratory infections and infective exacerbations are some of the most common causes of hospital admissions and declining health in people living with lung disease. People hospitalized for respiratory infections have high rates of re-hospitalization and frequently develop other chronic health issues. Ongoing studies include understanding how age, frailty, and chronic lung disease impact immune responses to infection and vaccines, the long-term health effects of COVID-19, and how autoimmunity in the lung may contribute to infective exacerbations.
- vi) *Population level insights to understand the origins of chronic lung disease:* Firestone researchers collaborate with other population-based studies (e.g., PURE, CLSA, CARE-PF) to understand how environmental factors contribute to cough, lung function and chronic lung disease.

Proposed Activities:

- i) *Bringing patient phenotyping to the genomic era:* We have a proven track record that tailoring treatment to patient phenotypes improves outcomes; however, there are still many patients who have ambivalent or novel endotypes, or do not respond to treatment. This Embedded within the Firestone Institute is our core set of biospecimens, databases and bioinformatic expertise, which we call the Centre for Chronic Lung Disease. Using this collection of resources, we will invest in studying gene, protein and metabolite signatures to better understand patient phenotypes in pulmonary fibrosis, asthma, COPD, and lung cancer. By incorporating transcriptomics, metabolomics, proteomics and lung imaging we will be able to 1) discover new biomarkers of disease and response to treatment, 2) tailor treatment, 3) facilitate the development of novel diagnostics. We expect major growth in this area through an increase in tri-council and investigator-initiated funding through new faculty recruitment, investment in core data analytics personnel, investing in tissue collection and biobanking and synergies with our CFI-funded imaging platforms.
- ii) *Retrospective and prospective studies using patient meta-databases and biobanked specimens:* The Firestone clinic sees thousands of patients with chronic lung disease a year, many of whom have consented to participate in research. By creating databases that include data on lung function, diagnosis, drugs and treatments in conjunction with banked biospecimens, our researchers will be able to understand how infections impact lung function or disease progression, follow progression after treatment and understand differing trajectories of specific disease

phenotypes. We have invested in personnel with expertise in database management and technical staff with expertise in biobanking and sample collection, to create a resource for Firestone researchers to use. The Centre for Chronic Lung Disease is centrally managed by the Research Director (see position details below). It is a resource of biobanked tissues and patient specimens, datasets derived from samples and equipment used for imaging biospecimens. This collective resource is managed by the Research Director.

- iii) *Novel training opportunities to build the next generation of clinician-scientists and scientists:* Canada has not had funding specific for MD/PhD training in over 15 years and there is a dearth of opportunities for clinician-scientists to participate in mechanistic research. We have had a strong history of novel fellowship programs that provide rich research training. As an example, our interventional pulmonology program is the only one in Canada that is co-managed by both respirology and thoracic surgery and our fellows have worked closely with basic scientists on collaborative research projects. We support the research goals of clinical trainees through travel awards and support for specific projects. Both our clinical learners and graduate students and post-doctoral fellows belong to the trainee-run “FIRHst” society. They are supported by having career days and opportunities to present and apply for travel funds. Our graduate students, post-doctoral fellows and technical staff benefit from access to clinical specimens, and intellectual input from clinicians, scientists, and patient advocates. We aim to be the best place to do translational respirology research in Canada and to continue to attract trainees from all over the world.
- iv) *Expanding our understanding of host-microbe interactions in chronic lung disease:* It was once believed that acute exacerbations in chronic lung disease were caused by viruses. We now know that this is often, but not always true. We now understand that people living with chronic lung disease, and older adults in general, often have inappropriate inflammatory responses to resident microbes and in some cases this predisposes to infections. We will increase our understanding of host-immune-microbe interactions using novel preclinical models of respiratory infections (e.g. in aged and frail mice), studying the role of the airway microbiome, and using our patient metadatabases to understand how specific microbes alter the patient trajectory. We have a strong history of collaborative clinics between respirologists and infectious disease clinicians, most recently our Long COVID clinic, that provide clinical insight and access to samples and patient recruitment. Combining our novel and preclinical models we will better understand the mechanisms of acute exacerbations and respiratory infections while advocating for better vaccination strategies to prevent respiratory infections.

C. Rationale for Establishment of the Research Institute:

The Firestone Institute for Respiratory Health has been one of the strongest respirology research institutes in Canada. It has been informally associated with McMaster and all of its researchers carry a McMaster appointment, but it has never been a formally recognized McMaster Institute. Creating a joint McMaster-St. Joseph’s Healthcare Hamilton Institute will be beneficial to both institutions in order to ensure consistency of governance and administrative policies. This is not expected to impact stakeholders including our faculty, trainees and staff.

D. Criteria for Expanding the Membership:

Our complete policy for membership is appended as Appendix 1. This document describes rights, responsibilities and criteria for membership. Our criteria for expanding the membership is as follows: To receive membership, a McMaster Faculty member, who is an affiliate of the Research Institute of St Joe’s in Hamilton (RSJH) within the Department of Medicine at the Faculty of Health Science, writes to the Executive Director and requests to be considered for nomination for membership.

Once the request is received, the Executive Director asks that the person meet with the Research Director to learn about the FIRH administrative structure along with FIRH policies and the cooperative philosophy underpinning the research themes within the Institute. This meeting will help gauge the “fit” between the Institute and the interested person.

If the interested person agrees to continue to put their candidacy forward after this meeting, the Research Director brings that application to the Executive Committee for discussion. The Research Director will be asked to talk about the

nominee's candidacy, in terms of the value that they will bring to the group. Following that discussion, unless otherwise indicated, the person is nominated and approved by the Executive Committee. In the event that the candidacy is not universally supported, the Executive Director can either call a vote and/or make the final decision. The Executive Director will liaise with The Research Institute of St Joe's Hamilton to ensure the candidate is applicable for affiliate status and the resources and space is in place to support their membership. The process concludes with a letter, sent by the Executive Director, to the candidate informing the person of the decision.

Affiliated Membership: FIRH will consider a request to be an affiliated member of FIRH using a similar process to selecting full members. Affiliated members will be granted to people who are faculty members in good standing in other University departments who are not faculty within the Division of Respiriology. Affiliated members will be candidates who participate with FIRH significantly and whose effort benefit the research activities of the group.

Legacy Membership: Upon receiving official institution status with McMaster University, current faculty listed as being part of Firestone Institute for Respiratory Health, will be "grandfathered" into FIRH as legacy members. The members will be asked to confirm their interest in remaining as a member of FIRH Research in writing. Those who are unwilling to be legacy members can indicate in writing that they wish to decline membership.

All members must maintain and renew their affiliation with the RISJ as requested (usually every 2 years).

Term: A member of FIRH will be held in good standing for an indefinite period as long as he/she is able to contribute to the research activities of the Institute. Membership within FIRH research is on a volunteer basis and the member is expected to agree to follow the policies and directions set by the group. At any time, the member can resign their affiliation with FIRH by notifying the Executive Director in writing.

E. Detailed Business Plan:

Financial needs:

The Firestone Institute for Respiratory Health has operated on a yearly \$700,000 operating budget from the Research Institute at St. Joe's for over 10 years. These funds are used to support an administrative assistant, inviting external speakers, key staff, faculty salaries and support, strategic research investments. This is the required amount to sustain operations. See *Appendix A (Budget template)* for details. No new funds are requested.

Space needs:

The Firestone Institute for Respiratory Health is situated on the Charlton campus of St. Joseph's Health Care. Laboratory space is delegated by the RISJ. Some members have additional laboratory space at McMaster University or have clinics at other sites. FIRH currently occupies approximately 2,219 square feet of research office and research exam room space, along with approximately 6,254 square feet of research laboratory space. No new space is requested.

Human Resource needs:

Administrative assistant: The administrative assistant manages many day to day operations. They are responsible for generating financial reports, organizing clinical and research rounds, working with the Executive and Research Directors to book meetings, plan projects and large events (e.g., symposium), assist with preparing grants and manage finances. The administrative assistant liaises with staff at the RSJH to manage space and financial audits.

Guangzhou Institute for Respiratory Health Liaison: We have a long-standing relationship with the Guangzhou Institute for Respiratory Health (GIRH, China). Our liaison works 0.5 FTE at FIRH and spends 0.5FTE at GIRH. The liaison works on projects of mutual interest and helps arrange research and educational events.

Faculty: We support the salaries of basic science faculty and provide funds for protected time of clinical faculty. No new faculty hires are requested. (See Appendix A for details)

Technician: We provide 0.25FTE equivalent of funding for an experienced research technician to support the basic science laboratories.

Research Coordinator: Our research coordinator assists with ethics applications, documentation required by Health Canada, patient recruitment and ensuring compliance with sponsor visits. The research coordinator is used on a cost-recovery basis but multiple faculty members.

F. Organizational Structure:

Executive Director: The Executive Director is hired by and reports to the Vice Dean, Research at McMaster, the Vice President, Research at SJHH / Scientific Director at RSJH, the Chief of Medicine at SJHH, the Chief of Surgery at SJHH, and the Chair of the Department of Medicine at McMaster. The Executive Director serves a 5-year term, normally renewable once, although some circumstances may lead to the Executive Director serving more than two consecutive terms. Each renewal will follow satisfactory review by the Governing Board and an External Review Board. Terms of Reference for the position, which include responsibilities, are appended.

Research Director: The Research Director is appointed by and reports to the Executive Director and the Executive Committee. The Research Director manages the resources of the Centre for Chronic Lung Disease (i.e., biospecimens, datasets, databases) The Research Director serves a 4-year term, renewable once, pending satisfactory review in year 4 by the Executive Committee. Terms of Reference for the position, which include responsibilities, are appended.

Executive Committee: The Executive Committee consists of the Executive Director, the Respiriology Heads of Service for St Joseph's Healthcare Hamilton and Hamilton Health Sciences, the Director, Division of Respiriology the Academic Division Head, Thoracic Surgery, the Research Director, the Head of Head of Respiratory Rehabilitation, the Residency Program Director, the Program Director -Thoracic Surgery, and a basic scientist with a laboratory footprint on the St. Joseph's Healthcare Hamilton footprint. The Executive Committee meets a minimum of 4 times a year to discuss issues arising, strategic opportunities, educational initiatives, and professionalism/equity concerns. The Executive Committee is consulted in all major initiatives and decisions and advises the Executive Director on scientific or scholarly priorities. Terms of Reference for the Executive Committee are attached.

External Scientific Advisory Board (SAB): The External Scientific Advisory Committee provides impartial feedback on the scientific success of the Firestone Institute for Respiratory Health and advises on emerging opportunities. The SAB will receive the yearly scientific report and be asked to provide an assessment of the Firestone Institute for Respiratory Health's accomplishments every two years.

- Dr. Jean Bourbeau, McGill - Division of Experimental Medicine
- Research & Clinical interests include: disease management, pulmonary rehabilitation, and knowledge translation for COPD
- Dr. Don Sin, UBC - Centre for Heart Lung Innovation
- Research & Clinical Interests: Biomarker discovery and treatment of COPD
- Dr. Grace Parraga, Western University: Non-invasive imaging for the diagnosis and treatment of chronic lung diseaseGR
- Dr. Scott Budinger - NorthWestern University, US
- Research & Clinical interests: Pulmonary fibrosis, aging physiology, molecular pathology of chronic lung disease
- Dr. Liz Sapey, University of Birmingham
- Research & Clinical interests: Pneumonia, lung infections, ageing and frailty

Governing Board and Role in Annual Review: The governing board will include:

Governing Board – Co-Chairs:

Dean & Vice-President, FHS or delegate who would typically be the Vice-Dean of Research

President, SJHH, or delegate who would typically be the Vice-President of Research

Members:

Vice-Dean, Research, FHS

Chair, Department of Medicine, FHS

Vice-President, Research, SJHH/Scientific Director, RSJH
Chief of Medicine, SJHH
Executive Director, The Research Institute of St. Joe's Hamilton

The Governing Board will oversee the financial management of the Institute and measure benchmarks of success by receiving an annual review from the Executive Director. They will provide insight into emerging opportunities within the RSJH, McMaster and externally. In consultation with the Executive Director and the Scientific Advisory Board, the Executive Committee and the members of the Institute, they will be responsible for assembling an External Review Board at least every 5 years, coincident with the final year of the Director's term.

The Governing Board will report annually to the Dean and Vice-President of the Faculty of Health Sciences (since members are all members of the Department of Medicine), who will report annually to the Vice President of Research (VPR) on the status, progress, and future plans of the Institute. The VPR will subsequently provide University Planning Committee (UPC), Senate and Board of Governors with an annual report on the status of the Institute for information. The annual report will also be shared with the Vice President of Research for St. Joseph's Healthcare Hamilton, the Executive Director of The Research Institute of St. Joe's Hamilton and the Chief of Medicine at St. Joseph's Healthcare Hamilton.

G. Operational Reviews:

Annual Review

The Executive Director will report to the Governing Board on an annual basis. This report will include updates on research productivity, researchers, educational initiatives, external affiliations, Institute administration and operations, financial status, grants-in-aid, strengths and weaknesses, objectives for the coming year and any other items of relevance to the operation of the Institute.

External Five-Year Review:

In the fourth year of each term, the External Review Board will provide a report on the Institute. They will comment on the following:

- 1) research productivity including grants obtained, research and commercialization outputs and the international reach of the research.
- 2) training environment including the number of highly qualified personnel trained, innovativeness of educational initiatives, and career readiness of trainees
- 3) Impact on patient care including the number of members involved in guideline development, presence at national and international conferences, and advocacy in government.
- 4) appropriate use of financial resources and appropriateness of institutional commitments.

Appendix A

Research Centre or Institute Budget Template								
	2023	2024	2025	2026	2027	Total	\$ Secured	\$ Anticipated
OPENING BALANCE/CARRY FORWARD	\$ -	\$ 24,500	\$ 70,000	\$ 94,500	\$ 98,000	\$ 287,000		
REVENUE - indicate whether secured or anticipated	2023	2024	2025	2026	2027	Total	\$ Secured	\$ Anticipated
The Research Institute of St. Joe's Hamilton	\$700,000	\$700,000	\$ 700,000	\$ 700,000	\$ 700,000			
						\$ -		
						\$ -		
TOTAL REVENUE	\$700,000	\$700,000	\$ 700,000	\$ 700,000	\$ 700,000	\$ 3,500,000		
EXPENSES	2023	2024	2025	2026	2027	Total	\$ Secured	\$ Anticipated
Administrative Expenses: (add rows as required)								
Administrative Personnel						\$ -		
Administrator	\$ 65,000	\$ 65,000	\$ 67,000	\$ 69,000	\$ 71,000	\$ 337,000		
Office Supplies:						\$ -		
General Office Supplies	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 20,000		
Office Equipment:						\$ -		
Computer Equipment/Upgrades/Maintenance	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 2,500	\$ 12,500		
Travel:						\$ -		
Meeting expenses:						\$ -		
Meeting Expenses	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000		
Communications:						\$ -		
Phones/fax machines	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 20,000		
Website	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 2,500		
Renovations:						\$ -		
Ongoing costs for space:						\$ -		
Total Administrative Expenses	\$ 81,000	\$ 81,000	\$ 83,000	\$ 85,000	\$ 87,000	\$ 417,000	\$ -	\$ -
Research Expenses: (add rows as required)								
Research Personnel:						\$ -		
Basic Scientists	\$195,000	\$205,000	\$ 215,000	\$ 225,000	\$ 235,000	\$ 1,075,000		
Research Director Stipend	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 200,000		
Clinical Research Fellow	\$ 40,000					\$ 40,000		
Research Technician	\$ 60,000	\$ 62,000	\$ 64,000	\$ 66,000	\$ 68,000	\$ 320,000		
Research Coordinator	\$100,000	\$105,000	\$ 110,000	\$ 115,000	\$ 120,000	\$ 550,000		
Research Liaison with GIRH	\$ 71,000	\$ 73,000	\$ 75,000	\$ 77,000	\$ 79,000	\$ 375,000		
Recruitment support	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 150,000		
Research Supplies:						\$ -		
Research start-up funding for new recruits	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000		
Education/Training	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 7,500	\$ 37,500		
Research Equipment:						\$ -		
Travel:						\$ -		
Trainee Travel Grant Competition	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 5,000	\$ 25,000		
GIRH related travel	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 50,000		
Meeting expenses:						\$ -		
Annual Research Retreat	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 50,000		
FIRH Society of Trainees support	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 5,000		
Communications:						\$ -		
Renovations:						\$ -		
Ongoing costs for space:						\$ -		
Total Research Expenses	\$594,500	\$573,500	\$ 592,500	\$ 611,500	\$ 630,500	\$ 3,002,500		
TOTAL EXPENSES	\$675,500	\$654,500	\$ 675,500	\$ 696,500	\$ 717,500	\$ 3,419,500		
IN-YEAR (Surplus/ Deficit)	\$ 24,500	\$ 70,000	\$ 94,500	\$ 98,000	\$ 80,500			
Funding and Expense Summary								
Opening Balance (Year 1)						\$ -		
Total Revenue (Total Years)						\$ 3,500,000		
Total Available Funding						\$ 3,500,000		
Total Expenses (Total Years)						\$ 3,419,500		
Net Position						\$ 80,500		

Appendix B – Terms of Membership

Terms of Reference: Membership, Firestone Institute for Respiratory Health (FIRH)

Scope & Purpose: The Firestone Institute for Respiratory Health uniquely combines clinical, research, and educational expertise, to provide a 360, all encompassing, avenue for respirology related activities and initiatives. Members of FIRH share the common goal of advancing patient care, research innovation, and knowledge translation.

General Responsibilities:

- Maintain a footprint on the St. Joseph's Healthcare Hamilton site (Charlton campus), through research, education, or clinical activities.
- Be an affiliate of The Research Institute at St. Joe's Hamilton (RSJH) – please see policy 002-RSJ-H Researcher Affiliation with Research St. Joseph's – Hamilton.
- Hold all research funds at RSJH for studies conducted at St. Joseph's Healthcare Hamilton.
- Participate in meetings and discussions about collaborative initiatives and be open to sharing ideas and expertise with other members
- Present at Regional Clinical or Research Rounds once every 2 years
- Engage in partnerships with other FIRH members
- Identify themselves as members of the Institute, including presentations and publications
- Act as a mentor for learners and trainees within FIRH
- Assist in tracking the progress and performance of the Institute by providing data on research and results as requested
- Contribute to activities related to communication about, and promotion of, FIRH, such as sharing of news and events within member networks
- Attend FIRH seminars, events, annual meetings and retreats
- Share information about opportunities, best practices, and challenges related to respirology research and educational initiatives with other FIRH members
- Foster and maintain an environment that encourages collaboration and builds capacity in respirology research and education
- Act in good faith in the support of FIRH and multidisciplinary respirology research at McMaster
- Use the official marks of the FIRH on presentation and posters as well stating that they are a member of FIRH

It is understood that membership in FIRH is predicated on being held in good standing with the University and The Research Institute of St. Joe's Hamilton. Adherence to University, Research Institute and hospital-based policies and requirements form part of the rules of membership in FIRH. Membership in FIRH does not necessarily guarantee equal access to use the resources with FIRH or those belonging to an FIRH based researcher. In addition, FIRH members will be able to request access to specific FIRH resources and administrative supports. Affiliate members are not eligible for funds from the base FIRH budget (i.e., those that support the direct cost of research, trainee scholarship/fellowships, etc.) unless they are collaborating with a full member, at which point they may submit joint research proposals.

If a member voluntarily leaves McMaster University, he/she may request to become an affiliated member of FIRH under the terms and process listed above. If a member involuntarily leaves either, membership with FIRH will be suspended and or revoked at the discretion of the Executive Director.

Process for becoming a member: The appointment of members to the Firestone Institute for Respiratory Health is as follows. To receive membership, a McMaster Faculty member, writes to the Executive Director and requests to be considered for nomination for membership and applies to be an affiliate of the RISJ. The Executive Director will bring the application to the Executive Committee for discussion. They will share their opinion about the nominee's candidacy, in terms of the value that they will bring to the group. Following that discussion, and providing they are accepted as an affiliate to the Research Institute of St Joes' Hamilton the person is nominated and approved. In the event that the

candidacy is not universally supported, the Executive Director can either call a vote and/or make the final decision. The process concludes with a letter, sent by the Executive Director, to the candidate informing the person of the decision.

Affiliated Membership: FIRH will consider a request to be an affiliated member of FIRH using a similar process to selecting full members. Affiliated members will be candidates who participate with FIRH significantly and whose effort benefit the research activities of the group.

Legacy Membership: Current faculty listed as being part of Firestone Institute for Respiratory Health, will considered legacy members. The members will be asked to confirm their interest in remaining as a member of FIRH Research in writing to Executive Director. A member made decline membership.

Term: A member of FIRH will be held in good standing for an indefinite period as long as they are able to contribute to the research activities of the Institute. Membership within FIRH research is on a volunteer basis and the member is expected to agree to follow the policies and directions set by the group. At any time, the member can resign their affiliation with FIRH by notifying the Executive Director in writing.

Member Benefits:

- Shared resources, such as access to the Institute’s administrative coordinators and research coordinators
- Opportunities to participate in and obtain funding for collaborative research projects
 - ❖ by participating in brainstorming and grant writing for projects suitable for internal or external grant funding
- Increased exposure and recognition, both internally and externally
 - ❖ by contributing to communication activities related to FIRH research at McMaster, such as:
 - identifying news items relevant to FIRH that could be shared or included in newsletters, on the website, social media sites, etc.
 - contributing to updates for the Executive Committee
 - contributing other items for the FIRH website, including research profiles and biographies
- Facilitated knowledge mobilization
 - ❖ Opportunities for enhanced student training
 - ❖ Potential for improved productivity and quality of work
 - ❖ Potential for new partnerships with groups external to McMaster

Appendix C – Leadership Positions

C-i) Executive Director

C-ii) Research Director

C-iii) Executive Committee Terms of Reference & Membership

C-i) Executive Director, Firestone Institute for Respiratory Health

The Department of Medicine, Faculty of Health Sciences at McMaster University, and St. Joseph's Healthcare Hamilton invite applicants for an Executive Director of the Firestone Institute for Respiratory Health to join the Division of Respiriology. Academic rank commensurate with the candidate's qualification and experience.

FIRESTONE INSTITUTE for RESPIRATORY HEALTH:

The Firestone Institute for Respiratory Health was born out of the opportunity to improve the diagnosis and management of respiratory diseases. In the late 1970s, McMaster University and St. Joseph's Healthcare Hamilton (St. Joe's) took a novel approach by embedding pulmonary research into a clinical setting. The goal was to encourage collaboration between clinicians managing the diseases and the scientists investigating the causes, diagnosis, and treatment. A great example of Firestone's collaborative work is the valve aerosol reservoir device – the AeroChamber® – developed by Dr. Newhouse and his team. The AeroChamber® is now used worldwide to help patients with asthma who had trouble using their inhalers effectively.

Firestone researchers were among the very first to carry out research in lung ventilation and perfusion using radioactive isotopes and the scintillation camera. The earliest studies to evaluate measuring airway responsiveness in asthma were developed by Dr. Hargreave, along with methods to evaluate inflammation in the airways using induced sputum. The Six-Minute Walk Test and the Asthma Control Questionnaire are now used worldwide in the evaluation of airway diseases. Some of Firestone's most important research was carried out by Dr. Hargreave in developing the methacholine challenge test, also used around the globe in asthma diagnosis.

In 2018, St. Joe's congratulated Firestone researchers for an impressive four papers published in the New England Journal of Medicine within weeks of each other, an incredible feat.

By combining clinical expertise with novel imaging technology, Firestone is also developing a pulmonary imaging centre by leading studies in this area. Dr. Sarah Svenningsen and Dr. Param Nair are developing novel methods using inhaled noble gas MRI to better identify problematic areas of the lungs, coupled with various treatment techniques including bronchial thermoplasty.

Today, the Firestone Institute for Respiratory Health is a leader in patient care, education, and research. The interdisciplinary team consists of physicians, surgeons, respiratory therapists, cardiopulmonary technicians, sleep polysomnography technologists, and administrative staff registering 45,000 patients and providing 40,000 clinical tests annually. Researchers are addressing the growth of allergies and respiratory diseases such as asthma and COPD. At the same time, researchers are conducting cutting-edge work on emerging community concerns, ranging from the impact of air pollution and smog, to investigating the effects of cannabis smoke on the immune system.

POSITION SUMMARY:

As a key member of the Executive Committee of the Firestone Institute for Respiratory Health (FIRH) at St. Joseph's Healthcare Hamilton (St. Joe's), the Executive Director (ED) reports to:

- Vice Dean, Research, McMaster University
- Vice President, Research, SJHH
- Chief of Medicine, SJHH
- Chief of Surgery, SJHH
- Chair, Department of Medicine, McMaster University

The ED helps to ensure that the FIRH is delivering world-class research, education and clinical services in respiratory health by directing the development, administration and promotion of all research, education and clinical services throughout the FIRH. Clinical strategies, operating plans and services are co-led with the Clinical Director, Firestone Ambulatory Clinic. Together with the Executive Committee, the ED will ensure that all clinical, education and research activities within respiratory health across the continuum of care are conducted in a professional and ethical manner and that the advancement of knowledge is, wherever possible, adopted as part of clinical technical community practice and/or policy. The ED will network with academic institutions, funding agencies and government, as appropriate, to initiate and encourage scientific collaborations and support funding initiatives. The ED will participate in provincial, national and international committee activities of high relevance.

KEY RESPONSIBILITIES:

- Responsible, with the Executive Committee, for all research, education and clinical services at the FIRH.
- Build internal and external leadership within a multi-stakeholder environment.
- Develop strategic directions and short and long term plans for research, education and clinical services consistent with identified thematic foci and the strategic plan of SJHH and the Research Institute of St. Joe's Hamilton (Research Institute).
- With the Executive Committee, create an internal culture that encourages openness, collaboration, stewardship accountability, and promotes innovation and continuous improvement; creating a positive working environment; communicate and manage performance expectations; and provide individual support and direction.
- Contribute insight and analysis to strategic policy development on respiratory health.
- Liaise with pertinent departments at McMaster University, in particular, to ensure an appropriate academic environment and learning experiences for students involved in research and education.
- Establish and maintain research, education and clinical standards.
- With the Executive Committee, develop annual operational plans.
- Recruit, coordinate and administer the appointment and reappointment of staff and physicians.
- Develop mechanisms and opportunities for dissemination of research activities.
- Ensure development of an infrastructure to ensure scientific and ethical reviews of research, and the management of intellectual property.
- Ensure the existence of a safe and well working environment.
- Support and assist the foundation(s) with fundraising and donor interactions.
- Advance a culture of client/patient safety through work and daily practices.

QUALIFICATIONS:

In order to successfully meet the objectives of the position, the following key qualifications are required and/or desired for the ED of the FIRH:

- Ph.D./Doctoral Degree and/or M.D. in a pertinent discipline and professional registration

SKILLS and EXPERIENCE

- Extensive research and clinical experience in respiratory health, with preference for an individual with research expertise in COPD, to expand on existing areas of clinical and research excellence in asthma, interstitial lung disease and thoracic surgery.
- A minimum of 10 years in a senior leadership position within a complex research, education and clinical environment.
- Exceptional scientific and research acumen with proven translational knowledge skills and the capacity to advance the application of research to clinical practice.
- Exceptional strategic and innovative thinking skills with proven implementation experience and the capacity to advance strategies through systematic and progressive implementation.
- Effective team player with leadership values that reflect a commitment to the development of others, culture development, and best outcomes in a complex environment.
- Has worked with various constituents, individuals and teams to build consensus and support for change initiatives to achieve program and system goals.

C-ii) Research Director, Firestone Institute for Respiratory Health

Description of position: The Research Director will be responsible for managing the resources of the Centre for Chronic Lung Disease, managing internal and external collaborations, and seeking out new opportunities for funding and support.

Qualifications: The Research Director may be either a clinician-scientist or a basic scientist but must have an externally funded research program on the origins or treatment of chronic lung disease that includes translational and foundational science. The applicant must have a strong history of collaboration and national and international reputation as being a thought leader in the field of chronic lung disease. The applicant must be committed to equitable distribution of resources and uphold standards of professionalism.

Appointment: The Research Director will be appointed by the Executive Committee of the Firestone Institute for Respiratory Health by submitting a CV and vision statement. The position will be for 4 years, renewable once. A stipend to support salary consistent with a 1 day a week appointment will be provided.

Responsibilities:

- 1) Managing the resources of the Centre for Chronic Lung Disease including the tissue biobank, equipment, support personnel and data. This includes being responsible for equipment maintenance, proactively applying for team and infrastructure grants, and developing management and accessibility plans as per RISJ, McMaster and FIRH guidelines.
- 2) Identifying and supporting external collaborations including the Guangzhou Institute for Respiratory Health, industrial collaborations, and outside academic collaborations.
- 3) Organizing research events including research showcases for clinical and basic science trainees, and Research Rounds (which may be done with another faculty lead).
- 4) Nominate research faculty for awards, internal and external recognition when appropriate.
- 5) Ensure resources of the Centre for Chronic Lung Disease are equitably distributed.
- 6) Developing plans to reach benchmarks for increased research productivity using the Centre for Chronic Lung Disease.
- 7) Providing a yearly report to the Executive Committee that includes;
 - i. A summary of research activities and initiatives including but not limited to the number of internal and external researchers using the resources of the Centre for Chronic Lung Disease, grants obtained and applied for, infrastructure needs and publications and other research activities arising from use of the Centre.
 - ii. Budget for the Centre for Chronic Lung Disease including a summary of resources and support provided to FIRH researchers.
- 8) Providing documentation for yearly reports to the RISJ and reports to the external scientific advisory board.

Reporting: The Research Director will report to the Executive Committee and the Executive Director.

C-iii) Terms of reference: Executive Committee of the Firestone Institute for Respiratory Health

Scope & Purpose: The Executive Committee will consist of leadership representing teaching, clinical service, and research interests in the Firestone Institute of Respiratory Health. The purpose of the committee is to foster collegiality, collaboration and pursue joint initiatives. By understanding challenges and initiatives in each members respective domain, the committee will be able to 'speak with one voice' when representing the Firestone to university or hospital administration, and other stakeholders. The committee will advise the Executive Director on issues and opportunities relevant to The Firestone, including strategic planning, hiring, professionalism issues, funding & infrastructure needs and requirements. The Executive Director will consult with and receive feedback from the Executive Committee on major funding expenditures, developing the strategic directions, academic hiring, and others.

Membership:

Standing Members

Standing members will be members of the committee as long as they hold the below position. In the case where the member is ending their term, they may attend meetings for up to one year as an out-going member.

- 1) Executive Director (currently D. Bowdish)
- 2) Respirology Head of Service - St Joe's (currently R. Amer)
-Should the Head of Clinical Service be unable to attend, the Deputy Director may attend as a representative.
- 3) Director, Division of Respirology (currently M. Kolb)
- 4) Academic Division Head, Thoracic Surgery, Program Director- Thoracic Surgery or a representative (Currently Y. Shargall)
- 5) Research Director (currently M. Kolb)
- 6) Head of Respiratory Rehabilitation (currently N. Raghavan)
- 7) Residency Program Director (currently J. Wald)
- 8) Respirology Head of Service - HHS (currently MyLinh Duong)
- 9) Basic scientist with a footprint on the St Joe's site (currently J. Hirota)

Meeting Frequency & Quorum: All attempts will be made to schedule meetings so that all members can attend.

Meetings will occur at least four times a year and meetings may be called if there are time-sensitive issues that need to be addressed.


Invited members:

The Executive Committee may invite individuals from within or outside of the FIRH to attend all our part of a meeting should their expertise be required.

Administrative Support: The administrative assistant assigned to the Executive Director will be responsible for organizing meetings, will ask for agenda items from all members two weeks in advance, assemble and circulate the agenda one week in advance and will attend meetings to take minutes. After the meetings he/she will circulate the minutes for approval from all members and file them. Minutes will be accessible to all members of The Firestone upon request. The Admin Assistant will also follow up with requests or action items if required.

Decision Making: Since our members have processes of decision making associated with their positions, the Executive Committee will primarily serve as a consultative committee and will not interfere with established processes associated with each member's established process of decision making. Members' support or dissent for decisions will be documented in the minutes to demonstrate collective support, awareness, and issues that may arise. The Executive Director will mediate discussions of contentious issues and document debate, which we acknowledge is essential to the decision-making process.

To: University Planning Committee

From: Andy Knights, Vice-President Research (Acting) 

Date: March 19, 2024

Re: Closure of the Fraunhofer Project Centre for Biomedical Engineering and Advanced Manufacturing (BEAM)

The Fraunhofer Project Centre for Biomedical Engineering and Advanced Manufacturing (BEAM) was established by the Board of Governors in 2015 as a joint initiative between McMaster University and the German Fraunhofer Institute for Cell Therapy and Immunology (Fraunhofer IZI). Fraunhofer is Europe's largest research institution for applied research with more than 22,000 employees and over 60 institutes. Fraunhofer IZI investigates and develops solutions to specific problems at the interfaces of medicine, life sciences and engineering for partners active in medicine-related industries and businesses.

McMaster and Fraunhofer IZI had collaborated on joint research projects and BEAM was created to build on the relationship and maximize the development and transfer of scientific knowledge to industry. An additional component of BEAM was the development of a newly renovated space and infrastructure at the McMaster Innovation Park (MIP). External funding support for the establishment of BEAM was also provided by Federal, Provincial and Municipal levels of government.

The BEAM facility [officially opened](#) on March 7, 2018 and led to the development of more space and specialized infrastructure that has served as a magnet to attract many biomedical firms to MIP and set the stage for McMaster's continued investment in commercialization space at the Park.

While the creation of the facilities for the project centre has been very successful in aiding in the creation and transfer of biomedical research, creating employment in Hamilton, and growing the region's life sciences cluster, the formal collaboration contract between Fraunhofer and McMaster officially ended August 31, 2019. Due to several key changes in Fraunhofer IZI leadership, Fraunhofer provided written confirmation in June 2020 stating they were pursuing a new strategic direction and they would not renew their original agreement.

The external funding agreements from the Federal, Provincial and Municipal governments have also now expired (the last being in 2021).

As part of our ongoing efforts to review and maintain an active list of Senate approved Research Centres and Institutes, the OVPR recommends the Fraunhofer Project Centre for Biomedical Engineering and Advanced Manufacturing be formally closed.