



Medicine  
UNIVERSITY OF TORONTO

Division of Respiriology  
Strategic Plan  
2018-2023

## CONTENTS

1. INTRODUCTION	3
2. VISION	4
3. GOVERNANCE STRUCTURE	4
4. DIVISIONAL MEMBERSHIP	5
5. RESEARCH	6
6. RESIDENCY & FELLOWSHIP TRAINING PROGRAMS	9
7. CONTINUING MEDICAL EDUCATION	10
8. FACULTY DEVELOPMENT	11
9. FUND RAISING	11
Appendix 1. Summary of 2018 – 2023 Strategic Planning Objectives	12
Checklist of Priorities	13

# 1. INTRODUCTION

In 2013, the Division of Respiriology embarked on a strategic planning process under the direction of Dr. Douglas Bradley, who had been appointed to the role of Division Director in January 2012. This process culminated in the development of an ambitious Strategic Plan, outlining divisional objectives for research, education, quality improvement, and faculty development for the five year period from 2013 - 2018. The Strategic Plan outlined 19 long term goals in line with these areas, which were further broken down into 55 discrete short-term objectives. The plan was presented, discussed and ratified at a strategic planning retreat to which all members of the division were invited.

In June 2015, the Division held a retreat to review and recognize accomplishments and progress toward the goals and objectives outlined under the 2013 – 2018 Strategic Plan. The Division noted that 32 of the 55 short-term objectives had been completed, with progress toward 18 more. In pursuit of the Division's long-term goals it was noted that progress had been made in defining citywide areas of research excellence in Lung Transplantation, Sleep Medicine, and Cystic Fibrosis. The Division also re-established research rounds, and initiated a two-month mandatory research rotation for all residents to help support and expand the research enterprise. In 2015, an endowed chair, the Godfrey S. Pettit Chair in Respiratory Medicine, was established to support the academic activities of the Division. It is awarded to the Division Director of Respiriology and Dr. Bradley was its first recipient. With funds from the Pettit Chair the division was well positioned to further pursue its long-term goals and objectives. For example, in conjunction with funds from the National Sanatorium Association (Richard Horner), the University of Toronto Department of Medicine (Wendy Levinson) and St. Michael's Hospital (Arthur Slutsky), funds from the chair made possible the hiring of a new PhD Research Scientist, Dr. Gaspard Montandon. Funds from the chair also permitted the establishment of the Pettit Block Term Grants, under the auspices of the Research Advisory Committee (RAC), to provide modest peer-reviewed intramural grants to faculty members to support pilot projects and purchase of research equipment.

In 2017, the Division underwent an External Review to coincide with the completion of Dr. Bradley's first five-year term as Division Director. At that point, 52 of 55 short-term objectives had been achieved with progress in the remaining three. The report of the external reviewers recognized the 2013-2018 Strategic Plan as instrumental in the recent success of the Division and recommended that it be renewed, suggesting that the Division has an opportunity to further expand its areas of research and clinical expertise.

In 2018, a Strategic Planning Committee was struck by Dr. Bradley to renew the previous Strategic Plan and advise the Division's Executive Committee on promising new areas of research excellence for expansion. Planning meetings were held on June 1<sup>st</sup> and September 14<sup>th</sup>, and included discussion of potential areas of expansion including Airways Diseases, Mycobacterial Diseases and Interventional Pulmonology. In line with recommendations made in the external reviewers' report the Strategic Planning Committee identified Airways Diseases as an area in

which the Division could make a strong impact, as there are individuals doing research in this general area at the university and all the major affiliated teaching hospitals across the city, as well as the appropriate environmental influences to support growth in this area.

On October 26<sup>th</sup>, 48 members of the Division of Respiriology attended a strategic planning retreat at the Royal Ontario Museum in Toronto to hear presentations on Divisional progress in research, education, quality improvement, and continuing medical education (CME), as well as developments at respective hospital sites and an outline of the new Airways Disease Research Group (AWD). The following document provides a broad outline of recent developments in the Division, and highlights new areas for growth within the Division, based on the presentations and discussions of the strategic planning retreat.

## 2. VISION

As outlined in the 2013 Strategic Plan, the vision of the Division of Respiriology remains:

**International leadership in innovative, productive and world class respiratory research and training programs.**

## 3. GOVERNANCE STRUCTURE

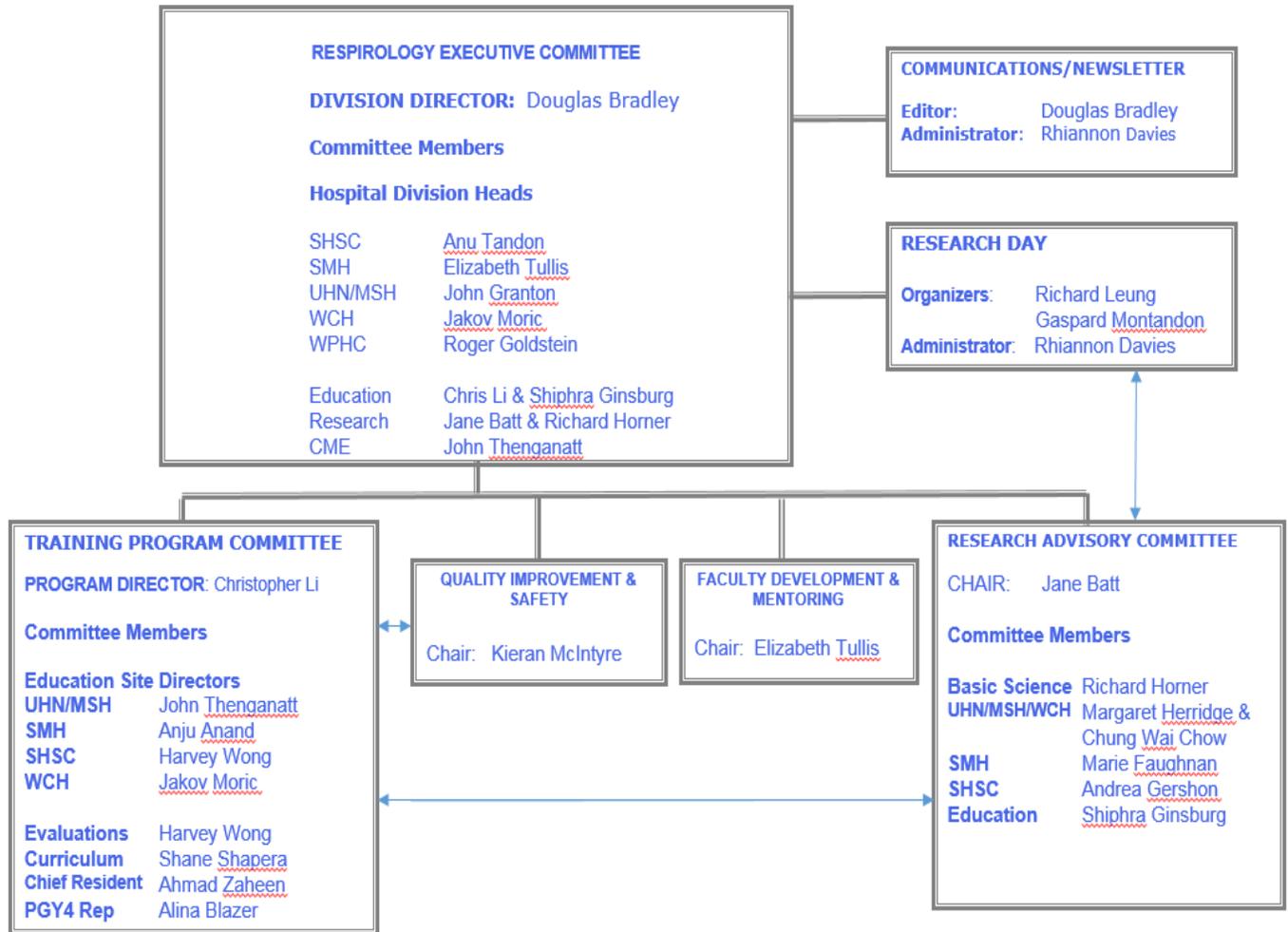
The governing structure of the Division is depicted in Figure 1. The Division is led by the Departmental Division Director, Dr. Douglas Bradley, working with an Executive Committee, to set the Division's academic mission, including strategic planning, policy implementation and fundraising. The executive includes representation across all sites at which its faculty members operate, as well as the academic and clinical interests of the Division's membership.

The Division Executive is further advised by a Research Advisory Committee, led by Dr. Jane Batt, a Resident Training Program Committee, led by Program Director, Dr. Christopher Li, and leads for Quality Improvement & Safety (Dr. Kieran McIntyre), and Faculty Development & Mentoring (Dr. Elizabeth Tullis).

Additional leadership is provided by Dr. John Thenganatt for the Division's CME programming, and Drs. Gaspard Montandon and Richard Leung for the Division's annual Research Day. Dr. Douglas Bradley and Divisional Administrator, Rhiannon Davies, are responsible for publishing the Division's newsletter, RespNews.

Figure 1.

## UNIVERSITY OF TORONTO DIVISION OF RESPIROLOGY ADMINISTRATIVE STRUCTURE



### 4. DIVISIONAL MEMBERSHIP

As of 2018 the Division has 56 full-time faculty members, and 93 total members including part-time and adjunct faculty. Full-time faculty members are distributed across sites including University Health Network, Mt. Sinai Hospital, St. Michael’s Hospital, Sunnybrook Health Sciences Centre, Women’s College Hospital, and Westpark Healthcare Centre. There is also distribution across all academic position descriptions at the University of Toronto, with the greatest concentration among Clinician Investigators (21), Clinician Teachers (17) and Clinician Scientists (16).

## 5. RESEARCH

At the outset of the 2013 plan, it was thought that basic and clinical research in Respiriology at the University of Toronto was in a period of decline. To address this decline in research productivity, the Division targeted recruitment efforts into areas of research excellence. Between 2012 and 2017, 10 of 15 new hires were either Clinician Scientists or Clinician Investigators and nine of these hires were in existing areas of excellence (Sleep and Control of Breathing, Cystic Fibrosis and Lung Transplant). The Division also hired its first PhD Research Scientist since 1997 into Sleep and Control of Breathing (Dr. Gaspard Montandon). This strategy appears to have been effective: the Division has enjoyed a substantial increase in external research funding from 2012 until 2017 as shown in Table 1.

**Table 1. Respiriology Research Funding**

<u>Year</u>	<u>Number of grants</u>	<u>Value of grants</u>
2012-13	86	\$6,587,507
2013-14	95	\$5,363,522
2014-15	111	\$6,593,877
2015-16	124	\$6,973,092
2016-17	115	\$9,033,175
	Total	\$34,551,173

In addition, Dr. Bradley struck a Research Advisory Committee (RAC). Under the present leadership of Dr. Jane Batt, the RAC has launched a number of initiatives toward the objectives of the 2013 Strategic Plan. Perhaps most notable has been the establishment of the Pettit Block Term Grants. This is an intramural grant competition for Respiriology faculty members designed to support pilot projects and purchase of research equipment program, particularly for junior members within the first seven years of their appointment. It was launched in 2016 and receives \$50 000 annually from the Pettit Chair Fund with maximum individual grant funding of \$10 000, to be used within one year. To date, fifteen grants have been funded, including seven to early career faculty. Applications are peer reviewed by RAC members, and Divisional members have had success leveraging these grants to capture peer-reviewed external research funding.

The Division has launched two new research awards in 2017 to recognize faculty and trainees, and better profile and promote the research enterprise. These awards are presented at the Division's annual Research Day. The *Division of Respiriology Faculty Excellence in Research Award* is selected by the RAC and presented to a faculty member for sustained excellence in research with a significant impact on the scientific community or society at large. The first recipient of this award was Dr. Margaret Herridge in 2017 followed by Dr. Richard Horner in 2018. The *Division of Respiriology Outstanding Research Trainee Award*, is also selected by the RAC from nominations submitted by supervisors and fellow trainees. The first recipient of this award was Dr. Kevin Grace in 2017, followed by Dr. Christopher Walsh in 2018.

In pursuit of the long-term goal to engage residents in the research enterprise and increase their exposure to research in the Division, a mandatory research rotation was established for all Respiriology residents. To ensure success of the residents' research projects, a research supervisor is selected five months prior to the start of the research rotation, and a research project proposal is submitted to the RAC for peer review four months prior to the start date. It is expected that, at minimum, the resident will present their project at the annual Research Day in the second year of their program, and they are encouraged to pursue other means of dissemination including conferences and publications.

The Division has aligned its research priorities within its designated areas of research excellence. As outlined in the 2013 Strategic Plan, the Division has historically designated areas of research excellence based upon programs that have a critical mass of researchers across multiple sites, with demonstrated research productivity and peer-reviewed funding success. In the previous Strategic Plan, Sleep and Control of Breathing, Lung Transplantation and Cystic Fibrosis were the three designated areas of excellence. However, the 2017 External Review indicated that in view of the size of this Division and the scope of its programs, there was room for expansion into other areas of excellence. Since airways diseases are major part of Respiriology, and since there were several individuals undertaking research into airways diseases, the external reviewers recommended that in deliberating on expansion of areas of excellence, airways diseases should be considered.

#### **AIRWAYS DISEASES**

Consideration of including Airways Diseases (AWD) research as an area of excellence within the division stems from a combination of internal and external factors and the recognition that AWD now has faculty across all hospital sites. With chronic obstructive pulmonary disease (COPD) as the third leading cause of death in Canada, and asthma as one of the most common chronic diseases, there is a pressing desire to address AWD at both hospital sites and in health policy.

There is policy and network alignment for AWD with the passing of the Ontario Lung Health Act in 2017 and the existence of the Canadian Respiratory Research Network (CRRN). The Division of Respiriology boasts strong clinical expertise and collaborations across divisions and community practices in this area. There is also movement in AWD in other medical specialties at U of T and at academic medical centres across the country.

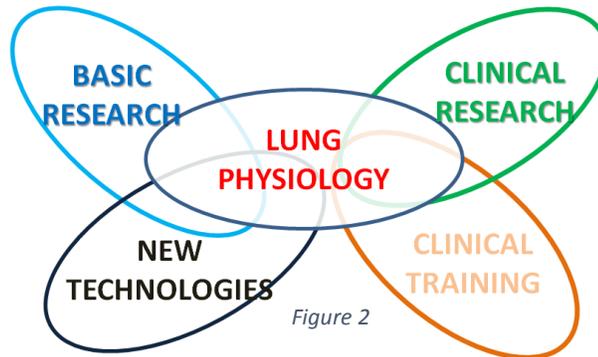
In an effort to build momentum and marshal the critical mass of faculty members addressing AWD, Dr. Bradley launched a 12 person AWD Group that met three times in 2018 to outline objectives of a strengthened program (figure 2) that would exploit strengths and recognize needs in research, training and clinical practice. Dr. Chung-Wai Chow at UHN has been appointed to chair the AWD group.

Toward development of a plan, the AWD group has catalogued strengths, gaps, challenges, opportunities and solutions. Strengths include proven excellence in respiratory physiology,

device development and artificial intelligence (AI), clinical studies of AWD, as well as knowledge translation and health services research in asthma and COPD. Excellence in respiratory physiology is aided by a large database of pulmonary function data from end-stage lung diseases, and lung and bone marrow transplant patients mainly at UHN; the assessment of novel diagnostic pulmonary function devices (e.g. forced oscillation technique, FOT); and an understanding of the role of nocturnal fluid shift in the pathophysiology and treatment of obstructive sleep apnea (OSA) and nocturnal asthma. Device development and AI capabilities come from partnerships with biomedical engineering, the Sleep dB Laboratory at Toronto Rehabilitation Institute, and computer engineering. Clinical studies in AWD include studies of occupational asthma and respiratory rehabilitation, epidemiological, health systems, outcomes and knowledge translation studies in asthma and COPD, and outcomes and longitudinal studies of lung function decline owing to air pollution and smoke inhalation from wildfires in Fort McMurray.

## Ideal Airway Programme

(CW Chow)



Gaps and challenges in research that have been identified include a need to strengthen basic genetic, cellular, molecular, immunological and biochemical research in pathogenesis of AWD, and the development of novel approaches to AWD management. There has been a lack of group grants, and there is a need to establish a pipeline of trainees in AWD at the University of Toronto.

The AWD group has a good opportunity to address these gaps and challenges. These goals will be accomplished by working with the Department of Medicine and the host hospitals to support AWD research, and to make it a priority for recruitment of faculty. There is particular recognition that a mid-career Clinician Scientist might need to be recruited to help address gaps in basic science. The AWD group will also tap its existing network to capitalize on the MOHLTC Lung Health Act of 2017, which came into effect in June of 2018. This act will support the lobbying of hospitals and funding agencies for increased investment in AWD, and the group plans to pursue large group grants to build research capacity. The group also plans to expand its presence in the Canadian Respiratory Research Network and develop collaborations with other Southern Ontario academic medical centres such as McMaster University.

Among the goals outlined to support AWD, the group will meet every 3-4 months to develop applications for grants in 2019 from, for example, the Canadian Institutes of Health Research, the Canadian Foundation for Innovation, and the National Sanatorium Association. Planned applications will first build on existing projects with solid preliminary data or pre-existing

collaborations, with a goal to build new collaborations whose objective will be to increase the number of grant submissions in 2020. The group also plans to develop a research training program, which will be aided by the recent hiring of two fellows in AWD.

#### **FURTHER AREAS OF OPPORTUNITY**

Areas of opportunity are defined as emerging or potential areas of excellence where there are also reasonable expectations of research productivity but without a critical mass of investigators at multiple sites. The financial implication of this designation is primarily related to recruitment, which needs to align with the needs of the affiliated hospitals. There were three areas of opportunity in the previous SP: AWD including impact of the environment, Rare Lung Diseases (PHT, ILD, HHT etc.) and Health Outcomes / Knowledge Translation.

One area that shows potential to be added to areas of opportunity is Interventional Pulmonology (IP). The Division has hired three faculty in this area within the past five years (Drs. Harvey Wong and Christine McDonald at SBHCS, and Dr. Kasia Czarnecka at TGH/UHN). The Division of Respirology is fortunate to collaborate with the Division of Thoracic Surgery, particularly with an internationally renowned expert, Dr Kazuhiro Yasufuku,. (Thoracic Surgery at TGH/UHN) who has contributed significantly to intellectual property in this field, especially the development of EBUS. With the increased number of related procedures, chest tubes, pleural catheters and EBUS, there is potential to form a citywide training program in IP. The limitation in this area is a paucity of grant support. Accordingly, faculty involved in IP will be encouraged to seek significant research funding in this area.

## **6. RESIDENCY & FELLOWSHIP TRAINING PROGRAMS**

#### **RESPIROLOGY RESIDENCY TRAINING PROGRAM**

This program underwent a very successful external review by the Royal College of Physicians and Surgeons of Canada (RCPSC) in October 2015 in which all previous deficiencies, such as unclear roles and responsibilities of the Resident Training Program Committee, and inadequate pleural procedures training were addressed. Indeed, no weaknesses were identified. In October of 2017 the Training Program underwent an internal review in which several strengths were identified including a strong and effective Program Director and Committee, a supportive DDD, thorough program review and development process, tremendous depth, size, scope and diversity of clinical experiences delivered by dedicated and highly effective teaching faculty, a strong and dynamic academic half day curriculum, excellent integration of research into the program as well as use of comprehensive multimodal assessment tools. Again, no weaknesses were identified. Applicants to the training program have increased from 20 in 2012 to 45 in 2016. In the 2016-17 year there were 10 residents enrolled in the program.

Currently, the main challenge facing the Division is implementation of the RCPSC-mandated Competency By Design (CBD) program. Respirology is scheduled to launch CBD in July of 2020. The RCPSC Specialty Committee has begun preparations for implementation of CBD by defining entrustable professional acts (EPAs) and embedded milestones, required training experiences,

assessment tools and reviewing examination content and timing. It will be necessary to align current rotations into stages of training and required experiences and to develop an effective interface for data management using the new Elentra system. Residents will maintain an electronic portfolio of their EPAs, milestones and other feedback from faculty via Elentra. A Competence Committee will be formed to coordinate implementation of CBD. CBD will involve providing clear learning direction and explicit teaching assessment goals. It will also require clinical-based assessment involving multiple observations by faculty of residents with provision of immediate verbal feedback and written documentation of these activities. A Competence Committee will be struck by Dr. C. LI and will meet with residents regularly to provide feedback on progress, preparedness for the RCPSC examinations and also potential need for remediation. This will require strengthening of a culture of feedback where both strengths and weaknesses are openly discussed with residents by faculty.

### **FELLOWSHIP TRAINING PROGRAMS**

Due to the increased demands of CBD on the Residency Training Program Director, and the increase in the number of fellows in Respiriology, the external review of October, 2017 recommended appointment of a dedicated Fellowship Training Program Director (FPD). The goal of this new position is to make improvements in the training environment for fellows. Dr. Bradley announced that Dr. Cecilia Chaparro had agreed to take on the role beginning November 1, 2018. Dr. Chaparro indicated that the number of fellows had increased from 10 in 2012-13 to 26 in 2017-18, including 20 international Fellows from 13 countries. She outlined plans to enhance the experience of fellows joining a fellowship program. These included formal entry and exit interviews of all new and existing fellows by the FPD, as well as an annual orientation session for fellows to educate them in Canadian medical practices, especially the appropriate approach to and means of communication with patients. Information about all academic activities including Respiriology Research, Respiriology Grand, Sleep Research and Medical Grand Rounds, the annual Research Day and any social events will be disseminated to all fellows with the aim to further integrate them into Respiriology divisional activities. These measures will facilitate the Division's objective of achieving "international leadership and world class training programs".

To provide support for a fellow in Respiriology-related work, terms of Reference have been established for a one-year, \$60,000, CME Fellowship funded by profits from the Division's CME activities. National and international applicants are welcome, and priority is given to applicants that will pursue research training, aligned with one of the division's defined areas of excellence (Sleep and Control of Breathing, Lung Transplantation and Cystic Fibrosis). Applications will be reviewed by a Fellowship Review Committee and the first CME fellowship will be awarded for the 2019 -2020 academic year.

## **7. Continuing Medical Education**

Continuing Medical Education (CME) has seen considerable growth under the leadership of Dr. John Thenganatt. The 2016 Day in Respiriology, with a focus on Sleep Medicine, attracted 234

attendees and generated revenue for the division. Dr. Thenganatt has struck a seven person CME Standing Committee. A successful Conference App was developed, and attendees at conferences are eligible to receive 9 Section Three credits toward their CPD requirements. CME events have expanded to include not just themed *Annual Day in Respiriology* CME events (Lung Infection in 2017), but also *Respirology Year in Review* events and the *Summer CME Evening*. The CME committee now plans to run three events (the Annual Day, Year in Review, and Summer CME evening) on an ongoing basis. The next CME event will be *Day in Respiriology: Interstitial Lung Disease* on November 25, 2018. The ultimate goals are to expand the scope of CME activities by developing an Ontario-wide CME event within the next few years and to continue to provide a steady stream of CME revenue that will be used to fund a new stable CME Fellowship award as indicated above.

## 8. FACULTY DEVELOPMENT

The Division has had an outstanding year in terms of the accomplishments of its faculty in 2018. An unprecedented 11 faculty members received awards for excellence in research, education and clinical care at the international, national and local levels. These honours were distributed broadly across the spectrum of affiliated institutions and levels of seniority. Clearly, these awards speak to the widespread recognition of the excellence of Respiriology faculty.

To formally recognize excellence in mentorship, the Division will establish a Respiriology Mentorship Award. The goal is to recognize a faculty member who has had a sustained record of excellence in mentoring. Terms of Reference have been established, and to ensure rotation through the faculty, applicants cannot receive the award more than once every five years. The award will be presented annually at the Respiriology Research Day.

## 9. FUND RAISING

Fund raising is an effective means of supporting and enhancing our academic activities (e.g. Pettit Chair and Dawson Fellowship). In order to create new opportunities for faculty, Dr. Bradley will work with division members and the Department of Medicine (DOM) to continue fundraising efforts to support academic activities. The Division plans to coordinate fund raising activities with the DOM who is embarking on a fund raising campaign to mark the 100th Anniversary of the Sir John and Lady Eaton Chair in 2019 that focuses on current faculty as well as resident and fellow alumni. The campaign will be run by the DOM, Office of Advancement and will begin early in 2019. The DOM will be offering all its Divisions administrative support to raise funds toward their own goals. The Division of Respiriology will focus its efforts on raising funds to support intramural grants and Fellowships.

# Appendix 1.

## Summary of 2018 – 2023 Strategic Planning Objectives

### 1. Research

- a. **Expand Areas of Excellence**
  - i. Airways Diseases – under consideration
- b. **Expand Areas of Opportunity**
  - i. Interventional Pulmonology - under consideration
- c. **Establishment of Annual Distinguished Visiting Professorship Award**

### 2. Education

- a. **Appointment of a Fellowship Training Program Director**
- b. **Establishment of a CME Fellowship**
- c. **Establishment of a Competency Committee to oversee CBD**
- d. **Implementation of CBD into the Residency Training Program**

### 3. Continuing Medical Education

- a. **Expansion to three CME activities per year**
- b. **Development of a national CME event**
- c. **Use CME proceeds to establish a steady revenue stream to support ongoing CME fellowship and other academic activities**

### 4. Faculty Development

- a. **Establishment of a Faculty Mentorship Award**

### 5. Fund Raising

- a. **Seek funds to support intramural grants and Fellowship**
- b. **Coordinate fund raising with DOM Advancement who is embarking on a campaign to mark the 100th Anniversary of the Sir John and Lady Eaton Chair beginning in early 2019**
  - i. **focus fund raising efforts on current faculty as well as resident and fellow alumni**

# Division of Respiriology

## Checklist of Strategic Planning Priorities for 2018 – 2023

STRATEGIC PRIORITIES	LONG TERM OBJECTIVES	FOCUS
<b>Research</b>	Expand Areas of Excellence	Airways Disease – under consideration
	Expand Areas of Opportunity	Interventional Pulmonology – under consideration
	Establish Annual Distinguished Visiting Professorship Award	Drs. Bradley and Binnie to develop a plan
<b>Education</b>	Appoint a Fellowship Training Programs Director (FPD)	Dr. Bradley to appointed a FPD
	Establishment of a CME Fellowship	Inaugural competition will be for 2019-20 academic year
	Establish a Competency Committee for CBD	Dr. C. Li to appoint
	Incorporation of CBD into the Residency Training Program	Program Committee to implement in July 2020
<b>Continuing Medical Education</b>	Expansion to three CME activities per year	CME Committee to implement
	Development of a national CME event	CME Committee to implement
	Use CME proceeds to generate steady revenue stream for fellowship and academic activities	CME Committee to oversee
<b>Faculty Development</b>	Establish a Faculty Mentorship Award	Inaugural award to be presented in 2019
<b>Fund Raising</b>	Seek funds to support intramural grants and fellowships	Raise funds through CME activities and collaboration with DOM Advancement
		Focus fund raising efforts on current faculty as well as resident and fellow alumni