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DIVISION DIRECTOR'S COLUMN – Dr. Douglas Bradley



University of Toronto Respiriology: Sitting on Top of the Respiratory World

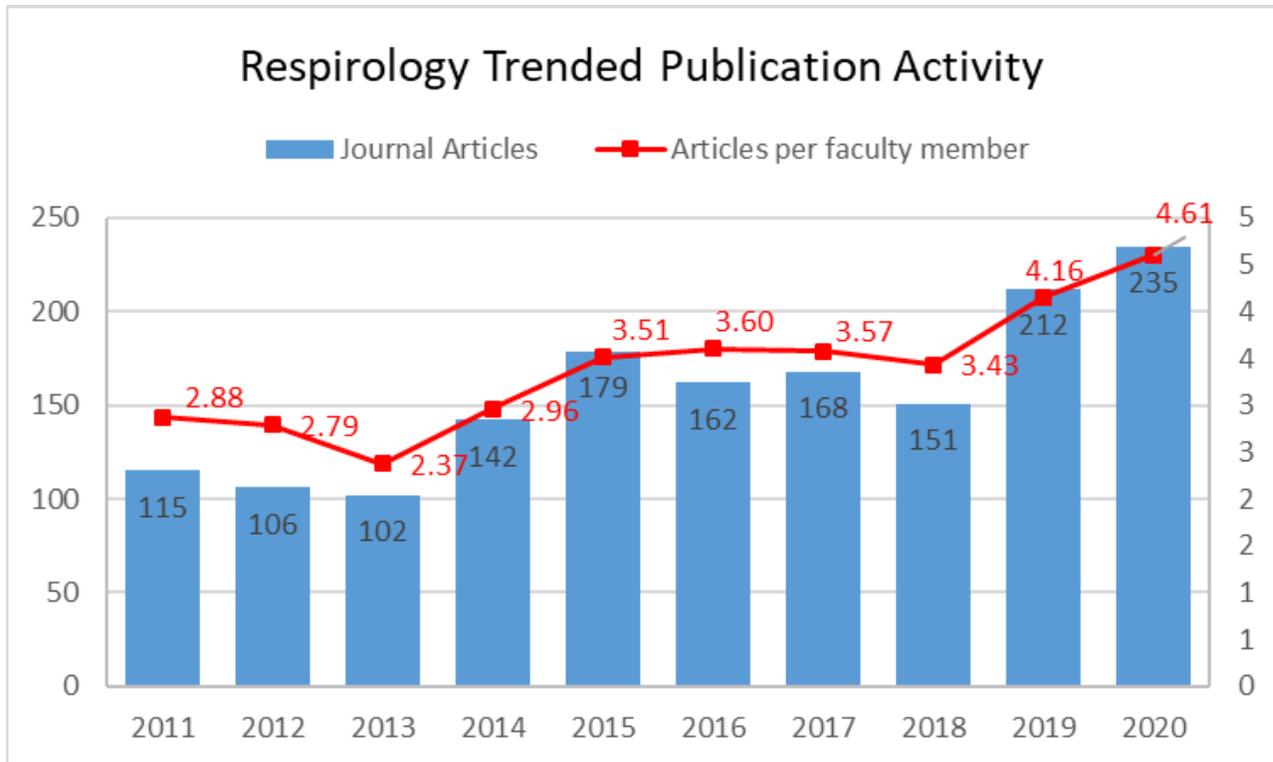
In this, my last Division Director's column, I would like to outline how the University of Toronto's Division of Respiriology has achieved its vision: *"To achieve international leadership in innovative, productive and world-class respiratory research and training programs."*

With respect to research, since the last external review of our Division in 2017, there has been a truly remarkable burgeoning of research productivity and renown. From 2016-2019 (the last year for which complete data are available), Division members have been very successful in garnering grant support. Although total funding has varied from year to year, there is a clear upward trend.

For example, compared to the average annual funding of \$6,622,233 from 2011-15, average annual funding from 2016-19 has increased by 27% to \$8,409,062.

Perhaps an even better indicator of research productivity is the number of publications by faculty members. Figure 1 demonstrates a 104% increase in the total number of publications and 60% increase in the number of publications per faculty member from 2011-20. From 2016-20 there has been a 45% increase in publications and a 28% increase in publications per author.

Figure 1. Publications 2011-2020



To put the University of Toronto's respiratory research productivity into perspective, the DOM compiled data on research output comparing the University of Toronto to six other universities prominent in respiratory research in rank order from 2016-20 as per Figure 2. The University of Toronto ranked second only to Harvard, both in number of publications and times cited. Even more impressive, **Expertscape, an independent research firm that assesses research impact via PubMed searches, has determined that over the last 10 years, the University of Toronto ranked second only to Harvard University in respiratory research output among over 4,000 institutions around the world** (<https://expertscape.com/ex/respiration+disorders>).

Taken together, these data indicate that the University of Toronto has gained elite status and now occupies a very prominent position in the Respiratory research world. This extraordinary achievement is a great credit to our remarkably talented and innovative faculty and research trainees and to their dedication to high impact, curiosity driven research. It is also a tribute to the hard work and success of our Research Advisory Committee, led by Dr. Jane Batt.

Name	Rank	Web of Science Documents	Category Normalized Citation Impact	Times Cited	% Docs Cited	% Documents in Top 1%	% Documents in Top 10%
Harvard University	1	5644	2.39	45540	52.30	3.95	18.76
University of Toronto	2	3503	2.11	30086	51.21	3.88	18.41
University of California San Francisco	3	2042	2.44	18324	46.62	3.92	19.69
University of Washington	4	1934	2.36	18214	50.62	3.93	18.67
University of British Columbia	5	1603	2.10	18321	54.02	4.30	18.03
McGill University	6	1090	1.75	10141	55.78	3.21	18.53
University of Oxford	7	956	2.55	11934	59.21	5.13	23.43

Figure 2. Respiratory Research Ranking from 2016-2020

With respect to education, in its Final Accreditation Review Report of November 2020, the RCPSC extolled the virtues of our training program. It highlighted many strengths and several areas they considered exemplary. These included a strong Program Director, Dr. Chris Li, and Residency Program Committee, a dedicated Division Director and program administrator, Rhiannon Davies, as well as engaged faculty, whose areas of sub-specialization provided a vast range of clinical experience. Other exemplary areas were innovative curriculum design, access to mentorship, a supportive process for residents to engage in research as well as in quality improvement and patient safety. They also cited as a “Leading Practice Innovation”, our Journal Club, overseen by Dr. Matthew Stanbrook. Its unique strengths are the development of a social media component allowing real-time access to authors of papers being discussed, and that several of the proceedings have been published in medical journals. This external review is a testimony to the outstanding quality of teaching provided by our gifted teachers and to their dedication to training the best Respiriologists possible to serve our community.

I would also like to highlight some of the progress we have made on our 2018–2023 Strategic Plan (SP). It set 13 specific objectives, of which 12 have been achieved and one is in progress. Of those achieved, the most important are the following. The Executive Committee recently approved expansion of our areas of excellence to include Airways Disease (AWD) research, thanks largely to the hard work and dedication of Dr. Chung-Wai Chow and the AWD group. Dr. Cecilia Chaparro was appointed as our first Fellowship Training Director to meet the demands of a growing cadre of post-graduate fellows. We expanded our CME events from one to three, thanks to our CME lead, Dr. John Thenganatt. Due to the success of these events, sufficient profits were generated to fund four CME

Fellowships over the last three years. The only objective that remains outstanding is establishment of a provincial or national CME event. However, COVID-19-related restrictions have precluded holding such an in-person event. I anticipate that once COVID-19-related restrictions are lifted, further progress will be made in this arena.

It has been a great privilege and a pleasure to serve as your Division Director for the last 10 years. Over this time, it has been very gratifying to see how the Division has flourished in research, teaching and clinical care. I am pleased to step down knowing that our Division now sits at the top of the respiratory world. I would like to thank all Division members for their valuable contributions to these remarkable achievements. I only regret that, under the present circumstances, we are unable to get together to celebrate these accomplishments in-person.

New Division Director: In closing, I would like to extend my congratulations to **Dr. Chung-Wai Chow** for her appointment as my successor starting January 1, 2022. Chung-Wai's clinical work is in lung transplantation at UHN Toronto General Hospital site, while her research focuses on use of oscillometry for early detection of lung function abnormalities related to COPD, air pollution and following lung transplantation. She is also Chair of the Lung Health Foundation Research Advisory Committee and President of the Humboldt Association of Canada. I am very pleased to be able to pass the torch on to her capable hands, and wish her well in this endeavour.

FEATURE ARTICLE - AIRWAYS DISEASES GROUP – Dr. Chung-Wai Chow



In 2017, the Division of Respiriology underwent an external review that recommended strengthening airways disease (AWD) research, since AWD is at the core of Respiriology. In response, Dr. D. Bradley formed the Toronto Airways Diseases (AWD) Research Working Group in April 2018. In October 2018, he appointed Dr. C.W. Chow to lead this group. Under her leadership, the group expanded from the initial faculty members (K. Chapman, CW Chow, A. Gershon, R. Goldstein, S. Gupta, M. Stanbrook, S. Tarlo, N.Vozoris and A. Yadollahi) to include new members from a wide variety of backgrounds. These including A. Adisesh, F. Al Habeeb, A. Blazer, D. Casey, A. Chan, A. Day, H. Khan, A. Kouri, M. Kirby, S. Mak, M. McInnis, T. Moraes, D. Rozenberg, C. Ryan, R. Schwartz, T. To and S. Valaee. Since then, two major foci of research have been established: 1) the Effect of Vaping and Cannabis on Lung Health and 2) Co-existence of Unrecognized COPD in Heart Failure supported by several peer-reviewed grants from the CIHR, the Lung Health Foundation and the NIH. In addition, a Lung Physiology-Pulmonary Function Research

Working Group has been established to review and coordinate research using various methods of evaluating lung function.

The AWD Research Group has also collaborated on publishing research findings, notably two publications with a senior trainee as the first author in *Chest* and *European Respiratory Review* in 2020 and 2021, respectively.

With respect to long term ventilation (LTV), including for patients with COPD, the Ministry of Health has approved establishing a Provincial LTV strategy to reduce pressure on ICU's and assist individuals to

transition to a more appropriate level of care. They are supporting expansion of West Park Healthcare's (WPH) LTV program and development of the ICU ventilator transition program. WPH will assume leadership for the provincial strategy with new hubs at Michael Garron Hospital, the Ottawa Hospital and the London Health Sciences Centre.

While COVID-19 curtailed social, scientific and business events, the group managed to host a Zoom 'party' in the summer of 2020 and a small outdoor gathering in the summer of 2021. With the momentum already established for working collaboratively, the group is poised to grow and flourish. Several areas considered for further development that involve multiple members include the development and application of: 1) artificial intelligence in the area of respiratory structure and function and 2) virtual care delivery.

In response to the group's achievements, the Respiriology Executive Committee approved elevation AWD research to an Area of Excellence in October of 2021.

RESIDENT TRAINING PROGRAM ALUMNI – Dr. Simon Houston



Following my Respiriology residency at the University of Toronto, I completed a one-year fellowship in interventional pulmonology at Toronto General Hospital. I then worked as a clinical associate at St. Michael's Hospital and then at Toronto General Hospital the following year. During this time, I completed a MSc degree in community health through the Dalla Lana School of Public Health.

In the summer of 2017, my wife (Cecilia) and I, along with our young daughter (Elina), moved to Halifax where I joined the Respiriology Division at Dalhousie University. My son (Ben) was born in 2018 - around the time I took over as director for the Respiriology training program at Dalhousie.

My interventional training and MSc degree from the University of Toronto have been foundational in helping me find success early in my career. At Dalhousie, I have continued to develop our respiriology training program, while guiding our transition to competency by design. I lead our growing EBUS and malignant pleural effusion services with the support of our Thoracic Surgery division, to which I am cross appointed. This year I led the development of a position statement on 'bronchoscopy during the COVID-19 pandemic' for the Canadian Thoracic Society (CTS). Most recently I have been collaborating with other Respiriologists across Canada to establish quality indicators for bronchoscopy supported by the CTS.

My life outside of work revolves around my two children and following NBA basketball (particularly, the Raptors). Atlantic Canada has much to recommend as a place to live and work. Our family enjoy the

more relaxed lifestyle in Halifax where we are able to live within walking distance of local amenities including universities, hospitals, and schools.

CLINICAL RESEARCH FELLOWSHIP ALUMNI – Dr. Laura Buckley (nee White)

After finishing my Sleep Research Fellowship, under the Supervision of Dr. Douglas Bradley, at the University of Toronto in 2014, I returned to Bristol, UK, to complete my specialty training in Respiriology. The Sleep Medicine training in Toronto enabled me to become a member of the British Thoracic Society's Sleep Apnea Advisory Group from 2014-2017. In 2018 I obtained a Consultant post in Respiratory and Sleep Medicine in the Bristol Royal Infirmary, a University of Bristol teaching hospital. My role includes managing respiratory inpatients, outpatient clinics in sleep, non-invasive ventilation and general Respiriology. I have been active in the COVID-19 pandemic response, managing non-invasive ventilation and coordinating outpatient follow-up of COVID-19 patients. My training in sleep medicine enabled me to set up a sleep teaching program for Respiriology trainees, as well as to introduce a multidisciplinary sleep meeting to improve patient care and promote learning. As part of my ambition to improve care of patients with sleep apnea, I have co-authored a book chapter on CPAP adherence that will be published imminently. I also have a strong interest in general medical education and am a tutor for final year medical students and a supervisor for postgraduate trainees.



Outside of medicine, I live with my husband, Gareth, an engineer, and my children Rose and Alfie, aged 6 and 4. I love sports and play netball at club level and have taken up tennis again. I enjoy travelling and the outdoors and hope to make another trip to Toronto soon.

Program Director Report – Dr. Chris Li

Competence By Design

Along with Respiriology training programs across the country, our program launched CBD in July 2021. Our inaugural cohort of CBD residents has completed the first stage of training, Transition to Discipline, and is now working on Foundations of Discipline. Many thanks to the faculty who have been diligently completing EPA assessments for our trainees so far, on Elenra. Our Competence Committee, comprised of Drs. Ambrose Lau (Chair), Matthew Binnie, Natasha Sabur, Lee Fidler, and myself, has already met once and will be meeting again later this month for our next review of resident progress.

CaRMS 2022 Medicine Subspecialty Match

I am very pleased to announce that we have matched the following 5 residents through the CaRMS Medicine Subspecialty Match:

Manpreet Basuita, University of Toronto
Gabriel Burke, University of Toronto
Xiao (Tim) He, University of Saskatchewan
Arun Partridge, University of Calgary
Julie Semenchuk, University of Toronto

As always, many thanks to the Selection Committee, who devoted a great deal of time and energy to the file review and interview process. We look forward to welcoming this new cohort of residents into our program in July 2022.



Royal College Examination in Respiriology 2021

Congratulations to the following residents, who successfully completed their Royal College of Physicians and Surgeons of Canada examination in Respiriology this past fall:

Fatimah Alfaraj, Eric Carelli, Eunice Cho, Nermin Diab, Chris Kawala, Nicky Kraus, Jesse Lu

Fellowship Director Report – Dr. Cecilia Chaparro



Despite COVID-19 related difficulties around the world during the last 20 months, interest in our Respiriology fellowship programs has increased. Our 13 programs have continued to receive requests and we have continued to process fellows' applications with some delays due to COVID-19 related issues in their local offices or at the University of Toronto. This has resulted in late initiation of some fellowship programs, but thanks to the patience and collaboration from our offices, we have been able adjust to the circumstances.

Considering the increasing number of fellowship requests, we are working with our fellowship program colleagues and administrative offices in developing a more standardized process to identify times to receive applications, review them, make appointments for interviews and to communicate our decisions. In 2022, we hope to review and update the descriptions of our fellowship programs. I would like to congratulate our current fellows who have won fellowship

awards and will extend their learning experience in our division. I would also like to thank our departing fellows for their contributions to our clinical and research programs and wish them success in their careers. We are now looking forward to welcoming our new fellows starting early in 2022.

Research Advisory Committee (RAC) - Dr. Jane Batt



RAC Membership

In 2021 Drs Margaret Herridge and Chung Wai Chow stepped down after six years of outstanding service to the RAC. Drs Clodagh Ryan and Sarah Brode have joined the RAC. Our current members also include Jane Batt (Chair) Andrea Gershon, Shiphra Ginsburg, Marie Faughnan, Warren Lee and Kieran McIntyre (QI rep). Alina Blazer has stepped down as our resident representative and we will be selecting a new representative

Pettit Block-term Grants

For the April 15th 2021 competition, four applications were received and two were funded:

S. Brode, T. Marras and M. Stanbrook – “Population based risk for mycobacterial diseases associated with immune check point inhibitors”, and A. Blazer and M. Stanbrook – “Quantifying the burden of and assessing risk factors for non-smoking-related COPD in Ontario”.

The current competition for November 2021 is being adjudicated. Due to COVID-19-related restrictions on research, one extra year has been provided to awardees to spend their funding. Accordingly, the RAC will be requesting updates on project impacts from all awardees in January 2022.

June 2021 Research awards were bestowed at Research and Awards Day

Andrea Gershon was the recipient of the Division of Respiriology’s Outstanding Research Faculty Award and Gregory Berra, supervised by Tereza Martinu, was the recipient of the Outstanding Research Trainee Award for his work on mechanisms and biomarkers for chronic lung allograft rejection. All Nominees for the Trainee Award will be invited by Matthew Binnie to present a 20-minute talk at Respiriology Research-in-Progress rounds. These talks were very well received last year and will continue, to highlight the tremendous work being done by our talented trainees.

Respirology resident research projects.

The respirology research training block is now running like a well-oiled machine. Jane Batt met individually with each of the incoming residents to ask about career goals to ensure their research block is tailored to their requirements. Meet the Investigators Night, hosted by Andrea Gershon, occurred virtually on Thursday, September 23, with 24 faculty presenting. Residents will be submitting their research proposals for review by the RAC early December.

After almost two years of having to put on-hold any new initiatives due to COVID-19, the RAC will be aiming to return to discussing new projects to move collaborative research forward across the Division in 2022.

HONOURS, AWARDS and GRANTS

Dr. Meghan Aversa is the winner of the **Transformative Thinking in Transplant** grant competition at the Canadian Society of Transplantation 2021 Virtual Forum for her presentation of her project **“AVOIDing Risk Epitope Mismatches in Lung Transplantation”**.

Dr. Alina Blazer was awarded the **“MD Program Teaching Award of Excellence”** for 2020 for having attained teaching evaluation scores in the top 10% for undergraduate teaching.

Dr. Douglas Bradley is the recipient of the **2021 Canadian Institutes of Health Research/Canadian Sleep Society (CSS) Distinguished Lecturer Award in Sleep Sciences**. He gave his award lecture entitled: **“Pathophysiological Interactions Between Sleep Apnea and Fluid-Retaining States – A Two-Way Street”** at the CSS virtual conference on October 30, 2021. In addition, Expertscape's PubMed-based algorithms placed Dr. Bradley in the top 0.1% of scholars writing about respiratory disorders over the past 10 years, and considers him an **“Expertscape World Expert in Respiratory Disorders”**.

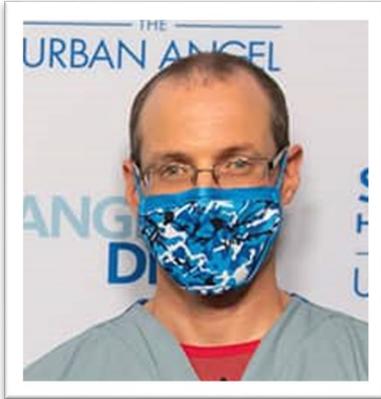
Dr. Chung-Wai Chow was one of a multidisciplinary team of researchers at the University of Toronto that has been awarded the **the Brockhouse Prize for Interdisciplinary Research in Science and Engineering** from the Natural Sciences and Engineering Research Council of Canada for developing innovative tools and strategies for studying air pollution and its effects. She has also been awarded a **CIHR Grant** for her project entitled **“Assessment of IPF Severity with Conventional and Intra-breath Oscillometry”**.

Dr. Stephen Juvet has been appointed Deputy Research Director for the **Ajmera Transplant Centre**.

Drs. Dmitry Rozenberg, Clodagh Ryan, Chung-Wai Chow, and Ewan Goligher have been awarded a **GoodHope Ehlers-Danlos Syndrome Foundation** grant from UHN's Krembil Research Institute.

Congratulations to all the above awardees!

NEWS



Launch of point-of-care-ultrasound (POCUS) – Dr. Kieran McIntyre

The University of Toronto's Division of Respiriology will be the first in Canada to provide hand-held Butterfly Qi point-of-care-ultrasound (POCUS) devices to trainees and staff physicians. POCUS has revolutionized respiratory medicine because it allows real-time assessment of respiratory disorders, such as subtle pleural effusions, pneumothorax and other lung pathologies, and is more sensitive than chest x-rays without the radiation and cost. Funding for POCUS comes from St. Michael's Hospital (SMH) Angels Den Foundation and was initially launched to assess patients with potential COVID-19 lung scarring. POCUS will be launched at SMH and St. Joseph's of Unity Health, Sunnybrook Health Sciences Centre, and University Health

Network. This program also includes a license to support POCUS-related educational activities.

The launch of the Butterfly Qi POCUS will allow University of Toronto's Respiriology training program to continue to lead in teaching and research and to enhance patient care. Enquiries about POCUS should be directed to **Dr. Kieran McIntyre** at SMH: Kieran.mcintyre@unityhealth.to

Congratulations to Dr. Anne Stephenson, who is awarded the Li Ka Shing Legacy Research Award which is given to a mid to senior-career Scientist who embodies the values of the Network of St. Michael's Hospital, St. Joseph's Health Centre, and Providence Healthcare, and advances the mission to improve the lives of our patients and community through research and leadership. This award is given to a scientist who enhances the reputation of clinical or social health research and their actions lead to a rich tradition of developing the next wave of great scientists.



Congratulations to **Dr. Jane Kobylanskii** on the arrival of her son, **Adam**, on Nov 20, 2021



We wish everyone, their families and friends a Happy Holiday Season

